



U.S. Department of Education
Institute of Education Sciences
NCES 2006-180

2004 National Postsecondary Student Aid Study (NPSAS:04) Full-Scale Methodology Report

Technical Report



U.S. Department of Education
Institute of Education Sciences
NCES 2006-180

2004 National Postsecondary Student Aid Study (NPSAS:04) Full-Scale Methodology Report

Technical Report

June 2006

Melissa Cominole
Peter Siegel
Kristin Dudley
David Roe
Theresa Gilligan
RTI International

James Griffith
Project Officer
National Center for Education Statistics

U.S. Department of Education

Margaret Spellings
Secretary

Institute of Education Sciences

Grover J. Whitehurst
Director

National Center for Education Statistics

Mark Schneider
Commissioner

The National Center for Education Statistics (NCES) is the primary federal entity for collecting, analyzing, and reporting data related to education in the United States and other nations. It fulfills a congressional mandate to collect, collate, analyze, and report full and complete statistics on the condition of education in the United States; conduct and publish reports and specialized analyses of the meaning and significance of such statistics; assist state and local education agencies in improving their statistical systems; and review and report on education activities in foreign countries.

NCES activities are designed to address high-priority education data needs; provide consistent, reliable, complete, and accurate indicators of education status and trends; and report timely, useful, and high-quality data to the U.S. Department of Education, Congress, state and other education policymakers, practitioners, data users, and the general public.

We strive to make our products available in a variety of formats and in language that is appropriate to a variety of audiences. You, as our customer, are the best judge of our success in communicating information effectively. If you have any comments or suggestions about this or any other NCES product or report, we would like to hear from you. Please direct your comments to:

National Center for Education Statistics
Institute of Education Sciences
U.S. Department of Education
1990 K Street NW
Washington, DC 20006-5651

June 2006

The NCES World Wide Web Home Page address is <http://nces.ed.gov/>.

The NCES World Wide Web Electronic Catalog is <http://nces.ed.gov/pubsearch/>.

Suggested Citation

Cominole, M., Siegel, P., Dudley, K., Roe, D., and Gilligan, T. *2004 National Postsecondary Student Aid Study (NPSAS:04) Full Scale Methodology Report* (NCES 2006-180). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

To download, view, and print the report as a PDF file, go to <http://nces.ed.gov/pubsearch/pubinfo.asp?pubid=2006-180>.

Contact:

Aurora D'Amico
aurora.d'amico@ed.gov
(202) 502-7334

Executive Summary

Introduction

The 2004 National Postsecondary Student Aid Study (NPSAS:04), conducted for the U.S. Department of Education's National Center for Education Statistics (NCES), collected comprehensive data regarding how students and their families pay for postsecondary education. The primary objective of NPSAS:04 is to produce reliable national estimates of characteristics related to financial aid for postsecondary students. NPSAS:04 also served as the base year of data collection for the Beginning Postsecondary Students Longitudinal Study (BPS), which will follow a cohort of students from the start of their postsecondary education and collect further data from them in 2006 and 2009.

For the first time, NPSAS:04 was conducted as the student component study of the 2004 National Study of Faculty and Students (NSoFaS:04). The faculty component—the 2004 National Study of Postsecondary Faculty (NSOPF:04)—is primarily a separate study, with the exception of institutional sampling and contacting. Historically, there has been considerable overlap in the institutions selected for participation in NPSAS and NSOPF; therefore, institutional sampling and contacting activities for both studies were coordinated in order to minimize response burden on institutions and to realize data collection efficiencies.

This report only describes the methodology and findings of NPSAS:04, which took place during the 2003–04 school year. The methodology and findings of NSOPF:04 are provided in a separate report.

Sample Design

The NPSAS:04 target population consists of all eligible students enrolled at any time between July 1, 2003 and June 30, 2004 in postsecondary institutions in the United States or Puerto Rico which had signed Title IV participation agreements with the U.S. Department of Education making them eligible for the federal student aid programs (Title IV institutions). NPSAS:04 is based on a nationally representative sample of all students (aided and nonaided) in those institutions. The institutions sampled represented all types and levels of postsecondary institutions in the United States, including public, private for-profit, and private not-for-profit institutions, at the 4-year, 2-year, and less-than-2-year levels. In the institutional sample, 1,670 institutions¹ were selected. Of these, 1,630 were determined to be eligible for NPSAS:04.² Enrollment lists were obtained from 1,360 of the 1,630 eligible institutions.

Approximately 109,210 undergraduate, graduate, and first-professional students enrolled in postsecondary education between July 1, 2003, and April 30, 2004, comprised the student sample, with special concern for the accurate sampling of students eligible to participate in the BPS longitudinal studies in the future. Students were selected on a flow basis from the institutions providing lists. Of the 109,210 students sampled, 8,200 were determined to be ineligible for the study, resulting in 101,010 eligible student sample members.

¹ The numbers appearing in the tables and text of this report have been rounded to the nearest tens to maintain the confidentiality of study respondents. However, percentages are based on unrounded numbers.

² 1,080 of these institutions were also included in the NSOPF institutional sample.

Study Respondents

Student-level data for NPSAS:04 were collected from a variety of sources, including student records (using computer-assisted data entry [CADE]), student interviews, and extant federal and private databases (CPS, and National Student Loan Data System [NSLDS]). For NPSAS:04, a definition of the minimum data requirements, regardless of source, to be considered a study respondent was adopted. About 90,750 of 101,010 eligible sample students had sufficient data across sources to be classified as study respondents, for a weighted response rate of 91 percent. Among the 90,750 study respondents, 92 percent were classified as CADE respondents and 70 percent were student interview respondents. The match rates to the other data services are also discussed.

Instrumentation

Unlike in previous NPSAS cycles, the NPSAS:04 student instrument was designed as a web-based instrument to be used both for self-administered “interviews” via the Web and by telephone interviewers. In addition, a study website was developed for access to the self-administered interview and to provide sample members with additional information about the study.

The instrument was designed to accommodate the mixed-mode data collection approach and to ensure the collection of the highest quality data. Design considerations included the following: appropriate question wording for both self-administered and telephone interviews; the provision of extensive help text to assist self-administered respondents and telephone interviewers; and pop-up boxes indicating out-of-range values.

The instrument consisted of six sections grouped by topic. The first section determined student eligibility for the NPSAS:04 study and the future BPS study, and obtained enrollment history. The second section contained questions relating to student expenses and financial aid. Included in this section were items regarding employment at the NPSAS institution, such as work-study participation, assistantships, and fellowships. Section three focused on employment and finances. Educational experiences, such as courses taken and admission test scores, were included in the fourth section, as well as educational experience items specific only to BPS respondents. The fifth section of the interview gathered background and demographic information about students and their family members. The final section, applicable only to BPS respondents, requested contacting information in order to make subsequent follow-up contact with them easier for future surveys.

Data Collection Design and Outcomes

Training

Training programs were developed for different types of project staff: institutional contactors, field data collectors for student record abstraction, help desk operators, and telephone interviewers. Institution contactors were trained to work with institutional staff to inform them of the nature of the study and to gain institutional participation. Training for field data collectors for student record abstraction emphasized the use of the various systems to monitor and transfer data. It also focused on the nature of the study and the processes associated with financial aid from an institutional perspective. Help desk operators received specific training on “frequently

asked questions” regarding the instrument and technical issues related to completion of the instrument via the Web. Help desk operators were also trained to conduct the student interview when requested by sample members. Programs on successfully locating and interviewing sample members were developed for all telephone interviewers. Topics covered in telephone interviewer training included administrative procedures required for case management; quality control of interactions with sample members, parents, and other contacts; the purpose of NPSAS:04 and the uses of the data to be collected; and the organization and operation of the web-based student instrument to be used in data collection.

Institutional Contacting

Once institutions were sampled, attempts were made to contact the chief administrator to verify institutional eligibility, solicit participation, and request the appointment of an institutional coordinator to oversee data collection within the institution. Institutional coordinators were asked to provide lists or data files of all eligible students enrolled at any time between July 1, 2003, and April 30, 2004. Several checks on quality and completeness of student lists were implemented prior to sampling students from each institution. Of the 1,630 eligible institutions sampled for the field test, about 1,360 provided lists, resulting in an overall institutional participation rate of about 80 percent (weighted).

Institutional Record Abstraction

A web-based CADE software system was used for the abstraction of student records from institutions. Institutions were given the option of completing CADE using their own staff, or, upon request, having an RTI International (RTI) field data collector complete the record abstraction process at the institution. Prior to the initialization of the CADE software system for an institution, records for all students sampled from a school were requested from the U.S. Department of Education’s Central Processing System (CPS), which contains financial aid application data. This information was preloaded into the CADE system to provide edit checks for the data entered by an institution. The CADE system consisted of three sections focusing on eight topics: locating information, demographic characteristics, admissions tests, enrollment, tuition, financial aid awards, needs analysis, and institutional student information records (ISIRs). Of the 1,360 eligible and participating institutions, about 1,300 institutions provided information for about 88,920 students. The institutional and student-level weighted response rates for record abstraction were 96 percent and 92 percent, respectively.

Student Locating and Interviewing

The NPSAS:04 data collection design involved initial locating of sample members, providing an opportunity for the student to complete the self-administered interview via the Web, following up with Web nonrespondents after 4 weeks, and attempting to conduct a telephone interview with them if necessary. Upon receipt of student enrollment lists, batch-locating activities were implemented to update address and telephone activities. Sources for this task included the CPS, the U.S. Postal Service National Change of Address (NCOA) system, and Telematch. Students were then sent a notification mailing containing a lead letter, informational brochure, and username and password for completing the interview via the Web. Telephone contact began for self-administered Web nonrespondents 4 weeks after the initial mailing. Locating and tracing activities by telephone interviewers occurred simultaneously with efforts to

gain cooperation from sample members. When all tracing options were exhausted by the interviewer, cases were sent to RTI's Call Center Services (CCS) Tracing Services. Cases for which further contacting information was obtained were sent back for contact by telephone interviewers; those for whom no additional information could be obtained were finalized as unlocatable.

As discussed earlier, there were 90,750 study respondents among the 101,010 eligible sample members. About 62,220 completed the student interview, for a weighted response rate of 71 percent. Among those who completed the student interview, about 25,000 BPS respondents eligible for the longitudinal follow-up studies (BPS:04/06 and BPS:04/09) were identified.³ Of all completed student interviews, about 53 percent (weighted) were completed with a telephone interviewer, and 47 percent (weighted) were completed via self-administration over the Web. The average overall time to complete the student interview for all respondents was about 27 minutes, regardless of the mode of completion.

Evaluation of Operations and Data Quality

Evaluations⁴ of operations and procedures focused on the newly introduced joint institutional contacting endeavor, the timeline for data collection from both institutions (CADE) and students (self-administered and interviewer-administered), tracing and locating procedures, refusal conversion efforts, the effectiveness of incentives for increasing early response via the Web and for refusal conversion, and the length of the student interview. Evaluations of data quality included an examination of items with high rates of missing data, use of online help text, item-level nonresponse conversion efforts, and question delivery and data entry quality control procedures.

Analysis Weights

Cross-sectional weights were developed for analyzing respondents to the NPSAS:04 interview. Variances were computed using the Taylor series and bootstrap techniques. Weighted response rates, nonresponse bias analyses, and survey design effect tables are also provided.

Data Files

Throughout the data collection period, data were processed and examined for quality control purposes. Following completion of all study data collection, separate Data Analysis System (DAS) files were created for undergraduate and graduate/first-professional students. The first DASs, both undergraduate and graduate/first-professional, were adjudicated and approved for public release in February 2005. The primary analysis file, from which the study DASs were constructed, contains data for approximately 90,750 study respondents,⁵ including about 35,510 first-time beginner (FTB) students, 44,340 other undergraduates, and 10,890 graduate and first-professional students. The primary analysis file contains over 500 variables, developed from multiple sources (including student interviews, institutional records, and extant data sources).

³ Institutions identified all potential first time beginners (FTBs) as they prepared enrollment lists for sampling purposes. Eligibility for inclusion in the BPS:04 cohort was confirmed for those who completed the student interview. Study respondents who did not complete the student interview are retained on the data file as potential FTBs and their eligibility will be confirmed as part of the follow-up interview.

⁴ All comparisons have been tested using a significance level of 0.05.

⁵ Study respondents are those who met the minimum data requirements regardless of data source.

The survey data files used to create variables in the DASs, and the associated electronic codebooks and file documentation, are available to researchers who have obtained a restricted data license from NCES.

Products

NPSAS:04 reports or data products that have or will be published include the following:

- *2004 National Postsecondary Student Aid Study (NPSAS:04): Student Financial Aid Estimates for 2003–04.* This E.D. TAB is the first publication based on the 2003–04 data. The E.D. TAB describes the percentages of students receiving various types of financial aid and average amounts received, by type of institution attended, attendance pattern, dependency status, and income level.
- *2004 National Postsecondary Student Aid Study (NPSAS:04): Undergraduate Financial Aid Estimates for 2003–04 by Type of Institution.* This E.D. TAB is the second publication based on the 2003–04 data. This E.D. TAB focuses only on undergraduates, including separate tables for those who attended public 4-year, private-not-for-profit 4-year, public 2-year, or private for-profit postsecondary institutions during the 2003–04 academic year. It describes average tuition and fees, average total price of attendance, and the percentages of undergraduates receiving various types and combinations of financial aid and average amounts received, with a particular focus on grants and loans.
- *2004 National Postsecondary Student Aid Study (NPSAS:04): Undergraduate Data Analysis System.* The NPSAS:04 Undergraduate DAS contains the data on a sample of about 80,000 undergraduates who were enrolled at any time between July 1, 2003, and June 30, 2004, in about 1,400 postsecondary institutions. It represents all undergraduate students enrolled in postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico that were eligible to participate in the federal financial aid programs in Title IV of the Higher Education Act.
- *2004 National Postsecondary Student Aid Study (NPSAS:04): Graduate Data Analysis System.* The NPSAS:04 Graduate DAS contains the data on a sample of about 11,000 graduate students who were enrolled at any time between July 1, 2003, and June 30, 2004, in about 1,400 postsecondary institutions. It represents all graduate students enrolled in postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico that were eligible to participate in the federal financial aid programs in Title IV of the Higher Education Act.
- *Profile of Undergraduates in U.S. Postsecondary Education Institutions: 2003–04.* Describes the demographic and enrollment characteristics of undergraduate students.
- *Student Financing of Undergraduate Education: 2003–04.* Focuses on undergraduate tuition, total price of attendance, types and sources of financial aid received, net price, financial aid need, and unmet need.
- *Student Financing of Graduate and First-Professional Education: 2003–04.* Describes the demographic and enrollment characteristics of graduate and first-professional students and the types and sources of financial aid received.

This page left intentionally blank.

Foreword

This report describes and evaluates the methods and procedures used in the 2004 National Postsecondary Student Aid Study (NPSAS:04), the student component of the 2004 National Study of Faculty and Students (NSoFaS:04). NPSAS:04 included important changes from previous NPSAS studies. One of the most significant changes was the fielding of the institutional contacting stage of the study jointly with that for the faculty component of NSoFaS:04, the 2004 National Study of Postsecondary Faculty (NSOPF:04). A second major change was conducting student record abstraction from institutional records and student interviewing simultaneously, rather than sequentially as had been done in previous NPSAS cycles. Another change was the development of a single web-based instrument for self-administration by sample members and use by telephone interviewers alike.

We hope that the information provided in this report will be useful to interested readers. Additional information about NPSAS:04 is available on the Web at <http://www.nces.ed.gov/surveys/npsas>.

C. Dennis Carroll
Associate Commissioner
Postsecondary Studies Division

This page left intentionally blank.

Acknowledgments

The authors gratefully acknowledge the assistance of staff members of the National Center for Education Statistics (NCES) for their advice, guidance, and review in the design of the study, and in preparation of this document. We are particularly grateful to C. Dennis Carroll, Associate Commissioner, Postsecondary Studies Division; Paula R. Knepper, Senior Technical Advisor, Postsecondary Studies Division; James Griffith, Program Director, Postsecondary Longitudinal and Sample Survey Studies (PLSSS); Tracy Hunt-White, Statistician (PLSSS); and Linda Zimbler, Statistician (PLSSS), for their constructive input and review.

Particular thanks are also extended to the Technical Review Panel members, who provided considerable insight and guidance in the development of the design and instrumentation of the study and to Heath Brown, Melanie Corrigan, and Adam Stoll for their careful review of this report.

Thanks are also extended to the many project staff members who assisted with the production of this report. Special acknowledgment is given to John Riccobono, who served as the study's Project Director. Appreciation is extended to Jim Chromy and Roy Whitmore for their consultation and guidance on the statistical design of the study. Also, thanks to those who contributed to many of the statistical analyses presented here, including Karol Krotki, Kim Ault, Ruby Johnson, Jane Eslinger, Stephen Black, Jeremy Porter, and Darryl Creel.

Jeff Franklin, Brian Kuhr, and Robert Bozick are recognized for their contributions to the design and analysis of the data collection efforts and data quality evaluations. Finally, the tireless efforts of Sallie Fiore, Craig Hollingsworth, Sharon Powell, and Lynne Hawley in preparing this document are appreciated.

Most of all, we are greatly indebted to the institutions and students who generously participated in the survey. Their willingness to take the time to share information made this study a success.

This page left intentionally blank.

Contents

Executive Summary	iii
Foreword.....	ix
Acknowledgments	xi
List of Tables	xvi
List of Figures.....	xix
Chapter 1 Overview of NPSAS:04.....	1
1.1 Background and Purpose of NPSAS	2
1.2 Major Design Changes	2
1.2.1 Combining NPSAS and NSOPF.....	2
1.2.2 State-Representative Samples.....	2
1.3 Schedule and Products of NPSAS:04.....	3
1.3.1 Schedule	3
1.3.2 Products	3
Chapter 2 Design and Methodology of NPSAS:04.....	5
2.1 Sampling.....	5
2.1.1 Target Population and Sampling Overview.....	5
2.1.2 Institutional Sample and Eligibility	11
2.1.3 Student Sample and Eligibility	14
2.2 Sources of Data.....	18
2.3 Data Collection Design.....	18
2.3.1 Institutional Contacting	19
2.3.2 Student Enrollment List Acquisition	23
2.3.3 Matching to Federal Databases (CPS, NSLDS)	25
2.3.4 Data Abstraction from Student Records (CADE).....	26
2.3.5 Student Interview.....	31
2.3.6 Data Quality Evaluation	42
2.4 Data Collection Systems.....	42
2.4.1 Instrument Development and Documentation System (IDADS)	42
2.4.2 Integrated Management System (IMS).....	43
2.4.3 Variable Tracking System (VTS).....	46
Chapter 3 Data Collection Outcomes.....	47
3.1 Institutional Participation	47
3.1.1 National Sample	47
3.1.2 State Samples.....	48
3.2 Study Respondents.....	50
3.2.1 National Sample	50
3.2.2 State Samples.....	52
3.3 Data Collection Results, by Source	53
3.3.1 Student Record Matching	53
3.3.2 Outcomes of Student Record Abstraction	57
3.3.3 Student Interview Completion.....	60
3.3.4 Student Locating and Response Rate Summary	63
3.3.5 Conversion of Nonrespondents	65

3.4	Completeness of Data Records among Study Respondents	66
Chapter 4 Evaluation of Field Operations and Data Quality		69
4.1	Enrollment List Collection	69
4.1.1	Early Contacting Activities	69
4.1.2	Institutional Participation	69
4.1.3	Quality of Enrollment Lists	71
4.2	Student Record Abstraction.....	73
4.2.1	Preloading Data into CADE	73
4.2.2	Timeliness of Record Abstraction	74
4.2.3	CADE Data Completeness	76
4.3	Student Interviewing.....	77
4.3.1	Identification of First Time Beginners (FTBs).....	77
4.3.2	Data Collection Evaluations	79
4.3.3	Instrument Usability	88
4.3.4	Item Nonresponse	90
4.3.5	CATI Monitoring and Quality Assurance	95
Chapter 5 Variable Construction and File Development.....		99
5.1	Overview of the NPSAS:04 Data Files	99
5.2	Online Coding and Verification.....	100
5.2.1	Online Coding	100
5.2.2	Range and Consistency Checks	100
5.3	Data Editing.....	101
5.4	Data Perturbation.....	103
5.5	Statistical Imputations	103
5.6	Composite and Derived Variable Construction.....	105
Chapter 6 Unit Nonresponse Bias Analyses, Weighting, and Variance Estimation		107
6.1	Institution Nonresponse Bias Analysis and Weighting	109
6.1.1	Initial Institution Weight Components	109
6.1.2	Assessing Institution Nonresponse Bias	110
6.1.3	Adjusting Institution Weights.....	111
6.1.4	Institution Weighting Adjustment Performance	116
6.2	Student Nonresponse Bias Analysis and Weighting.....	118
6.2.1	Initial Student Weight Components.....	118
6.2.2	Assessing Student Nonresponse Bias	121
6.2.3	Adjusting Student Weights.....	122
6.2.4	Student Weighting Adjustment Performance	135
6.3	Item Nonresponse Bias Analysis	137
6.4	Variance Estimation	146
6.4.1	Taylor Series.....	147
6.4.2	Bootstrap Replicate Weights	148
6.4.3	Variance Approximation	149
References.....		151
Appendixes		
A.	Technical Review Panel.....	A-1
B.	Sampling Details.....	B-1
C.	Data Collection Notification Materials.....	C-1

D. Endorsements D-1

E. Facsimiles E-1

F. Training Materials F-1

G. Data-CADE Specifications G-1

H. Imputations H-1

I. Analysis Variables I-1

J. GEM Adjustment Procedure J-1

K. Nonresponse Bias Analysis K-1

L. Details of the Bootstrap Variance Estimation L-1

M. Weighted Analysis Considerations..... M-1

N. Design Effects..... N-1

List of Tables

Table	Page
1. Schedule of major NPSAS:04 activities: 2002–04	3
2. Target numbers of sample students, by institutional stratum and type of student: 2004.....	9
3. Target numbers of sample students in the 12 state representative samples, by institutional stratum and type of student: 2004.....	10
4. Institutional sampling rates and number of certainty and noncertainty institutions, by institutional stratum: 2004	12
5. Planned and achieved NPSAS:04 student samples, by student stratum and level of offering: 2004.....	16
6. Initial classification of NPSAS:04 student sample, by institutional characteristics and student stratum	17
7. Summary of NPSAS:04 evaluations	42
8. Numbers of NPSAS:04 sampled, eligible, and participating institutions and enrollment list participation rates, by institutional characteristics: national sample.....	48
9. Numbers of NPSAS:04 sampled, eligible, and participating institutions and enrollment list participation rates, by institutional characteristics: state samples.....	49
10. Numbers of NPSAS:04 sampled and eligible students and response rates, by institutional characteristics and student type: national sample	51
11. Numbers of NPSAS:04 sampled, eligible, and responding students and response rates, by institutional characteristics: state samples	52
12. Results of Central Processing System (CPS) matching for 2003–04 and 2004–05, by institutional characteristics and student type: 2004	55
13. Results of National Student Loan Data System (NSLDS) matching, by institutional characteristics and student type: 2004.....	56
14. Student record abstraction method: 2004.....	57
15. Institutional-level computer-assisted data entry (CADE) completion rates, by institutional characteristics and abstraction method: 2004	58
16. Student-level computer-assisted data entry (CADE) completion rates, by institutional characteristics and student type: 2004.....	59
17. Student locating, by institutional characteristics and student type: 2004.....	60
18. Batch processing record match rates, by tracing source: 2004	61
19. Students requiring intensive tracing procedures, by institutional characteristics and student type: 2004	62
20. Locate and interview rates, by intensive tracing efforts: 2004	62
21. Student interview completion results, by institutional characteristics and student type: 2004.....	64
22. Student interview completion mode: 2004	65

23.	Percent of student respondents with data, by institutional characteristics, student type, and source: 2004	67
24.	Cumulative flow of enrollment list receipt: 1996 and 2004.....	69
25.	Institutional NPSAS:04 enrollment list participation, by prior NPSAS participation	70
26.	Distribution of participating NPSAS:04 institutions, by 2000 Carnegie classification	71
27.	NPSAS participation of historically Black colleges and universities (HBCUs): 1987–2004.....	71
28.	Types of discrepancies encountered with student lists, by highest level of offering: 2004.....	72
29.	Nature and source of elements preloaded into computer-assisted data entry (CADE): 2004.....	73
30.	Comparison of NPSAS:04 student record data element completion rates, by method of abstraction: 2004.....	77
31.	First-time beginner (FTB) determination, by student type: 2004	79
32.	Help desk incidents, by type: 2004	80
33.	Average time to complete full-scale student interview, by student type: 2004	83
34.	Average time to complete full-scale student interview, by interview section and student type: 2004	83
35.	Average time to complete full-scale student interview, by interview section and mode of administration: 2004	84
36.	Average on-screen and transit time, by response mode: 2004	85
37.	Average time to complete self-administered student interview, by internet connection type: 2004.....	86
38.	Average calls per case, by interview status: 2004.....	86
39.	Average calls per case, by institutional characteristics and student type: 2004	87
40.	Summary of coding results for major field of study, by respondent type: 2004	88
41.	Rates of help text usage for items accessed by 5 percent or more of respondents, by interview screen and administration mode: 2004.....	89
42.	Conversion rates for critical items: 2004	91
43.	NPSAS:04 interview item nonresponse for items with more than 10 percent missing	92
44.	NPSAS:04 interview item nonresponse for items with more than 10 percent "don't know," by mode of administration	94
45.	Description of missing data codes: 2004	101
46.	Summary of institution nonresponse bias analysis for all institutions, by type of institution: 2004	111
47.	Weight adjustment factors for institution poststratification: 2004	112
48.	Weight adjustment factors for institution nonresponse adjustment: 2004	113
49.	Institution weight distribution and unequal weighting effects (UWEs): 2004.....	117
50.	Weight adjustment factors for unknown student eligibility status: 2004	120

51.	Summary of student nonresponse bias analysis for all students, in public 2-year institutions: 2004.....	122
52.	Weight adjustment factors for student location nonresponse adjustment: 2004	124
53.	Weight adjustment factors for student refusal nonresponse adjustment: 2004	126
54.	Weight adjustment factors for student other nonresponse adjustment: 2004.....	128
55.	Weight adjustment factors for student poststratification: 2004.....	133
56.	Student weight distribution and unequal weighting effects (UWEs): 2004.....	136
57.	Summary of item response rates for all students, by type of institution: 2004	138

List of Figures

Figure		Page
1.	Schematic of sequential NPSAS:04 sampling operations.....	6
2.	The 2004 National Study of Faculty and Students institution website home page	21
3.	The 2004 National Study of Faculty and Students (NSoFaS:04) institution website status screen	23
4.	Structure and content of computer-assisted data entry (CADE) student record abstraction instrument: 2004.....	27
5.	The 2004 National Postsecondary Student Aid Study (NPSAS:04) web-CADE home page.....	30
6.	Structure and flow of student interview: 2004.....	34
7.	Overview of student data collection: 2004.....	36
8.	The 2004 National Postsecondary Student Aid Study (NPSAS:04) website home page.....	39
9.	NPSAS:04 locating and interview outcomes	63
10.	Cumulative flow of computer-assisted data entry (CADE) completions: 1996 and 2004.....	75
11.	Computer-assisted data entry (CADE) completions, by abstraction mode: 2004.....	75
12.	Visual representation of on-screen and transit times: 2004.....	82
13.	The 2004 National Postsecondary Student Aid Study (NPSAS:04) error rate: question delivery	96
14.	The 2004 National Postsecondary Student Aid Study (NPSAS:04) error rate: data entry	96
15.	Receiver Operating Characteristics (ROC) curve for overall institution response propensity: 2004.....	118
16.	Receiver Operating Characteristic (ROC) curve for overall student response propensity: 2004.....	136

This page left intentionally blank.

Chapter 1

Overview of NPSAS:04

This document provides a description of the methodological procedures and results for the 2004 National Postsecondary Student Aid Study (NPSAS:04). The 2004 study is being conducted for the National Center for Education Statistics (NCES) of the U.S. Department of Education, Washington, DC, as authorized by Title I, Section 153 of the Education Sciences Reform Act of 2002, P.L. 107-279, 116 Stat. 1940 (2002). For reference, previous cycles of NPSAS and its longitudinal spin-off studies, the Beginning Postsecondary Students Longitudinal Study (BPS) and the Baccalaureate and Beyond Longitudinal Study (B&B), were authorized by the following legislation:

The General Education Provisions Act, as amended, 20 U.S.C. §1221 e-1 (2001).

The Higher Education Act of 1965, as amended by the Higher Education Amendments of 1986, Title XIII(a), Section 1303, and Title XIV, 20 U.S.C. §1070 et seq. (1994).

The Higher Education Act of 1965, Augustus F. Hawkins – Robert T. Stafford Elementary and Secondary School Improvement Amendments of 1988, 20 U.S.C. §2911 to 2976 (2001).

Sections 404(a), 408(a), and 408(b) of the National Education Statistics Act of 1994, 20 U.S.C. 9001 et seq. (2002).

NPSAS:04 is being conducted as the student component study of the 2004 National Study of Faculty and Students (NSoFaS:04) under contract by RTI International (RTI).¹ Results for the faculty component study of NSoFaS:04—the 2004 National Study of Postsecondary Faculty (NSOPF:04)—are provided in a separate methodology report (Heuer et al. forthcoming).

This introductory chapter describes the background, purposes, schedule, and products of the NPSAS:04 study. In chapter 2, study design and methods are described. Overall outcomes of the several stages of data collection are presented in chapter 3. Chapter 4 presents evaluations of procedures used to collect information from institutions and students and the quality of the data collected. Chapter 5 describes the procedures used in data file preparation. Chapter 6 presents the nonresponse bias analyses, weighting procedures, and variance estimation. Materials used during the study are provided as appendixes to the report and cited in the text where appropriate.

All analyses conducted to evaluate the effectiveness of the NPSAS:04 procedures are discussed. Unless otherwise indicated, a criterion probability level of 0.05 was used for all tests of significance. Throughout this document, reported numbers of sample institutions and students have been rounded to further ensure confidentiality of individual student data. As a result, row and column entries in tables may not sum to their respective totals, and reported percentages may differ somewhat from those that would result from these rounded numbers.

¹ RTI International is a trade name of Research Triangle Institute.

1.1 Background and Purpose of NPSAS

NPSAS is a comprehensive nationwide study to determine how students and their families pay for postsecondary education. The study is based on a nationally representative sample of all students (aided and nonaided) in postsecondary education institutions. Undergraduate, graduate, and first-professional students comprise the sample; these students attend all types and levels of institutions, including public and private for-profit and not-for-profit institutions, and less-than-2-year institutions to 4-year colleges and universities.

The first NPSAS study was conducted in 1986–87 to meet the need for national-level data about significant financial aid issues. Since 1987, NPSAS has been fielded every 3 to 4 years, with the last cycle conducted during the 1999–2000 academic year. Beginning in 1990, each NPSAS data collection has provided the sample and base-year data for either the BPS or the B&B. NPSAS:04 serves as the base-year study for BPS. These students will be followed up in 2006 and again in 2009.

A main objective of NPSAS:04 is to produce reliable national estimates of characteristics related to financial aid for postsecondary students. No other single national database contains student-level records for students receiving financial aid from all of the numerous and disparate programs funded by the federal government, the states, postsecondary institutions, employers, and private organizations. The data are part of NCES’s comprehensive information on student financial aid and other characteristics of those enrolled in postsecondary education. The study focuses on three general questions with important policy implications for financial aid programs:

- How do students and their families finance postsecondary education?
- How does the process of financial aid work, in terms of both who applies for and who receives aid?
- What are the effects of financial aid on students and their families and on postsecondary institutions?

1.2 Major Design Changes

1.2.1 Combining NPSAS and NSOPF

For the first time, NPSAS and NSOPF were conducted together under one contract: NSoFaS:04. There has historically been a great deal of overlap in the institutional samples for these two studies since the target populations for both studies involve postsecondary institutions. To minimize institutional burden, and also to maximize efficiency in data collection procedures, the two studies were combined. This report will document the methodology and procedures used in NPSAS:04 and will discuss issues related to NSOPF when such procedures were relevant for NPSAS as well.

1.2.2 State-Representative Samples

Another important change is that NPSAS:04 was designed to provide state-level representative estimates for undergraduate students within three institutional strata—public 2-year institutions; public 4-year institutions; and private not-for-profit 4-year institutions for 12 states that were categorized into three groups based on population size—four large, four medium, and four small: California, Connecticut, Delaware, Georgia, Illinois, Indiana,

Minnesota, Nebraska, New York, Oregon, Tennessee, and Texas. These states were chosen for this “demonstration” study from a set of volunteering states that expressed interest and a willingness to support and encourage participation by their institutions.

1.3 Schedule and Products of NPSAS:04

1.3.1 Schedule

Table 1 summarizes the schedule of major activities for the full-scale study.

Table 1. Schedule of major NPSAS:04 activities: 2002–04

Activity	Start date ¹	End date ²
Select institutional sample	8/9/02	7/18/03
Mail and make phone contact with chief administrator	3/10/03	7/17/04
Mail and make phone contact with institutional coordinator	3/24/03	7/17/04
Obtain lists for student sampling	1/7/04	7/12/04
Select student samples	1/19/04	7/13/04
Send prenotification mailing to students	2/3/04	7/22/04
Request/obtain CPS data	1/21/04	7/14/04
Preload CPS data into CADE records	1/22/04	7/20/04
Implement CADE record abstraction	2/4/04	9/9/04
Implement Web interviewing of students	2/4/04	9/9/04
Implement CATI of students	3/4/04	9/9/04

¹ This is the date on which the activity was initiated for the first applicable institution and/or its associated students.

² This is the date on which the activity was completed for the last applicable institution and/or its associated students.

NOTE: CPS = Central Processing System; CADE = computer-assisted data entry; CATI = computer-assisted telephone interviewing.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

1.3.2 Products

The following reports based on NPSAS:04 will be published by NCES in the future:

- *Profile of Undergraduates in U.S. Postsecondary Education Institutions: 2003–04.* Describes the demographic and enrollment characteristics of undergraduate students.
- *Student Financing of Undergraduate Education: 2003–04.* Focuses on undergraduate tuition, total price of attendance, types and sources of financial aid received, net price, financial aid need, and unmet need.
- *Student Financing of Graduate and First-Professional Education: 2003–04.* Describes the demographic and enrollment characteristics of graduate and first-professional students and the types and sources of financial aid received.

The following products have already been published and are available on the NCES website (<http://nces.ed.gov/>), including the first E.D. TAB and Data Analysis System (DAS):

- *2004 National Postsecondary Student Aid Study (NPSAS:04): Student Financial Aid Estimates for 2003–04.* This E.D. TAB is the first publication based on the 2003–04 data. The E.D. TAB describes the percentages of students receiving various types of financial aid and average amounts received, by type of institution attended, attendance pattern, dependency status, and income level.

- *2004 National Postsecondary Student Aid Study (NPSAS:04): Undergraduate Financial Aid Estimates for 2003–04 by Type of Institution.* This E.D. TAB is the second publication based on the 2003–04 data. This E.D. TAB focuses only on undergraduates, including separate tables for those who attended public 4-year, private-not-for-profit 4-year, public 2-year, or private for-profit postsecondary institutions during the 2003–04 academic year. It describes average tuition and fees, average total price of attendance, and the percentages of undergraduates receiving various types and combinations of financial aid and average amounts received, with a particular focus on grants and loans.
- *2004 National Postsecondary Student Aid Study (NPSAS:04): Undergraduate Data Analysis System.* The NPSAS:04 Undergraduate DAS contains the data on a sample of about 80,000 undergraduates who were enrolled at any time between July 1, 2003, and June 30, 2004, in about 1,400 postsecondary institutions. It represents all undergraduate students enrolled in postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico that were eligible to participate in the federal financial aid programs in Title IV of the Higher Education Act.
- *2004 National Postsecondary Student Aid Study (NPSAS:04): Graduate Data Analysis System.* The NPSAS:04 Graduate DAS contains the data on a sample of about 11,000 graduate students who were enrolled at any time between July 1, 2003, and June 30, 2004, in about 1,400 postsecondary institutions. It represents all graduate students enrolled in postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico that were eligible to participate in the federal financial aid programs in Title IV of the Higher Education Act.

Contact Aurora D’Amico, or visit the website (<http://nces.ed.gov/dasol/>) to access a NPSAS:04 DAS application or one of the NPSAS:04 reports.

Aurora D’Amico
Postsecondary Studies Division
Phone: (202) 502-7334
E-mail: aurora.d’amico@ed.gov

NPSAS:04 restricted use data files. The survey data files used to create variables in the Data Analysis Systems, and the associated electronic codebooks and file documentation, are available to researchers who have obtained a restricted data license from NCES. Information on the NCES Statistical Standards Program, including Restricted Use Data Licenses Procedures, is available from the NCES website: <http://nces.ed.gov/statprog>. Further information on obtaining a restricted data license may be found in the NCES *Restricted Use Data Procedures Manual* (U.S. Department of Education 1999), at <http://nces.ed.gov/statprog/rudman>, and also from Cynthia Barton.

Cynthia L. Barton
Data Security Assistant
Phone: (202) 502-7307
E-mail: cynthia.barton@ed.gov

Chapter 2

Design and Methodology of NPSAS:04

This chapter provides a detailed summary of the design and the methods implemented in the 2004 National Postsecondary Student Aid Study (NPSAS:04). All procedures and methods were developed in consultation with a Technical Review Panel comprised of nationally recognized experts in higher education. A complete listing of this panel is provided in appendix A. Sampling is discussed in particular detail because it occurs in several stages in this study. For example, the base-year NPSAS sample design must take into account the sampling needs for the Beginning Postsecondary Students Longitudinal Study follow-up surveys (BPS:04/06 and BPS:04/09), since the longitudinal cohort is generated from the NPSAS:04 sample. In addition, institutional contacting, instrument development, data collection procedures, data quality evaluations, and data management systems are described.

2.1 Sampling

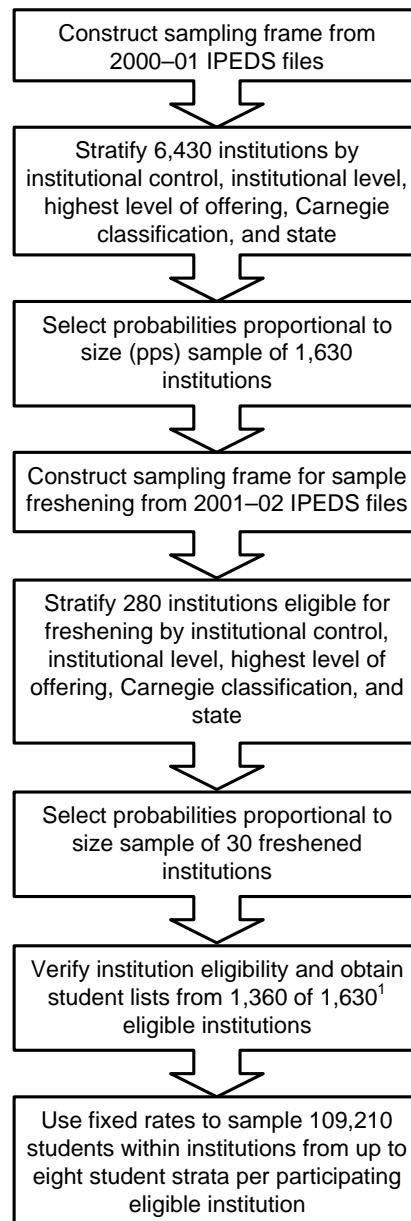
2.1.1 Target Population and Sampling Overview

The NPSAS:04 target population consists of all eligible students enrolled at any time between July 1, 2003, and June 30, 2004, in postsecondary institutions in the United States or Puerto Rico which had signed Title IV participation agreements with the U.S. Department of Education making them eligible for the federal student aid programs (Title IV institutions). To be eligible for NPSAS, students had to be enrolled in either an academic program with at least one course for credit that could be applied toward fulfilling the requirements for an academic degree or enrolled in an occupational or vocational program that requires at least 3 months or 300 clock hours of instruction to receive a degree, certificate, or other formal award. Eligible students could not be concurrently enrolled in high school and could not be enrolled solely in a general equivalency diploma (GED) or other high school completion program.

An overview of the sequential statistical sampling process for NPSAS:04 is provided in figure 1. The institution sampling frame for NPSAS:04 was constructed from the 2000–01 Integrated Postsecondary Education Data System (IPEDS) Institutional Characteristics (IC) and header files. The IPEDS data used for the initial sampling frame were collected in 2001, and the IPEDS data used for sample freshening (described in section 2.1.2) were collected in 2002. Thus, any institutions that came into existence or became eligible between the IPEDS data collections in 2002 and June 30, 2004 were not covered in the sampling frame. Institutions in the file that were not eligible (e.g., institutions located outside the United States and Puerto Rico, central offices, military academies) were deleted from the population file. The eligible institutions on the sampling frame were partitioned into 58 institutional strata based on institutional level,

institutional control, highest level of offering, Carnegie classification, and state.² All other students from these states were selected as part of the national sample.

Figure 1. Schematic of sequential NPSAS:04 sampling operations



¹ The 1,630 eligible institutions include the 1,630 originally selected, minus 30 ineligible institutions, plus 30 institutions from the freshened sample.

NOTE: IPEDS = Integrated Postsecondary Education Data System.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

² NPSAS:04 includes state-representative undergraduate student samples for three types of institutions (public 4-year, public 2-year, and private not-for-profit 4-year) in 12 states. These 12 states were selected by NCES from those expressing interest. The 12 states were categorized into three groups based on population size: four small states (Connecticut, Delaware, Nebraska, Oregon), four medium-size states (Georgia, Indiana, Minnesota, Tennessee), and four large states (California, Illinois, New York, Texas).

The 58 institutional strata, 22 nationally-representative and 36 state-representative, are shown below.

1. Public less than 2-year
2. Public 2-year, associate's Carnegie classification
3. Public 2-year, other Carnegie classification—degree-granting
4. Public 2-year, other Carnegie classification—NPSAS only
5. Public 4-year non-doctorate-granting, master's Carnegie classification
6. Public 4-year non-doctorate-granting, bachelor's Carnegie classification
7. Public 4-year non-doctorate-granting, other Carnegie classification
8. Public 4-year doctorate-granting, doctor's Carnegie classification
9. Public 4-year doctorate-granting, other Carnegie classification
10. Public 4-year NPSAS only
11. Private not-for-profit less-than-4-year, associate's Carnegie classification
12. Private not-for-profit less-than-4-year, other Carnegie classification—degree-granting
13. Private not-for-profit less-than-4-year, other Carnegie classification—NPSAS only
14. Private not-for-profit 4-year non-doctorate-granting, master's Carnegie classification
15. Private not-for-profit 4-year non-doctorate-granting, bachelor's Carnegie classification
16. Private not-for-profit 4-year non-doctorate-granting, other Carnegie classification
17. Private not-for-profit 4-year doctorate-granting, doctor's Carnegie classification
18. Private not-for-profit 4-year doctorate-granting, master's Carnegie classification
19. Private not-for-profit 4-year doctorate-granting, other Carnegie classification
20. Private not-for-profit 4-year—NPSAS only
21. Private for-profit less-than-2-year
22. Private for-profit 2-year or more
23. California public 2-year
24. California public 4-year
25. California private not-for-profit 4-year
26. Connecticut public 2-year
27. Connecticut public 4-year
28. Connecticut private not-for-profit 4-year
29. Delaware public 2-year
30. Delaware public 4-year
31. Delaware private not-for-profit 4-year
32. Georgia public 2-year
33. Georgia public 4-year
34. Georgia private not-for-profit 4-year
35. Illinois public 2-year
36. Illinois public 4-year
37. Illinois private not-for-profit 4-year
38. Indiana public 2-year
39. Indiana public 4-year
40. Indiana private not-for-profit 4-year
41. Minnesota public 2-year
42. Minnesota public 4-year
43. Minnesota private not-for-profit 4-year
44. Nebraska public 2-year
45. Nebraska public 4-year
46. Nebraska private not-for-profit 4-year
47. New York public 2-year
48. New York public 4-year
49. New York private not-for-profit 4-year
50. Oregon public 2-year
51. Oregon public 4-year
52. Oregon private not-for-profit 4-year
53. Tennessee public 2-year
54. Tennessee public 4-year
55. Tennessee private not-for-profit 4-year
56. Texas public 2-year
57. Texas public 4-year
58. Texas private not-for-profit 4-year

Institutions were selected using Chromy's sequential probability minimum replacement (pmr) sampling algorithm (Chromy 1979), which is similar to systematic sampling, to select institutions with probabilities proportional to a composite measure of size based on expected

enrollment. A sample of 1,630 institutions was selected in Fall 2002 so that these institutions could be notified early of their selection and to allow a separate sample to be selected for the field test from the remaining institutions on the sampling frame. In Summer 2003, an additional sample of about 30 institutions was selected from a frame of institutions not included on the initial sampling frame. Of the sample institutions selected for the full-scale study, about 810 were selected with certainty. The certainty institutions were either in strata in which all institutions were selected, or had expected frequencies of selection greater than unity (1.00). About 1,630 of the sampled institutions were found to be NPSAS eligible, and about 1,360 of these eligible institutions provided student enrollment lists for use as the second stage (i.e., student) sampling frame.

The sampling frames provided by sample institutions included paper and electronic lists of students enrolled in terms or courses of instruction during the previously defined NPSAS year. Student lists were sampled on a flow basis as they were received, using equal probability stratified systematic sampling. There were eight student sampling strata:

1. in-state first-time beginner students;
2. out-of-state first-time beginner students;
3. in-state other undergraduate students;
4. out-of-state other undergraduate students;
5. master's students;
6. doctoral students;
7. other graduate students; and
8. first-professional students.

First-time beginner students (FTBs) were stratified separately from other undergraduate students because they were oversampled to allow for sufficient numbers to be surveyed in the 2006 follow-up study (BPS:04/06). FTBs and other undergraduate students were each divided into in-state and out-of-state strata because undergraduate in-state students were oversampled in the 12 states with state-representative samples. These in-state and out-of-state strata were used for all institutions to allow for sampling ease and consistency; however, in states that did not have state-representative samples, in-state students were sampled at the same rate as out-of-state students.

For each student stratum, the enrollment list was sampled at a rate designed to provide approximately equal student-level probabilities. Student sampling rates were adjusted after sufficient lists had been received to accurately estimate the overall sample yield. The sampling rates were set to meet the sample sizes shown in table 2 for the national sample and table 3 for the state sample. The overall target sample size was about 121,680; however, the sampling procedures resulted in the selection of about 109,210 students. The actual sample is lower than the target sample size because institutional participation rates were somewhat lower than expected³ and sampling rates were not adjusted high enough and early enough for the participating institutions to compensate for the loss of sample yield from the non-participating institutions.

³ See section 3.1 for the results of institutional participation.

The sample size for NPSAS:04 is larger than past NPSAS studies. The primary reason for the increased sample size was to ensure sufficient yield for analytic purposes. The sample size was designed so that respondent yield would be sufficient for analyses even if actual response rates were lower than the targeted rates. Second, the National Center for Education Statistics (NCES) desired one weight to make the data easier for analysts to use. Also, as mentioned above, NPSAS:04 includes state-representative undergraduate student samples for three types of institutions (public 2-year, public 4-year, and private not-for-profit 4-year) in 12 states. A larger overall sample size was necessary to achieve state-representative samples in addition to the nationally-representative sample.

Table 2. Target numbers of sample students, by institutional stratum and type of student: 2004

Institutional stratum	All students	Undergraduates			Graduate students	First-professionals
		All undergraduates	FTBs	Other undergraduates		
All institutions	121,680	110,560	56,070	54,490	9,340	1,780
Public less than 2-year	4,990	4,990	4,540	440	†	†
Public 2-year	45,060	45,060	20,280	24,780	†	†
Public 4-year non-doctorate-granting	11,270	10,480	3,380	7,110	790	†
Public 4-year doctorate-granting	21,130	15,060	4,570	10,490	5,210	860
Private not-for-profit less-than-4-year	3,310	3,310	2,740	570	†	†
Private not-for-profit 4-year non-doctorate-granting	10,250	9,650	4,320	5,340	600	†
Private not-for-profit 4-year doctorate-granting	10,220	6,620	2,750	3,870	2,680	920
Private for-profit less-than-2-year	9,040	9,040	8,830	210	†	†
Private for-profit 2-year or more	6,430	6,340	4,670	1,680	80	†

† Not applicable.

NOTE: Detail may not sum to totals because of rounding. First-time beginner (FTB) and other undergraduate counts are based on the status known at the time of sampling.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table 3. Target numbers of sample students in the 12 state representative samples, by institutional stratum and type of student: 2004

Institutional stratum	All undergraduates	FTBs	Other undergraduates
California	11,510	1,910	9,590
Public 2-year	8,620	1,120	7,500
Public 4-year	2,070	490	1,570
Private not-for-profit 4-year	820	310	520
Connecticut	1,510	660	850
Public 2-year	590	250	340
Public 4-year	500	210	290
Private not-for-profit 4-year	420	210	210
Delaware	1,770	800	970
Public 2-year	720	290	440
Public 4-year	640	320	320
Private not-for-profit 4-year	410	200	210
Georgia	2,340	1,200	1,140
Public 2-year	1,160	750	410
Public 4-year	800	280	530
Private not-for-profit 4-year	380	180	200
Illinois	4,170	1,680	2,490
Public 2-year	2,560	1,120	1,440
Public 4-year	790	230	560
Private not-for-profit 4-year	810	330	480
Indiana	1,970	910	1,060
Public 2-year	470	250	220
Public 4-year	1,010	420	600
Private not-for-profit 4-year	490	240	250
Minnesota	2,390	1,320	1,070
Public 2-year	1,360	910	440
Public 4-year	640	220	420
Private not-for-profit 4-year	390	190	200
Nebraska	1,400	650	750
Public 2-year	530	270	260
Public 4-year	580	250	330
Private not-for-profit 4-year	290	130	160
New York	5,140	2,230	2,910
Public 2-year	1,900	1,030	870
Public 4-year	1,380	410	970
Private not-for-profit 4-year	1,860	790	1,070
Oregon	1,970	860	1,110
Public 2-year	1,090	490	600
Public 4-year	590	230	360
Private not-for-profit 4-year	290	140	150
Tennessee	1,810	800	1,010
Public 2-year	750	370	380
Public 4-year	660	230	430
Private not-for-profit 4-year	400	200	200
Texas	6,260	2,970	3,290
Public 2-year	4,030	2,280	1,740
Public 4-year	1,640	450	1,190
Private not-for-profit 4-year	600	240	360

NOTE: Detail may not sum to totals because of rounding. First-time beginner (FTB) and other undergraduate counts are based on the status known at the time of sampling.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

2.1.2 Institutional Sample and Eligibility

The target population for NPSAS:04 included nearly all Title IV participating postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico.⁴ To be eligible for NPSAS:04, an institution was required, during the 2003–04 academic year, to

- offer an educational program designed for persons who had completed secondary education;
- offer at least one academic, occupational, or vocational program of study lasting at least 3 months or 300 clock hours;
- offer courses that were open to more than the employees or members of the company or group (e.g., union) that administered the institution;
- be located in the 50 states, the District of Columbia, or Puerto Rico;
- be other than a U.S. Service Academy;⁵ and
- have a signed Title IV participation agreement with the U.S. Department of Education.

As indicated above, institutions providing only avocational, recreational, or remedial courses or only in-house courses for their own employees were excluded. The listed eligibility requirements are consistent with those used in previous NPSAS rounds, with two exceptions: the last requirement was new for NPSAS:2000, and offering more than just correspondence courses was no longer a requirement beginning with NPSAS:04.

The student sample was allocated to the separate applicable institutional and student sampling strata, defined above. Student sampling rates, which were used to compute institution-level composite measures of size, were based on the 2000 IPEDS Fall Enrollment Survey counts and the required sample sizes (see appendix B for details).

An independent sample of institutions was selected for each institutional stratum using Chromy's sequential probability minimum replacement (pmr) sampling algorithm (Chromy 1979) to select institutions with probabilities proportional to their computed measures of size. However, rather than multiple selections of sample institutions being allowed,⁶ those with expected frequencies of selection greater than unity (1.00) were selected with certainty. The remainder of the institutional sample was selected from the remaining institutions within each stratum. The sampling algorithm was implemented with a random start for each institutional stratum to ensure the positive pairwise probabilities of selection that were needed for proper variance estimation (Chromy 1981).

The sample of institutions was initially selected in September 2002 to allow the field test sample institutions to be selected from the complement of the full-scale sample. In July 2003, a freshened sample of institutions was selected from a frame of institutions that were not on the

⁴Title IV participating institutions excluded from the target population were the five U.S. Service Academies.

⁵These academies were not eligible for this financial aid study because of their unique funding/tuition base.

⁶Precluding institutions with multiple selections at the first stage of sampling made it unnecessary to select multiple second-stage samples of students.

original sampling frame because they were either new institutions or newly eligible institutions.⁷ Freshening was done to ensure the representativeness of the sample because the initial sample was selected a year earlier. The measures of size for the supplemental sampling frame from which the freshened sample was selected were based on the 2002 IPEDS Fall Enrollment Survey counts.

Table 4 shows the institution sampling rates and the numbers of certainty and noncertainty institutions selected for each of the 22 national strata and the 36 state strata, respectively. The institutions included in the national sample were selected from all 58 strata, while institutions included in the state samples were selected only from the 36 state strata. Within each institutional stratum, additional implicit stratification was accomplished by sorting the stratum sampling frame by the following classifications: (1) historically Black colleges and universities (HBCU) indicator; (2) Carnegie classifications of postsecondary institutions; (3) the Office of Business Economics (OBE) Region from the IPEDS header file (Bureau of Economic Analysis of the U.S. Department of Commerce Region);⁸ and (4) the institution measure of size. The objective of this implicit stratification was to approximate proportional representation of institutions on these measures.

Table 4. Institutional sampling rates and number of certainty and noncertainty institutions, by institutional stratum: 2004

Institutional stratum ¹	Size of universe ²	Sampling rate	Number of sample institutions		
			Total	Certainty	Noncertainty
Total	6,706	0.25	1,670	810	860
Public less than 2-year	317	0.21	70	20	50
Public 2-year associate	623	0.12	70	#	70
Public 2-year other—degree-granting	36	0.14	10	#	#
Public 2-year other—NPSAS only ³	69	0.45	30	10	20
Public 4-year non-doctorate-granting, master's	118	0.17	20	#	20
Public 4-year non-doctorate-granting, bachelor's	65	0.17	10	#	10
Public 4-year non-doctorate-granting, other	47	0.06	#	#	#
Public 4-year doctorate-granting, doctor's	126	1.00	130	130	#
Public 4-year doctorate-granting, other	49	0.20	10	#	10
Public 4-year NPSAS only ³	16	0.13	#	#	#
Private not-for-profit less-than-4-year, associate	108	0.31	30	#	30
Private not-for-profit less-than-4-year, other—degree-granting	24	0.08	#	#	#
Private not-for-profit less-than-4-year, other—NPSAS only ³	240	0.16	40	10	30
Private not-for-profit 4-year non-doctorate-granting, master's	132	0.09	10	#	10
Private not-for-profit 4-year non-doctorate-granting, bachelor's	293	0.12	30	#	30
Private not-for-profit 4-year non-doctorate-granting, other	202	0.16	30	#	30
Private not-for-profit 4-year doctorate-granting, doctor's	52	1.00	50	50	#
Private not-for-profit 4-year doctorate-granting, master's	61	0.18	10	#	10
Private not-for-profit 4-year doctorate-granting, other	143	0.09	10	#	10
Private not-for-profit 4-year—NPSAS only ³	51	0.06	#	#	#
Private for-profit less-than-2-year	1,445	0.12	170	10	170
Private for-profit 2-year or more	1,149	0.10	110	10	110

See notes at end of table.

⁷ Some of the IPEDS data provided by institutions that was used to determine eligibility for the original frame was sufficiently different from the IPEDS data subsequently provided by institutions to determine eligibility for the freshening frame.

⁸ For sorting purposes, Alaska and Hawaii were combined with Puerto Rico in the Outlying Areas region rather than in the Far West region.

Table 4. Institutional sampling rates and number of certainty and noncertainty institutions, by institutional stratum: 2004—Continued

Institutional stratum ¹	Size of universe ²	Sampling rate	Number of sample institutions		
			Total	Certainty	Noncertainty
California	298	0.38	110	50	60
Public 2-year	114	0.33	40	#	40
Public 4-year	33	1.00	30	30	#
Private not-for-profit 4-year	151	0.27	40	20	20
Connecticut	45	1.00	50	50	#
Public 2-year	15	1.00	20	20	#
Public 4-year	10	1.00	10	10	#
Private not-for-profit 4-year	20	1.00	20	20	#
Delaware	9	1.00	10	10	#
Public 2-year	3	1.00	#	#	#
Public 4-year	2	1.00	#	#	#
Private not-for-profit 4-year	4	1.00	#	#	#
Georgia	108	0.79	90	60	30
Public 2-year	53	0.57	30	10	30
Public 4-year	21	1.00	20	20	#
Private not-for-profit 4-year	34	1.00	30	30	#
Illinois	148	0.49	70	40	40
Public 2-year	48	0.63	30	10	20
Public 4-year	12	1.00	10	10	#
Private not-for-profit 4-year	88	0.34	30	10	20
Indiana	71	0.85	60	50	10
Public 2-year	16	1.00	20	20	#
Public 4-year	14	1.00	10	10	#
Private not-for-profit 4-year	41	0.73	30	20	10
Minnesota	90	0.86	80	70	10
Public 2-year	43	0.70	30	20	10
Public 4-year	11	1.00	10	10	#
Private not-for-profit 4-year	36	1.00	40	40	#
Nebraska	29	1.00	30	30	#
Public 2-year	7	1.00	10	10	#
Public 4-year	7	1.00	10	10	#
Private not-for-profit 4-year	15	1.00	20	20	#
New York	249	0.43	110	70	30
Public 2-year	37	1.00	40	40	#
Public 4-year	45	0.67	30	20	10
Private not-for-profit 4-year	167	0.24	40	20	20
Oregon	52	1.00	50	50	#
Public 2-year	17	1.00	20	20	#
Public 4-year	10	1.00	10	10	#
Private not-for-profit 4-year	25	1.00	30	30	#
Tennessee	75	0.81	60	50	10
Public 2-year	21	1.00	20	20	#
Public 4-year	10	1.00	10	10	#
Private not-for-profit 4-year	44	0.68	30	20	10

See notes at end of table.

Table 4. Institutional sampling rates and number of certainty and noncertainty institutions, by institutional stratum: 2004—Continued

Institutional stratum ¹	Size of universe ²	Sampling rate	Number of sample institutions		
			Total	Certainty	Noncertainty
Texas	166	0.54	90	50	40
Public 2-year	68	0.44	30	10	20
Public 4-year	43	0.70	30	20	10
Private not-for-profit 4-year	55	0.55	30	20	10

Rounds to zero.

¹ Stratum reflects institutional categorization as determined from the 2000–01 Integrated Postsecondary Education Data System (IPEDS) file; some institutions were categorized differently in later IPEDS files.

² Based on the 2000–01 and 2002–03 IPEDS files.

³ “NPSAS-only” refers to institutions that were not included on the sampling frame for NSOPF—the faculty component of NSoFaS.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

2.1.3 Student Sample and Eligibility

The postsecondary students eligible for NPSAS:04 were those who attended a NPSAS-eligible institution during the 2003–04 academic year and who were

- enrolled in *either* (1) an academic program; (2) at least one course for credit that could be applied toward fulfilling the requirements for an academic degree; *or* (3) an occupational or vocational program that required at least 3 months or 300 clock hours of instruction to receive a degree, certificate, or other formal award;
- not concurrently enrolled in high school; and
- not enrolled *solely* in a GED or other high school completion program.

Each sampled institution that was verified as NPSAS-eligible was asked to provide a list of all its students who satisfied all the NPSAS eligibility conditions, preferably an “unduplicated” electronic list (i.e., one in which each student’s name appeared only once), together with identifying, classifying, and locating information (see section 2.3.2). Although electronic files were preferred, student lists were accepted in a variety of formats, as long as they were complete.

Several checks on quality and completeness of student lists were implemented before the sample students were selected. Institutions providing lists that failed these checks were contacted to resolve the detected problems. Enrollment lists failed quality control checks under the following conditions:

- FTBs were not identified (unless the institution only enrolled graduate/first-professional students or explicitly indicated that no FTBs existed in the school); and/or
- student level—undergraduate, master’s, doctoral, other graduate, or first professional—was not clearly identified.

Quality checks on student counts were performed separately for FTBs and all other students. The “unduplicated” FTB counts were checked against the fall enrollment counts from the IPEDS Fall Enrollment Survey because IPEDS does not have “unduplicated” annual FTB

counts. The check failed if the count for any “unduplicated” list was at least 50 percent less than the IPEDS count. The list counts were expected to almost always be more than the IPEDS counts because the IPEDS counts were not annual counts. This check identified institutional enrollment lists that under-reported FTBs. The “unduplicated” counts of other undergraduates, graduates, and first-professionals were checked against the “unduplicated” annual enrollment counts from the IPEDS Fall Enrollment Survey. The check failed if the count for any “unduplicated” list differed by at least 50 percent from the IPEDS count.⁹

As student lists were received from institutions, students were sampled using predetermined sampling rates that varied by student stratum. Stratified systematic sampling was used to ensure comparable sampling procedures for both paper and electronic lists. After the sample of students had been selected for an institution, Social Security numbers (SSNs) of those sampled were compared to those of students who had already been selected from other institutions to eliminate cross-institution duplication. Multiplicity adjustments in the sample weighting (described in more detail in section 6.2.1) accounted for the fact that any students who attended more than one institution during the NPSAS year had more than one chance of selection.

Some institutional systems sent in lists for multiple institutions or campuses. If the lists were separate for each institution or campus, then the samples were selected separately and independently. If the lists were combined into one list with no identifier mapping students to institution or campus, then one student sample was selected that represented all of the institutions or campuses included on the list. In such cases, sampling rates were adjusted, and a weight adjustment was made (see section 6.1.1).

For paper lists, samples were selected manually, and then the list of sample students was entered into an electronic file. When students from different strata (e.g., FTBs and other undergraduates) were combined on a paper list, the sampling rate from the stratum with the higher rate was used. Then after the sample was entered into an electronic file, the students from the other stratum (or strata) were subsampled to match the sampling rates for that stratum.¹⁰

Initial student sampling rates were calculated for each sample institution using sampling rates designed to generate approximately equal probabilities of selection within the ultimate institution-by-student sampling strata (see appendix B). However, these rates were sometimes modified as follows:

- Student sampling rates were increased, as needed, so that the sample size achieved at each sample institution would be at least 10 sample students, where possible, to ensure sufficient yield for variance estimation.
- Student sampling rates were decreased if the sample size was more than 50 greater than the institution had been told to expect, which was based on the sampling rate applied to the enrollment count on the sampling frame.¹¹

⁹ If provided paper lists were not “unduplicated,” an “unduplicated” total was estimated by applying an empirically determined multiplicity factor (0.50) to the student count from the provided lists.

¹⁰ The issue of combined strata was not a problem for electronic lists since the file could be sorted by stratum prior to sampling.

¹¹ This was to ensure minimal burden for the institutions participating in computer-assisted data entry (CADE) data abstraction.

- Sample yield was monitored throughout enrollment list collection and student sampling rates were adjusted periodically for institutions for which sample selection had not yet been performed to ensure that the desired student sample sizes were achieved.

These adjustments to the initial sampling rates resulted in some additional variability in the student sampling rates and, hence, in some increase in survey design effects (variance inflation—see section 6.4.3).

The planned and achieved sample sizes by student stratum and level of offering are shown in table 5. The initial classification of the student sample overall and by institution type and student stratum are shown in table 6. As mentioned earlier, the achieved sample yield was less than what was planned (109,210 students as compared to the target of 121,680). Institutional participation rates were somewhat lower than expected, and sampling rates were not adjusted high enough and early enough for the participating institutions to compensate for the loss of sample yield from the non-participating institutions. Overall, there were more doctoral and other graduate students in the sample than planned, and there were fewer FTBs, other undergraduate students, and master’s students than planned. (See appendix B, section B.4 for additional detail on the sample allocation.)

Table 5. Planned and achieved NPSAS:04 student samples, by student stratum and level of offering: 2004

Student stratum ¹	Institutional level ²	Students sampled		
		Number expected ³	Number achieved ⁴	Percent ⁵
Total	All institutions	121,680	109,210	89.8
FTB	Subtotal	56,070	49,410	88.1
	Less-than-2-year	14,080	11,370	80.8
	2- to 3-year	24,530	22,250	90.7
	4-year	42,700	15,790	37.0
Other undergraduate	Subtotal	54,490	47,680	87.5
	Less-than-2-year	800	920	115.1
	2- to 3-year	25,990	19,660	75.6
	4-year	27,690	27,100	97.9
Master's	4-year	5,310	3,720	70.1
Doctor's	4-year	3,630	4,950	136.1
Other graduate	4-year	400	1,660	416.3
First-professional	4-year	1,780	1,790	100.7

¹ As expected the sampling frames misclassified some individual students with respect to first-time beginner (FTB), undergraduate, graduate, and first-professional status; statistics presented in this table are based on the sampling frame classification. The two FTB strata (in-state and out-of-state) have been combined, and the two other undergraduate strata (in-state and out-of-state) have been combined.

² Institutional level is based on the 2003–04 Integrated Postsecondary Education Data System (IPEDS) file. This file was used to reflect the level during the NPSAS year, which may be different than the level at the time of sampling.

³ Based on sample allocation.

⁴ The student sample was drawn from 1,360 eligible institutions that provided enrollment lists.

⁵ Percent reported reflects the ratio of “achieved” to “expected.”

NOTE: Detail may not sum to totals because of rounding. FTB = first-time beginner.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table 6. Initial classification of NPSAS:04 student sample, by institutional characteristics and student stratum

Institutional characteristics	Total sample ¹		Student sampling stratum ²							
	Number	Percent	FTB sample ³		Other undergraduate sample		Graduate sample ³		First-professional sample	
			Number	Percent	Number	Percent	Number	Percent	Number	Percent
All institutions	109,210	100.0	49,410	100.0	47,680	100.0	10,330	100.0	1,790	100.0
Institutional level										
Less-than-2-year	12,310	11.3	11,370	23.0	920	1.9	20	0.1	#	0.2
2-year	41,960	38.4	22,250	45.0	19,660	41.2	40	0.4	10	0.5
4-year non-doctorate-granting	21,550	19.7	8,220	16.6	12,130	25.4	1,180	11.4	20	0.9
4-year doctorate-granting	33,400	30.6	7,570	15.3	14,970	31.4	9,100	88.1	1,770	98.4
Institutional control										
Public	71,030	65.0	27,820	56.3	35,720	74.9	6,570	63.6	920	51.3
Private not-for-profit	22,730	20.8	8,770	17.8	9,450	19.8	3,640	35.2	870	48.4
Private for-profit	15,460	14.2	12,820	26.0	2,510	5.3	120	1.2	#	0.2
Type of institution										
Public less-than-2-year	2,780	2.5	2,330	4.7	440	0.9	#	#	#	#
Public 2-year	36,340	33.3	17,780	36.0	18,520	38.8	30	0.3	10	0.5
Public 4-year non-doctorate-granting	9,210	8.4	2,680	5.4	5,970	12.5	550	5.4	10	0.4
Public 4-year doctorate-granting	22,700	20.8	5,030	10.2	10,790	22.6	5,980	57.9	900	50.4
Private not-for-profit 2-year or less	3,020	2.8	2,350	4.8	670	1.4	10	#	#	#
Private not-for-profit 4-year non-doctorate-granting	9,310	8.5	3,920	7.9	4,840	10.2	540	5.3	10	0.4
Private not-for-profit 4-year doctorate-granting	10,400	9.5	2,510	5.1	3,940	8.3	3,090	29.9	860	48.0
Private for-profit less-than-2-year	8,750	8.0	8,280	16.8	460	1.0	10	0.1	#	0.2
Private for-profit 2-year or more	6,710	6.1	4,540	9.2	2,050	4.3	110	1.1	#	0.1

Rounds to zero.

¹ The student sample was drawn from 1,360 eligible institutions that provided enrollment lists.² As expected, the sampling frames misclassified some individual students as to first-time beginner (FTB), undergraduate, graduate, and first-professional status; statistics presented in this table are based on the sampling frame classification. This explains why some graduate/first-professional students were sampled from institutions that do not have such students.³ The two FTB strata (in-state and out-of-state) have been combined, the two other undergraduate strata (in-state and out-of-state) have been combined, and the master's, doctorate, and other graduate strata have been combined.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

2.2 Sources of Data

Information for NPSAS:04 was obtained from several sources, including the following:

- **Student Record abstraction (computer-assisted data entry [CADE]):** Data from institutional financial aid and registrar records at the sampled institutions currently attended. These data were entered at the institution by institutional personnel or field data collectors in 2003–04 using a web-based computer-assisted data entry program (web-CADE) or directly downloaded to a data file (data-CADE).
- **Student Interview:** Data collected directly from sampled students via web-based self-administered or interviewer-administered questionnaires.
- **Central Processing System (CPS):** U.S. Department of Education database of federal financial aid applications for the 2003–04 academic year. Data provided by students on the Free Application for Federal Student Aid (FAFSA) form.
- **National Student Loan Data System (NSLDS):** U.S. Department of Education database of federal Title IV loans and Pell Grants. The accessed NSLDS Pell Grant and loan files included information for the year of interest, as well as a complete federal grant or loan history for each applicable student.
- **Integrated Postsecondary Education Data System (IPEDS):** U.S. Department of Education, National Center for Education Statistics, database of descriptive information about individual postsecondary institutions attended by sample students.

These diverse and sometimes overlapping data sources provided some information that could not be collected directly from institutions or students. They also provided a way to “fill in” certain data that were also gathered via student record abstraction or the student interview but were missing for individual sample members (e.g., demographics). Finally, these overlapping data sources sometimes served to check or confirm the accuracy of similar information obtained from other sources.

2.3 Data Collection Design

As mentioned in the previous section, NPSAS data are gathered from multiple sources, some directly from institutions and students, and some from extant data sources. The various data collections will be described in the following sections. As with previous rounds of NPSAS, the first step involved contacting the institutions, describing the nature and purpose of the study, identifying institutional coordinators, and asking for institutional participation. Next, institutions were asked to provide lists of enrolled students from which the student sample could be selected. Student-level data were then collected via the institutional student record abstraction and the student interview.

Two important changes of note involve the sequence of student-level data collection processes. In past rounds of NPSAS, institutions were not asked to provide any contact information for students until the student sample had been selected. Information needed to locate and contact students for participation in the student interview was collected as part of the student record abstraction, to avoid unduly burdening institutions by asking for information for students that would not ultimately become part of the student sample. However, in the past, the sequential

linkage between CADE record abstraction and the student interview has adversely impacted the overall data collection schedule, and in turn, subsequent release of the data. Therefore, in NPSAS:04, student contact information was obtained with the enrollment lists, so that student interviewing could occur simultaneously with CADE and, thereby, reduce the amount of time required for data collection.

Another significant change in data collection procedures was the introduction of a single web-based instrument for both self-administered and interviewer-administered student interviews, which benefited the study in several ways, including facilitating the expeditious processing and documentation of data files.

The following sections describe the procedures implemented at each stage of data collection in more detail.

2.3.1 Institutional Contacting

Training

Three training sessions were held for institution contactors. In each session, institution contactors were trained to

- prompt institutions to provide requested data within schedule constraints;
- handle help desk questions on all components;
- avert and convert refusals;
- deal effectively with gatekeepers and other institutional staff; and
- use the Institutional Contacting System¹² (ICS) to document calls, schedule appointments, and send problems to project staff for resolution.

The first training session focused on institution recruitment—contacting the office of the chief administrator, making an initial contact to the designated institution coordinator, and prompting for completion of the Coordinator Response Form. The second training coincided with the mailing of the complete the National Study of Faculty and Students (NSoFaS) binder to the coordinators, and focused on prompting for student and faculty lists. The third training included an introduction to the CADE component, and focused on coordinating data collection and prompting activities for the student and faculty components of NSoFaS.

Each training session consisted of 2 days of classroom instruction and practice sessions in which contactors paired off with other contactors to rehearse prompting calls, answering help desk questions and using the ICS.

Additional ad hoc trainings on specific issues (refusal aversion and conversion, handling multi-campus institutions, etc.) were held as needed, often as part of regularly scheduled quality control meetings.

¹² The ICS is designed to track and document the status of sample institutions through the various phases of the project including initial contacting, coordinator contracting, enrollment list preparation, sampling, and data collection. See section 2.4.2 for more detail.

Institutional contacting

The eligible institutional sample for NSoFaS:04 consisted of about 1,630 institutions, all of which were sampled for NPSAS and 1,080 of which were also sampled for the National Study of Postsecondary Faculty (NSOPF). The process of recruiting institutions and initiating coordinator contacts began well before the beginning of the academic year of interest for several reasons. First, such early notification allowed schools time to plan for the resources required for participation within the study's schedule constraints. Early contacting also allowed institutions enough time for any required internal review and approval procedures, and time for institutions to work with project staff to resolve any potential obstacles to their participation. This advance notification was intended to increase the institutional response rate, accelerate the receipt of student lists, and increase the response rate of student sample identification.

Prior to the field test, endorsements from major professional associations and organizations that had previously endorsed NPSAS were renewed, as appropriate, to both NSoFaS component studies. An effort was also made to solicit new endorsements from other organizations. In all, 25 organizations endorsed NSoFaS.¹³ These endorsements were featured on all project letterhead, pamphlets, and on the NSoFaS website. In addition, several of these organizations continued to promote the study throughout the data collection period in newsletters and other communications.

For NPSAS, the overall process of student enrollment list collection proceeded according to the following steps which are described in detail below:

- initial contact;
- institution recruitment, and
- student list collection.

Initial contact. Institution contactors were hired and initially trained to confirm the name and contact information for the chief administrator, who served to confirm the institution's intention to participate in the study. Institutional eligibility was also confirmed at this time.

Institutions flagged as potentially ineligible—including closed institutions and institutions that indicated they were not Title IV eligible or open to the general public—were reviewed by project staff. Instances of sampled institutions that merged with other institutions (sampled or unsampled), possible changes in mission that could affect the institution's sampling strata, and changes in name or address were also reviewed.

Institution recruitment

Notification materials. Institution recruitment began in Spring 2003. Chief administrators at institutions sampled for NSoFaS were sent the following materials. (Copies of letters and pamphlets sent to chief administrators and institutional coordinators can be found in appendix C.)

- A cover letter, printed on NCES letterhead, providing background information on NPSAS and NSOPF.¹⁴ The letter requested that the chief administrator designate an institutional coordinator.

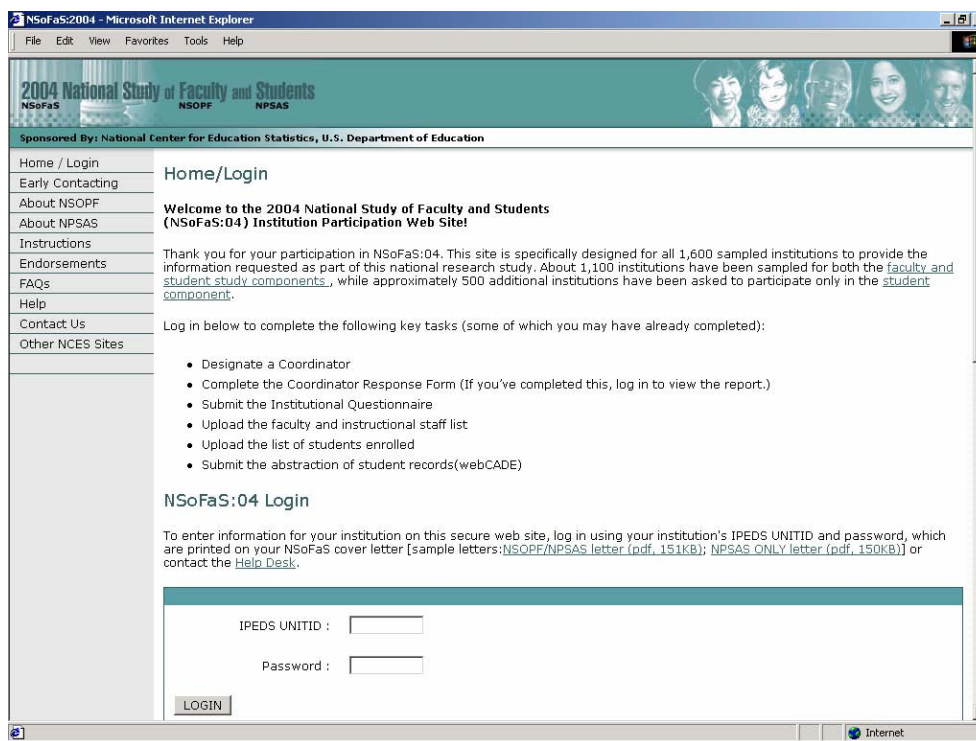
¹³ One of these organizations, associated with for-profit schools, was asked only for an endorsement for NPSAS.

¹⁴ Materials regarding NSOPF were included only to institutions that were also selected to participate in NSOPF.

- An NSoFaS pamphlet summarized the objectives of both NPSAS and NSOPF, and provided background information and selected findings for each component.¹⁵
- A NPSAS pamphlet, included to show what had been prepared for sampled students.
- A project timeline outlining the flow of activities for both component studies of NSoFaS, and the projected schedule for each.
- If sampled for NSOPF, an NSOPF pamphlet was included to show what had been prepared for mailing to the sampled faculty.

Institution website. A website was developed for use by institutions selected for participation in NSoFaS and the address was provided in all materials sent to institutions. The NSoFaS website served a number of functions for institutions selected for participation in NSoFaS. In addition to providing general information about the NPSAS and NSOPF studies being conducted, it served as a central repository for all study documents and instructions. It also allowed for the uploading of electronic lists of enrolled students. Figure 2 presents the home page of the NSoFaS website.

Figure 2. The 2004 National Study of Faculty and Students institution website home page



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Study of Faculty and Students (NSoFaS:04) website.

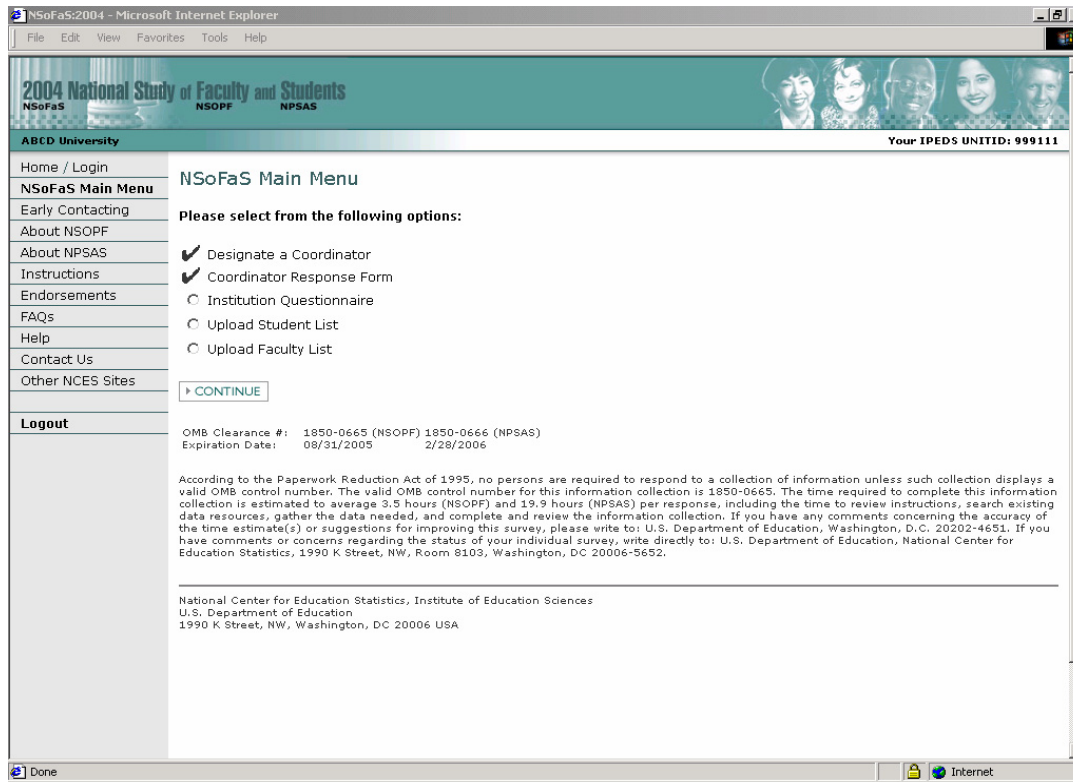
¹⁵ The institution website provided all necessary information and documentation to institutions that participated in NSoFaS. All were selected for NPSAS and many were also selected for NSOPF. Study-specific materials were provided as appropriate.

Visitors to the website were provided with the following links (see navigation bar on the left side of the screen):

- *Early Contacting* provided information about the early institution contacting for NSoFaS:04 for the initial stage.
- *About NPSAS* and *About NSoPF* provided information on each study's mandate and research objectives, with a link to NCES reports from previous study cycles.
- *Instructions* provided links that allowed institution staff to view and print copies of various NPSAS and NSoPF forms.
- *Endorsements* listed the 25 national organizations that endorsed the studies. (These are listed in appendix D.)
- *Frequently Asked Questions (FAQs)* included questions and answers concerning all stages of data collection for both components of NSoFaS.
- *Help* provided the help desk toll-free number and e-mail address for contacting project staff, along with instructions for logging in.
- *Contact Us* contained address information for RTI.
- *Other NCES Sites* linked to three NCES web pages that provided more information about NCES programs:
 - Site map of NCES website—<http://nces.ed.gov/help/sitemap.asp>;
 - Postsecondary Education Studies—<http://nces.ed.gov/surveys/surveygroups.asp?group=2>; and
 - To order publications and products—<http://nces.ed.gov/pubsearch>.

A status screen, shown in figure 3, indicated which stages of institution data collection were completed (denoted by a check mark) and allowed institutions to select from those stages that were not yet completed. Once a stage was completed, it was no longer accessible via the Web.

Figure 3. The 2004 National Study of Faculty and Students (NSoFaS:04) institution website status screen



Source: U.S. Department of Education, National Center for Education Statistics, 2004 National Study of Faculty and Students (NSoFaS:04) website.

Designation of institutional coordinator. A team of institutional contactors followed up with the chief administrators by telephone. The chief administrators were asked to name an institutional coordinator whose role was to respond to requests for data and coordinate data production and delivery efforts. Once an institutional coordinator was designated, they received the same packet of notification materials described above.

Working with Institutional Review Boards. Institutional coordinators who indicated that a formal review process, such as an Institutional Review Board (IRB) review, was necessary before their institution would agree to participate were forwarded additional project materials as appropriate. A complete IRB packet was prepared for this purpose and mailed to the coordinator upon request. This packet included copies of questionnaires, as well as complete descriptions of relevant survey procedures, including confidentiality and informed consent.

2.3.2 Student Enrollment List Acquisition

Complete instructions for providing the student enrollment lists, and other requested materials were provided to institutional coordinators.

Due dates for providing the enrollment list of students requested for NPSAS were based on the term structure of each institution. Institutions were encouraged to submit an electronic list by uploading it to the secure website. The data items requested for each listed student were the following:

- full name;
- student ID;
- Social Security number;
- educational level;
- FTB status (defined as one with no transfer credits from another institution, first enrolled as a freshman between July 1, 2003, and April 30, 2004, or has not completed a postsecondary class prior to July 1, 2003);
- local address;
- local telephone number;
- campus e-mail;
- permanent address; and
- permanent e-mail.

Follow-up with institutional coordinators was conducted by telephone, mail, and e-mail. Telephone prompts to the institutional coordinators were made for institutions that had not provided lists. E-mail reminders that encouraged participation were sent to institutional coordinators prior to pending deadlines. As enrollment lists were received, they were reviewed for completeness, readability, and accuracy. Additional follow-up to clarify the information provided or retrieve key missing information was conducted by the institution contactors as necessary. This included follow-up with institutions that failed quality control checks against IPEDS files, and institutions that failed to provide key variables (FTB status, etc.).

Reimbursement for staff time involved in providing student lists was offered to institutions reporting difficulty meeting the schedule for submitting lists. A refusal conversion letter was mailed to institutions that had not responded.

Systemwide participation and multi-campus enrollment lists

In some instances, state postsecondary systems and private multi-campus institutions were able to provide enrollment lists for all their sampled institutions from a central office. In these instances, a “lead institution” was appointed, and a coordinator was designated to report for all sampled institutions.

Systemwide offices also provided other data collection assistance. One large multi-campus system devised a software program that would allow institutions within the system to easily download the information requested for the list in a usable format and distributed the software to their sampled campuses. Others—particularly within the 12 oversample states—actively encouraged their campuses to participate. More than 200 institutions reported as part of a multi-campus system.

Student enrollment lists from NSLDS

To increase representation within certain strata in which institutional participation was low, some student lists were obtained directly from NSLDS records for individual institutions, rather than the institutions themselves. These lists had two important drawbacks which limited

their usefulness to a small number of institutions for which reliable lists could not otherwise be obtained. First, NSLDS lists only contained records for federal financial aid recipients, and did not represent all enrolled students. Second, the NSLDS lists did not contain as much locating data for students as did enrollment lists provided by institutions. Thus, additional locating information had to be obtained to contact the students. For these reasons, NSLDS lists were used only when most students at these institutions were thought to be aid recipients.¹⁶ NSLDS lists were used for sampling for only about 10 institutions. Among these 10 institutions for which sampling frames were obtained from NSLDS, 55 percent were for-profit less than 2-year institutions, 36 percent were for-profit, and 9 percent were private not-for-profit less than 4-year institutions.

12-state cooperation and assistance

A point of contact was identified in each of the 12 states with representative samples of undergraduates at the state level. These individuals were regularly updated on the participation status of institutions within their states. They also assisted with ongoing efforts to encourage institutional participation by contacting the chief administrators and institution coordinators at sampled institutions.

2.3.3 Matching to Federal Databases (CPS, NSLDS)

To reduce institutional burden in subsequent study data collections, information related to applications for federal financial aid during the financial aid year was obtained from the U.S. Department of Education's CPS. Students enter this information on the FAFSA form; it is then converted to an electronic form, analyzed, and provided to requesting institutions and other approved parties. As was the case in NPSAS:96 and NPSAS:2000, RTI was assigned a "special designation code" by CPS. Under this procedure, financial aid application data were requested through a standard Federal Data Request process.¹⁷ The CPS was accessed daily to download data from the completed request.

Data on the nature and amount of Pell Grants or federal student loans were obtained from the NSLDS database maintained by the U.S. Department of Education. The electronic data interchange with NSLDS was performed twice during the data collection period and once after data collection ended in order to send the most up-to-date data for matching as possible. It included a query of both federal student loan and Pell Grant files. A successful match with the NSLDS loan and Pell database required that the student have a valid application record within the database. The accessed NSLDS Pell Grant and loan files included information for the year of interest, as well as a complete federal grant or loan history for each applicable student.

¹⁶ Student enrollment lists were used from NSLDS when IPEDS data indicated that the percentage of grant-receiving students was at least 80 percent, and the percentage of students receiving loans was at least 90 percent. In most cases, both percentages were higher than 90 percent.

¹⁷ This is a request process similar to that available to state and federal requests from the system, through which information can be requested about individuals regardless of the institution they attend. Requests made by an institution are restricted to applicants to that institution only.

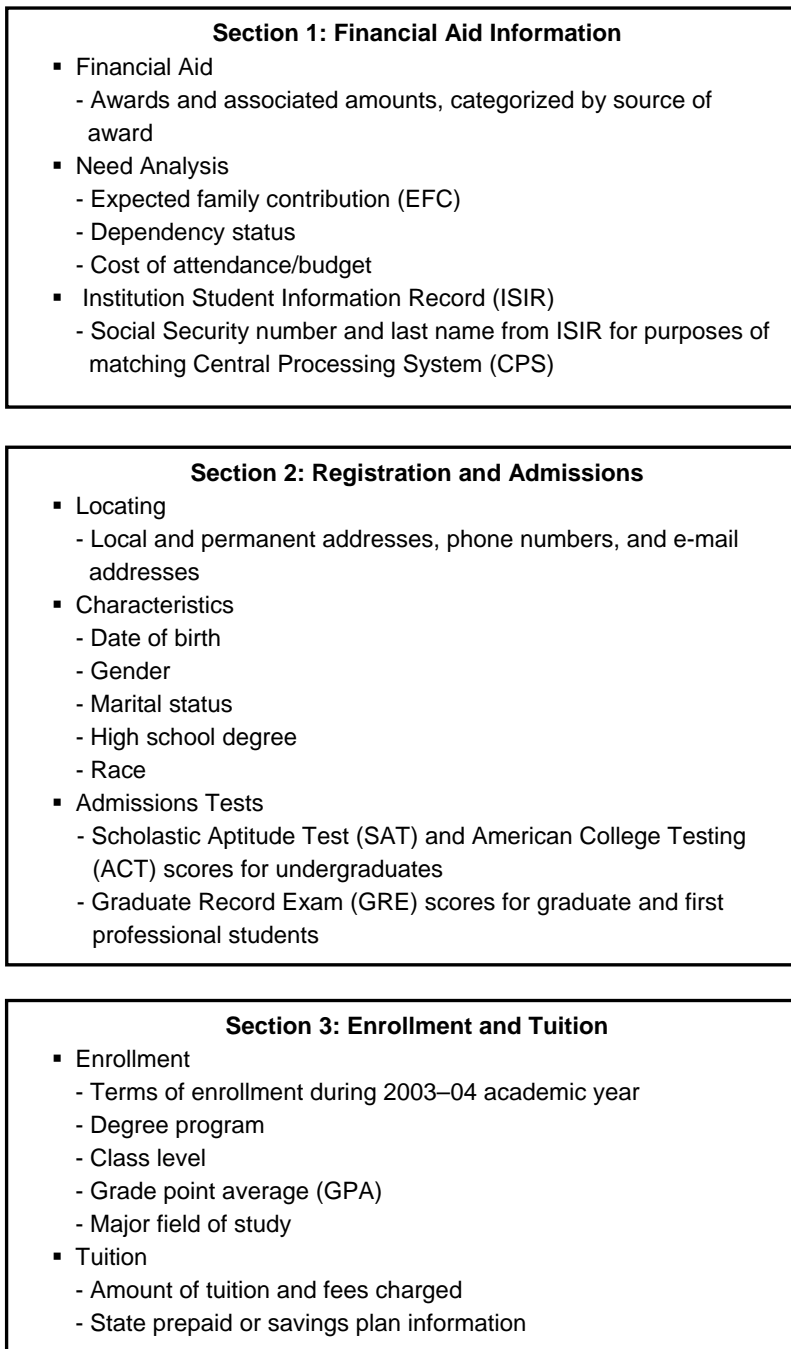
2.3.4 Data Abstraction from Student Records (CADE)

Instrument development

Three modes were used for student record abstraction: 1) institutions entered data directly into the web-based CADE system (referred to as self-CADE); 2) institutions provided student record information in data files according to specifications (data-CADE); and 3) trained RTI field data collectors abstracted the student record data into the web-based CADE system (field-CADE). The web-based CADE system was created using Active Server Pages technology against a structured query language (SQL) server database. The overall content of the NPSAS:04 CADE instrument was very similar to the instrument used in NPSAS:2000 and NPSAS:96 as it had worked very well in obtaining the desired data elements from the institutions. However, the instrument was modified so that NPSAS:2000 items specific to the B&B cohort were deleted and items necessary to identify the BPS cohort were added.

A facsimile of the CADE instrument is presented in appendix E. It consisted of three sections grouped by topic. The first section collected financial aid information and included three subsections: financial aid awards, need analysis, and Institutional Student Information Report (ISIR). The second section collected registration and admissions information and it also contained three subsections: locating, student characteristics, and admissions tests. The third and last section consisted of two subsections: enrollment and tuition. Figure 4 shows the layout of the CADE instrument along with additional details from each subsection.

Figure 4. Structure and content of computer-assisted data entry (CADE) student record abstraction instrument: 2004



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Training

The training for RTI field-CADE staff was held in two separate sessions to allow for efficient use of the field staff immediately following training. Prior to these separate sessions, field supervisors participated in a telephone conference training. The field supervisors were

trained as data collectors and all participated as data collectors for the field test in 2003. The majority had prior experience as supervisors in NPSAS:2000 and were familiar with the study protocols and history. The training focused mainly on administrative responsibilities and identifying appropriate staff.

The initial field data collectors training was conducted for staff in the eastern states and Puerto Rico. The second training session was for data collectors in western states. The field supervisor training included a half-day session dealing with the project's hiring objectives and time frame, as well as supervisory and administrative responsibilities, procedures for recruiting field data collectors, and use of the systems (Case Management, Assignment and Transfer [WebATS], and e-mail). The field data collector training consisted of NPSAS:04 study objectives and time frame, an explanation of how the financial aid process works on campuses, procedures for working with the institutional coordinator and other staff at the institutions, and instruction in and practice with locating records (including review of ISIRs). The training also covered a review of and practice with each section of the CADE instrument and electronic transmission of completed cases. Finally, procedures for contacting field supervisors and other administrative procedures were discussed.

During this training, considerable use was made of location and abstraction of records using mock student case studies developed, with the assistance of National Association of Student Financial Aid Administrators (NASFAA) staff, to represent diversity in record keeping at different types of postsecondary institutions. Laptop computers were provided to all trainees for their use during training and subsequent field work. The tables of contents for the training guides used, as well as the field data collector training agenda, are included in appendix F.

All institutional coordinators, regardless of mode of CADE completion chosen, were provided with materials to assist them with CADE. A packet was sent to all institutional coordinators once the sample had been selected and CADE preloads were available that included

- a letter containing the username and password for access to the web-CADE system;
- the *NSoFaS:04, National Postsecondary Student Aid Study: NPSAS webCADE: User's Guide*, which included complete specifications, instructions, and system requirements needed for webCADE submission. Also included was a link to the institution website as well as information on alternative methods of data submission. The user's guide also discussed the study's confidentiality procedures; and
- a hardcopy list of the sampled students.

The CADE website allowed institutions to access an electronic list of the sample, which enabled them to create programs to provide the requested data from their systems for only the sampled students. All this could be done in preparation for the data entry, regardless of whether institutional staff or field staff were entering data into CADE. Several features were available from within the system to assist data entry for institutions doing self-CADE, including: help screens embedded within the program, a help desk telephone number, and an e-mail generator for problem reports. The help desk provided assistance to institutions if questions or problems arose during data entry. The help desk also provided support to institutions using the data-CADE option which generated a set of problem reports upon uploading a data file, including completed CADE information for students sampled at the institution. These reports provided comments on

any errors found in the file. The help desk ensured that institutional staff and project staff worked together to correct data while it was still being provided.

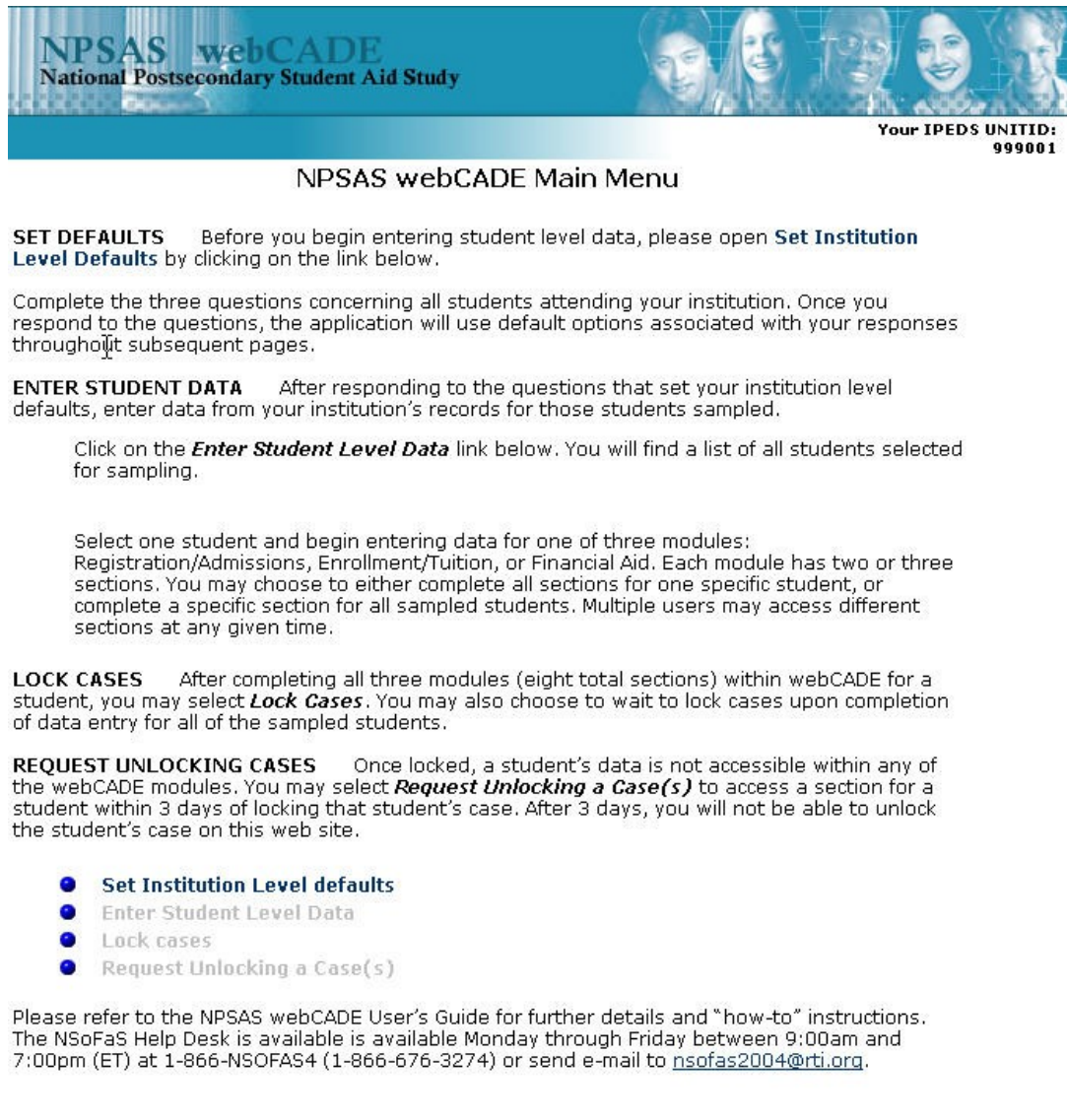
Data collection

Institutional record data for sampled students were collected using procedures similar to those successfully tested and implemented during NPSAS:2000 and during the NPSAS:04 field test. As discussed above, a web-based CADE software system was developed for use in collecting data from student records and the same CADE system was loaded onto laptops used by the RTI field data collectors for field-CADE. Institutions could choose either to enter the data themselves (self-CADE) or have an RTI-employed field data collector enter the data (field-CADE). In addition, a third option was made available for schools with programming capabilities in which electronic files could be submitted via a secured website (data-CADE). These are described in more detail below.

Self-CADE. Figure 5 presents the home page of the NPSAS CADE website. As can be seen, visitors to the website were first asked to complete their institution-level defaults (credit versus clock hour programs, grade-point average (GPA) scale, and institutional grants and scholarships). After completing these defaults, which are used by the CADE application, the user would enter all of the data for each student by clicking on the *Enter Student Level Data* link. Finally, the user would lock each case that was complete to indicate it was ready for processing. If cases were locked in error, there was a mechanism to request that a case be unlocked, provided that case had not been locked for longer than 3 days (after 3 days the user would have to call the help desk for any data changes). The website also provided the help desk phone number and e-mail address.

The home page, and all further-nested pages within the CADE application, were protected via a Secure Sockets Layer (SSL) encryption safeguard. Further security was provided by an automatic “time out” feature, through which the user was automatically logged out of the CADE application if the system was idle for 20 minutes or longer. The system did not use any persistent “cookies” (i.e., those that remain on the hard drive after the browser has been closed), thus adhering to the U.S. Department of Education’s privacy policy. Selected CPS data were preloaded before data collection began to reduce data entry burden for institution staff.

Figure 5. The 2004 National Postsecondary Student Aid Study (NPSAS:04) web-CADE home page



| [Help](#) | [Close this window](#) |

Source: U.S. Department of Education, National Center for Education Statistics, 2004 National Study of Faculty and Students (NSoFAS:04) website.

Data-CADE. As an alternative to keying data into the web-CADE application, institutions, particularly those with large sample sizes, were given the option of submitting data files containing student record data. Explicit instructions for uploading comma-separated or delimited flat files were provided to institutions choosing this option (see appendix G). This method of data abstraction was first used in NPSAS:2000. The file specifications were customized for each institution so that they would have their own coding schemes for reporting various types of state aid and institution aid (the names of which were obtained from the institutional coordinator during the institution contacting phase of the study). Eight data files,

including student-level, term-level, and aid award-level files, were required from each data-CADE institution to accurately match the identical data structure of the database underlying the web-CADE application. Upon completion of the data-CADE file preparation, institutions submitted their data files back to RTI via the NSoFaS website. Upon submission, an automated quality control system processed the files and instantly reported back to the institutions any anomalies in the data (e.g., incorrect student ID variables, lack of term-level data for sample students, incorrect file names, etc.).

Field-CADE. Consistent with procedures implemented in past NPSAS studies, institutions were given the option of having an RTI-employed field data collector visit the institution and provide student record data-entry services at no expense to the institution. This CADE abstraction method is referred to as field-CADE.

Field data collectors used laptops with a local version of web-CADE loaded for entering data abstracted from student records. All features in the Web version were present in the laptop version, including real-time edit features to help detect out-of-range or inconsistent entries. In addition, data previously obtained from CPS were preloaded into the system before data collection began, to reduce the data collectors' level of effort. Upon completing data entry, the field data collectors transmitted the data to the same database used by web-CADE, keeping all of the completed student records together in one location.

Preloading CPS data into CADE. The first step of the CADE record abstraction process involved sending the student sample to the CPS to obtain financial aid application data. Upon completion of the CPS matching (typically a 24-hour turnaround), a number of data elements were preloaded into the CADE database, thus initializing the CADE system for that institution. These preloaded elements included an indicator of whether the student had been matched successfully to the CPS system, as well as selected CPS variables for use in CADE software edit checks. In addition, the system was customized for each institution by preloading the names of institutional financial aid programs and up to 12 state financial aid programs to assist in identifying common types of financial aid received by students.

Once CADE was initialized for a particular institution, an informational packet was sent to the designated institutional coordinator. These packets contained a listing of the students sampled and instructions for accessing the website. RTI's call center staff made follow-up phone calls to notify institutions that the CADE data collection could begin. Coordinators who previously indicated a willingness to complete the data collection via self-CADE were provided with a username and password to gain access to the web-CADE systems. As a security measure, only the coordinator was provided this password via an automatic e-mail. Based on daily status reports summarizing the progress of the self-CADE institutions, calls were made periodically to the coordinators to prompt completion of the record abstraction. Institutions using the field-CADE option were also notified by mail and contacted by the field data collector at which time an appointment was made to visit the institution.

2.3.5 Student Interview

Instrument development

The overall content of the NPSAS:04 student interview was based on items used successfully in NPSAS:2000 and NPSAS:96 in order to provide data users with the ability to make comparisons over time. Items relevant to the BPS were drawn from NPSAS:96, the last

NPSAS that served as the base year for a BPS cohort. NPSAS:2000 items specific to the B&B cohort were deleted. The NPSAS:04 instrument content was also modified to reflect changes in policy issues and topics relevant to researchers.

The student interview was developed as a web-based application, consisting of six sections grouped by topic. Figure 6 displays the structure and flow of the student instrument. The first section determined student eligibility for the NPSAS:04 study and obtained information about degree program, field of study, and enrollment history. The second section contained questions relating to student expenses and financial aid. Included in this section were items regarding employment at the NPSAS institution, such as work-study, assistantships, and fellowships. Section three focused on other employment and finances. Educational experiences such as courses taken and admission test scores were included in the fourth section, as well as items specific to BPS respondents such as first-year experiences. The fifth section of the interview gathered background and demographic information about students and their family members. The final section, applicable only to BPS respondents, requested contacting information in order to make subsequent follow-up contact in future studies.

In past rounds of NPSAS, data collection was administered by trained interviewers (primarily computer-assisted telephone interview [CATI], with some in-person interviews, or computer-assisted personal interview [CAPI]). For the first time, NPSAS:04 also included an option for self-administration via the Web. Regardless of completion mode, a single web-based instrument was employed. Mixed-mode surveys introduce benefits and challenges not experienced with single-mode surveys. Self-administration provides sample members with the ability to complete the survey at their convenience. However, interviewers are able to clarify question intent and probe when responses are unclear. Self-administered surveys require modifications to account for the mixed-mode presentation (i.e., self-administered and CATI) to maintain data quality and to make the interview process as efficient as possible for respondents. The NPSAS student interview included the following features to accommodate the mixed-mode nature of the survey:

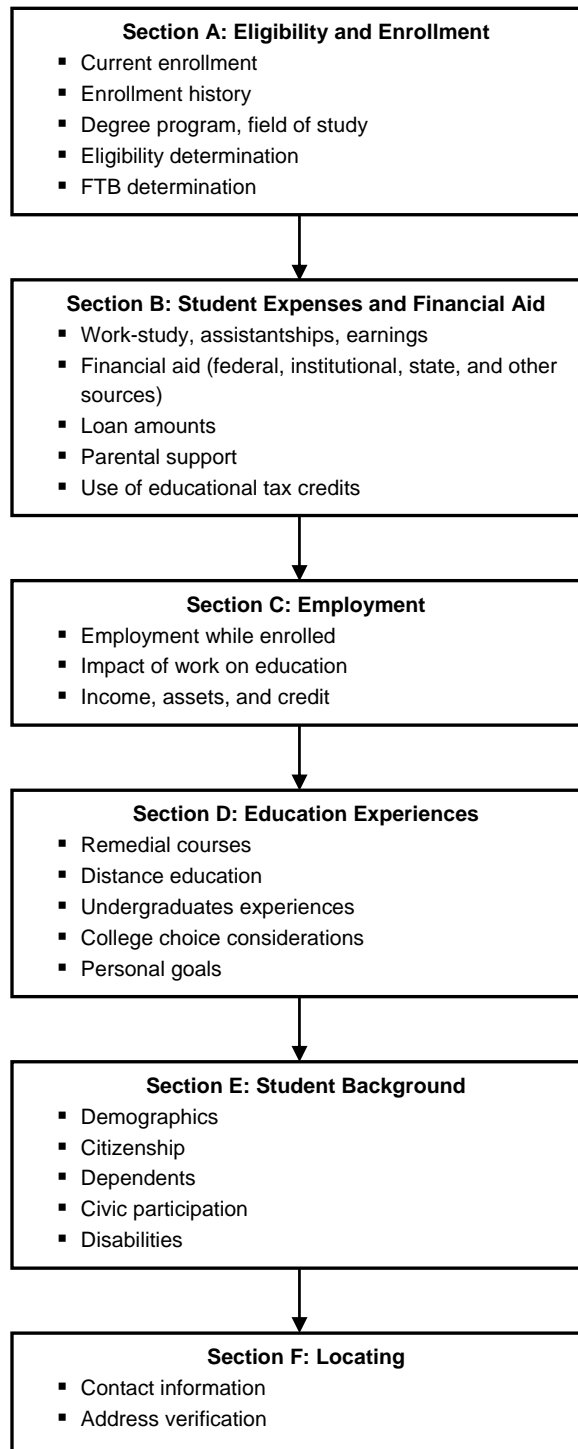
- Question wording was written so that it could be read by a respondent or read to a respondent by a telephone interviewer, while also maintaining question integrity.
- Help text was provided on all screens to assist both self-administered respondents and telephone interviewers in completing the interview.
- Pop-up boxes were displayed when out-of-range values were entered as a value for an item.
- Explicit “don’t know” responses were allowed only for items in which that was a legitimate response (such as parents’ income, use of educational tax credits, etc.). For the remaining items, respondents who did not know the answer or wished not to provide an answer could simply leave the screen blank and proceed with the interview.
- After three consecutive screens with no response, pop-up boxes were displayed to encourage participation. The prompt box reiterated the importance of the study and completeness of data, reminded sample members of the confidentiality of their responses, and requested that the respondent complete the items left blank.

With an instrument as large and complex as the NPSAS student interview, another critical factor was the determination of skip logic. Not only was it important to determine the appropriate routing from item to item on the basis of respondent status (e.g., FTB, undergraduate, graduate student), but it was also necessary to ensure that the skip logic was as efficient as possible. Sending respondents from one screen to another can add considerable transit time to web-based instruments. This increases the burden on the respondent and can lead to increased data collection costs as interviewers wait for screens to load during the interview. Another important consideration in developing the NPSAS:04 interview was the introduction of variation in response time. Web users connect through a variety of sources (e.g., dial-up, T1, high-speed cable access), use different operating systems, and have different computer resources. All of these factors were relevant to designing the instrument in order to ensure minimal burden on the respondent.

Once the instrument was programmed, rigorous testing was conducted over several iterations. Project staff and NCES staff tested numerous scenarios to evaluate the skip logic, question wording, screen layout, and efficiency of the instrument for the various student profiles expected to occur in the sample. Testing was done from a variety of locations, using a range of internet connections, and at varied times of the day to ensure that data collection would run smoothly. This process was facilitated by the use of RTI's Instrument Development and Documentation System (IDADS), which is described in detail in section 2.4.1. IDADS allowed project staff and NCES to coordinate testing efforts and provided a historical account of all problems and the solutions implemented.

An abbreviated interview was developed that contained a subset of key items from the main interview. This version was used during refusal conversion toward the end of data collection. A facsimile is presented in appendix E. The abbreviated interview was also translated into Spanish so that bilingual telephone interviewers could conduct hardcopy interviews with Spanish-speaking respondents.

Figure 6. Structure and flow of student interview: 2004



NOTE: FTB = First-time beginner.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Staff training

Various types of data collection staff were used for the NPSAS:04 student data collection, including tracing specialists, supervisors and monitors, help desk agents, and telephone interviewers. Specialized training sessions were conducted for each of these groups. A sample training agenda and table of contents from a training manual are provided in appendix F. Each training session covered an overview of the study, review of confidentiality requirements, a demonstration interview, question-by-question review of the instrument, as well as hands-on practice with the tracing module, instrument, and coding systems. In addition, each training session contained specialized instruction for each job, as described below.

- *Tracing specialists* received instruction on project-specific tracing protocols for tracing the sample members, as well as on the most effective tracing sources.
- *Supervisors and monitors* received instruction on project specific supervision and monitoring guidelines.
- *Help desk agents* received training on answering questions about the study, as well as technical questions from sample members, and were trained to document each call made to the study hotline.
- *Telephone interviewers* received information on the content of the interview, as well as on gaining cooperation from sample members, parents, and other contacts, and techniques for refusal avoidance and addressing the concerns of reluctant participants.

At the end of the project-specific training, interviewers were evaluated and certified upon successful completion of the training session.¹⁸ The certification process involved the successful administration of the NPSAS instrument in a paired “mock” interview with a fellow trainee (one assuming the role of the interviewer and the other the sample member, and then vice versa). Trainers monitored these sessions, noting any difficulties experienced with questionnaire administration; accuracy of data entry; and voice tone, speed, and quality. In addition to successfully administering a “mock” interview, interviewers were also required to pass an oral certification exam, which focused on addressing anticipated questions and concerns from respondents.

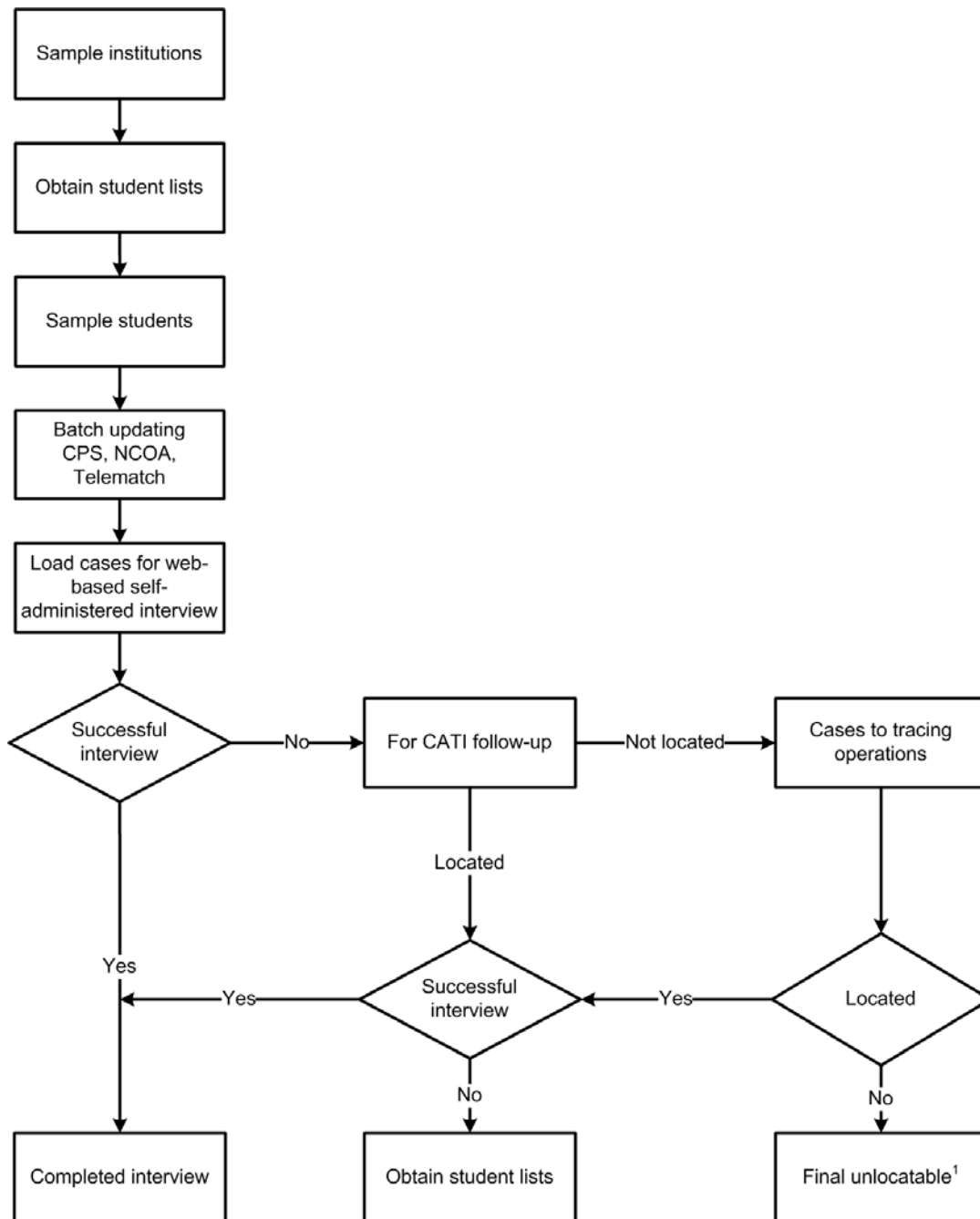
Approximately 8 weeks after the start of student interviewing, project staff and RTI Call Center Services (CCS) supervisory staff began conducting a series of refusal conversion trainings for a subset of high-performing telephone interviewers. CATI supervisors and monitors evaluated the effectiveness of telephone interviewers in dealing with respondent objections and overcoming barriers to participation. The most effective interviewers received additional and specialized instruction in specific refusal conversion techniques, including obtaining cooperation from sample members, addressing concerns raised by parents and other sample gatekeepers, validating the importance of the study, and encouraging participation among sample members who were nonrespondents prior to these conversion efforts.

¹⁸ Certification was required of all interviewers prior to beginning work on NPSAS.

Data collection

Procedures used to locate sample members and conduct student interviews are described in the following section. Figure 7 presents the flow of activities used in locating and interviewing.

Figure 7. Overview of student data collection: 2004



¹ Even after attempts to pursue a telephone interview were exhausted, sample members could initiate and complete the student interview via the Web through the end of data collection.

NOTE: CPS = Central Processing System; NCOA = National Change of Address; CATI = Computer-assisted telephone interview.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Locating

RTI's approach to tracing sample members included two basic stages: (1) advance tracing and (2) intensive tracing. The advance tracing stage included batch database searches and lead letter mailings to sample members. The intensive tracing stage consisted of interactive tracing conducted by Call Center Services (CCS) Tracing Services.¹⁹ The techniques described in the following sections were designed to yield the maximum number of locates with the least expense. The most cost-effective steps were taken first, minimizing the number of cases that required more costly intensive tracing efforts.

Advance tracing. Locating information obtained during institutional record abstraction was incorporated into the locator database. The data files were updated with information obtained from batch searches, from the National Change of Address (NCOA)²⁰ system, the Department of Education's CPS,²¹ and Telematch.²² Batch searches were conducted on a flow basis. After the locator database had been updated with the new information, a lead letter packet was mailed to the best known address for the sample member that included a standard lead letter, a study brochure, and instructions on how to access the survey via the Web (see appendix C). In the event that a sample member had moved from the mailing address in our locator database, mail forwarding from the U.S. Postal Service was requested. The most current information for the student and any other contacts were then preloaded into the CATI system.

CATI-internal locating. When assigned a case, the telephone interviewer called the telephone number designated by the system as the best number (i.e., the number among all available locator numbers that appeared to have the greatest potential for contacting the sample member) and attempted to interview the designated sample member. If the person answering the call said that the sample member could not be reached at that number, the interviewer asked the person how to contact the sample member. If this query did not provide the information needed, the interviewer initiated tracing procedures, using all information available to call other contact persons in an attempt to locate the sample member. If all tracing options available to the interviewer were exhausted without success, the case was assigned to intensive tracing via FastData,²³ or CCS Tracing Services.

¹⁹ Tracing Services is a highly specialized unit within RTI Call Center Services (CCS) that was created in response to the recurring needs of certain research methodologies to locate large numbers of sample members. The sole focus of this unit is tracing sample members so that they can be located for research studies; the unit does not conduct any data collections.

²⁰ The National Change of Address (NCOA) is a database consisting of change of address data submitted to the U.S. Postal Service. Almost 100 million records are updated every 2 weeks and stored for 3 years.

²¹ The Central Processing System (CPS) provides information for students who have applied for and/or received financial aid. The CPS computes student aid applicants' eligibility for student aid to assist them in attending postsecondary schools. CPS receives data from the Multiple Data Entry (MDE) contractor and sends a Student Aid Report (SAR) to the aid applicant.

²² Telematch is a computerized residential telephone number look-up service consisting of over 65 million listings, over one million not-yet-published numbers of new movers, and over 10 million businesses. Telematch uses a name, street address, and ZIP code as search criteria and Reverse Telematch uses telephone numbers as the search criteria to provide the names under which telephones are listed.

²³ FastData is a series of database searches used to locate sample members after pre-CATI batch database searches have been done but before sending cases for intensive interactive tracing.

Intensive tracing. All cases that were not located during the advance tracing process were submitted to CCS Tracing Services for intensive locating. CCS implemented a two-tiered intensive tracing plan. The first tier identified sample members with SSNs and processed them through the following electronic databases.²⁴

- *Query of Credit Bureau databases.* **Equifax**, a credit bureau that maintains credit files on a large number of individuals; **Experian**, which holds more demographic and credit information on individuals and businesses than any other company in the world and **TransUnion**, which also holds demographic and credit information on individuals and businesses, were all used to locate sample members.
- *Query of internet databases.* Contractor staff had direct electronic access to various databases, which included names, SSNs, and current and former addresses and telephone numbers of individuals.
- *Query of the Select Phone Book CD-ROM data.* This database contains every published telephone number in the United States, with associated names and addresses. It can be sorted within city by address, to obtain telephone numbers and names of neighbors.

New telephone numbers generated from the above searches were sent back into the Case Management System for telephone interviewing. If a new address was generated, but no telephone number, tracers used directory assistance or other databases to obtain telephone numbers. This first level of effort minimized the time that cases were out of production.

All remaining cases (those lacking new information from the SSN search) underwent a more intensive level of tracing in the second-tier approach. This approach involved the following procedures: (1) checking directory assistance for telephone listings at various addresses; (2) using electronic reverse-match databases to obtain the names and telephone numbers of neighbors and then calling the neighbors; (3) calling persons with the same unusual surname in small towns or rural areas to see if they were related to or knew the sample member; (4) contacting the current or last-known residential sources such as neighbors, landlords, current residents, tax assessors, realtors, and other business establishments related to previous addresses associated with the sample member; (5) calling colleges, military establishments, and correctional facilities to follow up on leads generated from other sources; and (6) checking various tracing websites. Tracers checked new leads produced by these tracing steps to confirm the address and telephone numbers for the sample members. When the information was confirmed, the case was returned to the CMS for completion. If the information could not be confirmed (e.g., there were no working telephone numbers or numbers for relevant neighborhood sources were unpublished), no further attempts were made to locate such sample members.²⁵

Notification materials and student resources

Student website. A study website was designed for students. The website provided important information about NPSAS:04, such as the purpose and history of the study and a summary of findings from prior interviews. Confidentiality procedures were described and the

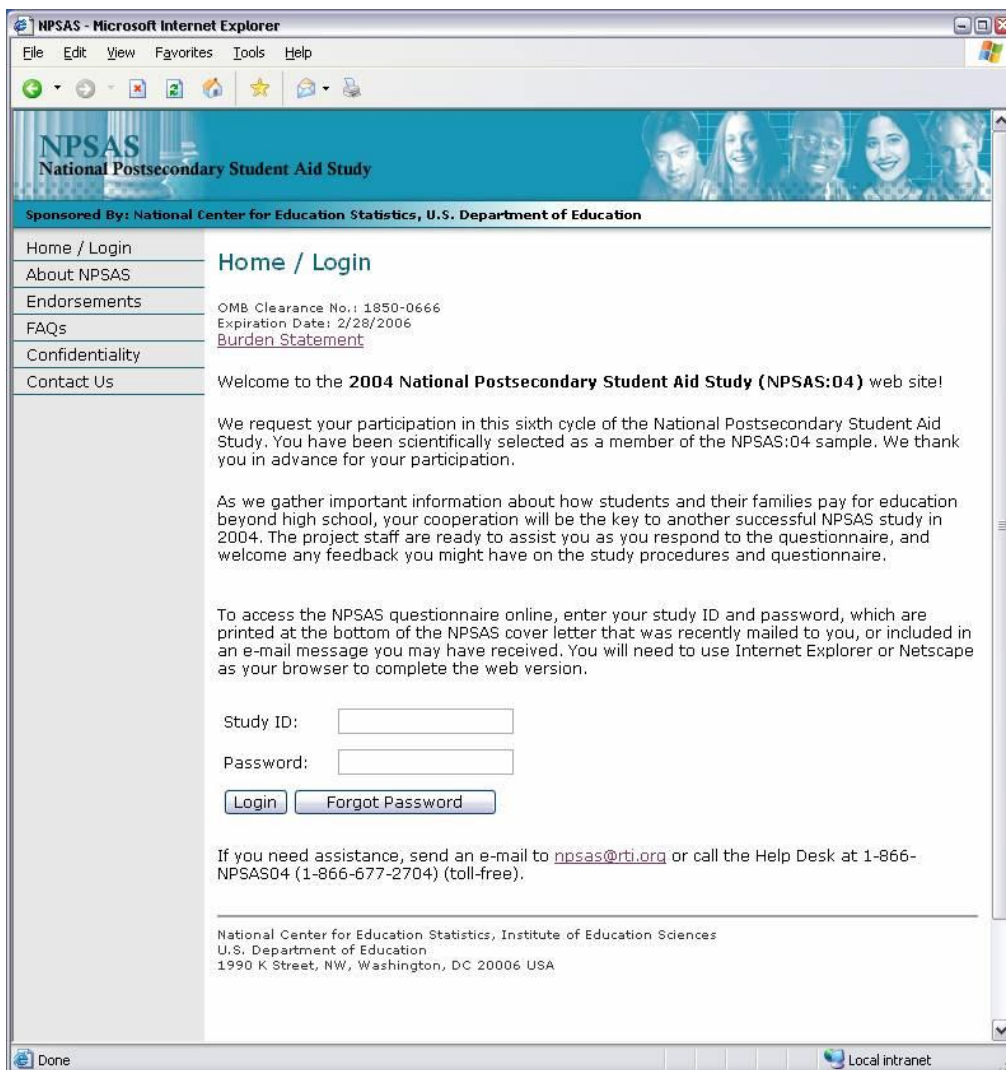
²⁴ Tracing activities were restricted to the collection of locating/directory information.

²⁵ Unlocatable sample members always had the opportunity to complete self-administered interview or to call in for a telephone interview through the end of data collection.

use of the data was explained. It also provided contact information for the study’s help desk and project staff and links to the NCES and RTI websites. The website also provided a link from which sample members could log in to the student interview. The website address was included with all mailings to sample members.

The NPSAS:04 website (figure 8) was designed in accordance with NCES Web policies. A two-tier security approach was used to protect all address and interview data collected through the website. At the first tier, sample members were required to log on to the secure areas of the website using a unique and randomly assigned study ID and password sent by mail. At the second tier of security, data entered on the NPSAS:04 website—both contact information and interview responses—were protected with SSL technology, ensuring that only encrypted data were transmitted over the Internet. As an additional security measure, the interview contained an automatic “time-out” feature through which a respondent was logged-out if the system was idle for 30 minutes.

Figure 8. The 2004 National Postsecondary Student Aid Study (NPSAS:04) website home page



Source: U.S. Department of Education, National Center for Education Statistics, 2004 National Study of Faculty and Students (NSoFaS:04) website.

Help desk. The help desk staff was available to assist sample members who had questions or problems accessing and/or completing the self-administered interview. A toll-free hotline was set up to accept incoming help desk calls. If technical difficulties prevented a sample member from completing a self-administered interview, a help desk staff member, who was also trained to conduct telephone interviews, would encourage him/her to complete a telephone interview rather than to attempt the self-administered interview.

The help desk application documented all incoming calls from sample members. In addition to this primary documentation function, it provided the following:

- information needed to verify a sample member's identity to assist with login difficulties;
- login information allowing a sample member to access the Web interview; and
- means for tracking problems that could not be immediately resolved.

The help desk application also provided project staff with various reports on the type and frequency of problems experienced by sample members, as well as a way to monitor the resolution status of all help desk inquiries.

Lead letter mailing. Once a valid address for a sampled student was identified either through the participating institution or a batch database search, each sample member was mailed a lead letter. The personalized lead letter signed by the NCES commissioner provided information about the study, a description of the options for completing the questionnaire via the Web or telephone, the electronic address (URL) for the project website, and the sample member's username and password for secure access to the website. A study brochure was also included with the mailing.

The letter was used to inform sample members that they were eligible to complete the NPSAS:04 interview at their convenience on the Web and provided them with the technical information on how to do so. The letter also provided an e-mail address and the NPSAS:04 toll-free telephone number to the help desk as a means for sample members to update their contact information, schedule an appointment, or complete the interview by telephone. Lead letter mailouts began in early February 2004 and by the end of July 2004, 138,320 lead letter packets had been mailed.

Electronic mail (E-mail). E-mail was an important tool in the locating and interviewing process. In addition to sending a lead letter mailing, students were sent a lead e-mail as an additional way of making initial contact. The content of this e-mail mirrored the content of the lead letter but also included a hyperlink Web address so students were able to click on the address to be taken directly to the Web survey. E-mail follow-up messages were sent to sample members with valid e-mail addresses 1 day, 7 days, and 14 days after the initial hard-copy mailing.

E-mail was also used as a tool for locating hard-to-reach sample members and for prompting participation among nonrespondents. The e-mail messages were used to encourage sample members either to complete the web-based self-administered survey or to contact RTI to complete the survey or to set an appointment for a telephone interview.

Student interviews

Self-administered interviews. The data collection notification materials invited sample members to log into the study website and provided all the information needed to do so. During the 4 weeks immediately following the notification letter, only self-administered interviews via the Web were completed unless a student called in to the help desk for assistance and completed the telephone interview. Outbound calls by interviewing staff were not initiated until sample members had sufficient opportunity to complete the interview. E-mail prompts were sent to sample members periodically during the 4-week period to encourage participation and remind them of the address for the study website, as well as the toll-free help desk telephone number.

Sample members were assured of the confidentiality of their responses. They were also informed of the voluntary nature of the survey, noting that they could decline to answer any survey question. Furthermore, the convenience features of the web-based survey were emphasized—especially that the survey could be completed at any time from any location with internet access and that respondents could break off and resume the interview if needed. The web interview site remained available 24 hours per day, 7 days per week throughout the entire data collection period. This availability gave sample members the option to complete interviews online during the entire data collection period.

Telephone interviews. Attempts to locate and interview study sample members who had not yet completed an interview began 4 weeks after sample members were invited to complete the self-administered interview. Once located, an attempt was made to conduct the full interview with the sample member. However, some cases required special treatment. To deal with those who initially refused to participate (including locator sources who acted as “gatekeepers,” preventing access to the sample member), certain interviewers were trained in refusal conversion techniques. Sample members and their locator sources who spoke only Spanish, primarily located in Puerto Rico, were assigned to bilingual CATI interviewers.

Use of incentives. In an effort to increase study response rates, sample members were offered an incentive of \$10 for completing a self-administered interview in the first 4 weeks. Sample members would receive the incentive regardless of participation mode, provided that they completed their interview prior to their individual deadline.

Toward the end of data collection, a different incentive plan was used with particular types of nonrespondents: (1) cases where the sample member initially refused the interview; (2) sample members for whom intensive tracing yielded a good mailing address, but no telephone number; and (3) cases identified as “hard to reach” (i.e., those with 20 or more call attempts, where contact had been established with the sample member and no “hard” appointment was pending). The incentive offer consisted of a letter from the project director on RTI letterhead, or an e-mail tailored to the specific type of nonrespondent (i.e., refusal or hard to reach/no telephone number). Respondents were promised a check for \$20 if they completed the interview, regardless of the mode they used to do so. The incentive letters were mailed on a flow basis as respondents met one of the three criteria described above.

Finally, in an effort to convert sample members who still had not responded to the previous incentive offers near the end of data collection, all pending cases received a final letter requesting participation by the end of the data collection period. Postcards and letters reemphasized the importance of the study and offered all remaining respondents a check for \$30 if they completed the interview, regardless of the mode they used to do so.

2.3.6 Data Quality Evaluation

All stages and components of NPSAS:04 were carefully monitored and evaluated throughout the course of development and production. Table 7 outlines some of the major evaluations conducted as part of the full-scale study.

Table 7. Summary of NPSAS:04 evaluations

Major area of evaluation	Evaluation approaches
Training for data collection	Debrief field abstractors. ¹ Debrief computer-assisted telephone interview (CATI) staff. ¹
Enrollment list acquisition	Analyze overall response rate, accuracy, and time to produce lists.
Student record abstraction	Analyze overall outcomes, including institutional participation, nonresponse, and refusal Analyze data quality (missing data) under conditions of web-CADE, field-CADE, and data file production approaches. Debrief institutional coordinators. ¹ Debrief field staff. ¹
Student tracing and locating activities	Debrief tracing staff and supervisors. ¹ Analyze all sources and levels of tracing results and costs.
Student interviewing	Analyze quality control monitoring data. Analyze CATI operational parameters (e.g., numbers of calls per case, total interviewer hours per completed interview). Analyze interview response burden, overall and by section. Debrief interviewers, monitors, and supervisors. ¹ Analyze response rates and patterns of interview nonresponse, overall and by mode of administration. Analyze impact of financial incentive on response rate.
Nonresponse bias analysis	Analyze nonresponse bias at the following levels: institutional, student, and item.

¹ Informal debriefings of staff involved in different data collection tasks were conducted throughout the study. Information gathered through these debriefings was used to enhance understanding of the outcomes of more formal evaluations and is therefore not described separately in this report.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

2.4 Data Collection Systems

2.4.1 Instrument Development and Documentation System (IDADS)

IDADS is a controlled web environment in which project staff developed, reviewed, modified, and communicated changes to specifications, code, and documentation for the NPSAS:04 student interview. All information relating to the instrument was stored in an SQL server database and was made accessible through Windows™ and Web interfaces. IDADS contains three modules: specification, programming, and documentation.

Initial specifications were generated within the IDADS *specification module*. This module enabled access for searching, reviewing, commenting on, updating, exporting, and importing information associated with instrument development. All records were maintained individually for each item, which provided a historical account of all changes requested by both project staff and NCES.

Once specifications were finalized, the *programming module* within IDADS produced hypertext transfer markup language (HTML), Active Server Pages (ASPs), and JavaScript template program code for each screen based on the contents of the SQL Server database. This output included screen wording, response options, and code to write the responses to a database, as well as code to automatically handle such web-instrument functions as backing up and moving forward, recording timer data, and linking to context-specific help text. Programming staff edited the code that was automatically generated by this module to customize screen appearance and program response-based routing.

The *documentation module* contained the finalized version of all instrument items, the screen wording for each, and variable and value labels. Also included in this module were the more technical descriptions of items such as variable types (alpha or numeric), information regarding to whom the item was administered and to whom the item applied, and frequency distributions for response categories. The documentation module was used to generate the student interview facsimile and the associated documentation files to be used as input to the VTS (discussed in section 2.4.3).

2.4.2 Integrated Management System (IMS)

The IMS is a comprehensive set of desktop tools designed to give project staff and NCES easy access to a centralized repository for project data and documents. The NPSAS:04 IMS was developed based on a framework initially developed (and refined) under previous NCES studies conducted by RTI. These include NPSAS:2000, B&B:2000/01, and B&B:93/03. As with these previous studies, the NPSAS:04 IMS consisted of independent, but integrated, modules. To the extent possible, the NPSAS:04 IMS was developed using commercial, nonproprietary PC-based software systems.

The major modules of the NPSAS:04 IMS include the following:

IMS website

- Contains tools and strategies to assist project staff and the NCES project officer in managing the study. All information pertinent to the study is located there, accessible via the Web, in a secure desktop environment. Available on the IMS are the current project schedule, monthly progress reports, daily data collection reports and status reports, project plans and specifications, key project information and deliverables, instrument specifications, staff contacts, the project bibliography, and a document archive. The IMS also has a download area from which the client and subcontractors can retrieve files when necessary.
- Infrastructure was programmed in ASP.
- SQL Server 2000 serves as the back-end database where applicable (maintaining the project staff contact list, Technical Review Panel membership, confidentiality reports, etc.)

Receipt Control System (RCS)

- An integrated set of systems that monitors all activities related to data collection, including tracing and locating. Through the RCS, project staff are able to perform stage-specific activities, track case statuses, identify problems early, and implement solutions effectively. RCS locator data were used for a number of daily tasks related to sample maintenance.
- Back-end database is Microsoft SQL Server 2000.
- Front-end interface and reports were programmed in ASP and SQL Server Reports Server.

Institution Contacting System (ICS)

- The ICS allows staff to log all contacts with institutions and determine the next steps for staff working with specific institutions. From within the ICS, the mailout program produces mailings to sample members, the electronic mailout program produces e-mail notifications and reminders to sample members, the tracing program enables staff to send and receive tracing information from locating firms, the query system enables administrators to review the locator information and status for a particular case, and the mail return system enables project staff to update the locator database. The RCS also interacts with the Case Management System (discussed below) and the CCS Tracing Services databases, sending locator data between the three systems as necessary.
- Back-end database is Microsoft SQL Server 2000.
- Front-end interface and reports were programmed in ASP and SQL Server Reports Server.

Case Management System (CMS)

- The technological infrastructure that connects the various components of the CATI system, including the student questionnaire, utility screens, databases, call scheduler, report modules, links to outside systems, and other system components. It utilizes a call scheduler to assign cases to interviewers in a predefined priority order. In addition to delivering appointments to interviewers at the appropriate time, the call scheduler also calculates the priority scores (the order in which cases need to be called based on preprogrammed rules), sorts cases in nonappointment queues, and computes time zone adjustments to ensure that cases are not delivered outside the specified calling hours. The call scheduler also permits callbacks to be set, and assigns status codes to the case. In addition, each case contains one or more roster lines that detail specific contact information for a case (e.g., home phone number, work phone number, etc.). The call scheduler uses a call algorithm based on the previous call results to determine which roster line should be called next.
- Back-end database is SQL Server 2000.
- Infrastructure was programmed in Visual Basic (VB).

Student instrument

- Back-end database is SQL Server 2000.
- Instrument was programmed in ASP.
- Edit checks were programmed using JavaScript.
- Web security was implemented using SSL certification with 128-bit encryption.
- Users' browsers were required to support, and be enabled for, JavaScript and session cookies (i.e., those that are erased from the hard drive after the browser has been closed).
- Final student interview database was maintained in SAS 8 (subsequently upgraded to SAS 9.1).
- Student status and summary reports were programmed in SAS 8 (subsequently upgraded to SAS 9.1).

CADE

- Back-end database is Microsoft SQL Server 2000.
- Front-end interface was programmed in ASP.
- Edit checks were programmed using JavaScript.
- Reports were developed using ASP.
- Web security was implemented using SSL certification with 128-bit encryption.
- Users' browsers were required to support, and be enabled for, JavaScript and session cookies (i.e., those that are erased from the hard drive after the browser has been closed).
- Final CADE database was maintained in SAS 8 (subsequently upgraded to SAS 9.1).

Automated processing

During data collection, a series of automated batch files were executed nightly via Windows XP scheduled processing to ensure that project staff were able to closely monitor progress during all stages of data collection. These automated processes included the following:

- **Dataload.** This program contained many different subprocesses, with the overall purpose being to process transactions generated during the day by various project systems and activities, and post the transactions to the RCS, updating institution and student-level case status information. Transactions included results from enrollment list processing, sampling, CPS matching, CADE preload and data receipt processing, lead-letter mailout and return, and student instrument preloading and interviewing.
- **RCS report generator.** Each night following the completion of the dataload process, the RCS report generator created HTML pages detailing both the institution- and student-level current status reports. It also produced miscellaneous project management reports including: Abstraction Method Report, Enrollment (list type) Report, Chief Administrator Participation Report, Enrollment List Acquisition

Report, CADE Status Summary Report (overall and for the BPS cohort), and Student Interview Summary Reports. The process automatically posted these reports to the IMS.

- **Data upload to master files.** Each night this process would update master files containing CADE and student interview data with newly acquired data, including complete and partial cases.
- **Data processing.** Separate programs ran nightly to edit the raw CADE and student interview data (see chapter 5 for more detail).

2.4.3 Variable Tracking System (VTS)

The central mechanism for constructing input files for the NCES Electronic Codebook (ECB) was a software application called the Variable Tracking System (VTS). The VTS tracked and stored documentation for both interview and derived variables required for the ECB and NCES' Data Analysis System (DAS). This included weighted and unweighted variable distributions, variable labels, value codes and labels, and a text field describing the development and source of each variable and, if applicable, the programming code used to construct it. Input files for the ECB and DAS systems were automatically produced by the VTS according to NCES specifications.

Chapter 3

Data Collection Outcomes

This chapter summarizes the results of the various stages of data collection implemented in the 2004 National Postsecondary Student Aid Study (NPSAS:04). Study response rates for institutions and students are presented first. Next, completion rates for individual data sources are discussed, including rates of matching to extant databases, locating results, and interviewing outcomes (by mode of survey administration).

3.1 Institutional Participation

Eligible sample institutions were asked to participate in two stages of NPSAS:04 by (1) providing a comprehensive list of enrolled students for sample selection and (2) providing data from student records for the sampled students. Consequently, the potential for institutional nonresponse existed at these two points in the survey process. Rates of institutional response—for the national and state-representative samples—are discussed in the following sections.

3.1.1 National Sample

Counts of eligible institutions in the national sample are shown in table 8, by institutional level, institutional control, and type of institution. About 1,630 of the 1,670 institutions initially selected for the full-scale study were determined to be eligible for NPSAS:04. Table 8 also shows that about 1,360 (84 percent) of the 1,630 eligible sample institutions provided a list of enrolled students that could be used for sample selection.²⁶ List provision rates (among eligible institutions) varied by type of institution, ranging from 77 percent for public less-than-2-year institutions to 89 percent for private not-for-profit less-than-4-year institutions. Weighted participation rates were calculated based on the institutional probabilities of selection and enrollment²⁷ and are also shown in table 8.²⁸ The overall weighted participation rate was 80 percent.²⁹

²⁶ Two institutions provided a list that had no student identifying information, and the institutions were not willing to provide this information. These lists were not sufficient for sample selection.

²⁷ In addition to the probabilities of selection, the participation rates accounted for the institution enrollment from the 2003 Integrated Postsecondary Education Data System (IPEDS). The unit of analysis for NPSAS is a student, so factoring the enrollment into the participation rates, gives an indication of what percentage of students are represented by the participating institutions.

²⁸ The weighted response rates can be interpreted as the estimated percentages of institutions in the population that would have provided a usable student sampling list, if asked.

²⁹ When the weighted response rates differ from the unweighted response rates, it is due to the nonresponding institutions having, on average, a lower or higher weight than the responding institutions. NPSAS:04 was designed to produce efficient estimates only at the student level. Institutions were selected with probabilities proportional to size; therefore, weighted institution-level estimates are subject to a high level of sampling variation.

Table 8. Numbers of NPSAS:04 sampled, eligible, and participating institutions and enrollment list participation rates, by institutional characteristics: national sample

Institutional characteristics ²	Sampled institutions	Eligible institutions ³	Institutions providing lists ¹		
			Number	Unweighted percent	Weighted percent
All institutions	1,670	1,630	1,360	83.5	80.0
Institutional level					
Less-than-2-year	260	250	200	82.1	80.8
2-year	490	480	410	85.4	78.0
4-year non-doctorate-granting	460	460	380	83.3	74.6
4-year doctorate-granting	450	450	370	82.4	85.6
Institutional control					
Public	810	800	680	84.9	79.6
Private not-for-profit	570	560	450	81.2	79.8
Private for-profit	290	270	230	84.2	86.7
Type of institution					
Public less-than-2-year	70	60	50	76.6	74.3
Public 2-year	380	380	320	85.4	77.6
Public 4-year non-doctorate-granting	130	130	110	85.1	70.3
Public 4-year doctorate-granting	230	230	200	86.3	87.1
Private not-for-profit less-than-4-year	70	70	70	89.0	92.6
Private not-for-profit 4-year non-doctorate-granting	280	270	220	81.9	78.1
Private not-for-profit 4-year doctorate-granting	220	220	170	77.7	80.8
Private for-profit less-than-2-year	170	160	140	84.0	82.3
Private for-profit 2-year or more	110	110	90	84.4	88.2

¹ Percents are based on the eligible institutions within the row under consideration.

² Institutional characteristics are based on data from the sampling frame which was formed from the 2000–01 and 2002–03 Integrated Postsecondary Education Data System (IPEDS).

³ Among the 30 ineligible institutions: 10 closed after the sampling frame was defined, and 10 failed to meet one or more of the criteria for institutional NPSAS eligibility. The remainder were treated as merged institutions because two or more campuses were included on one combined student list.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

3.1.2 State Samples

Counts of eligible institutions for the state samples are shown in table 9, by state and type of institution. Table 9 also shows the weighted and unweighted enrollment list provision rates (among eligible institutions), which varied by state and type of institution considered. The weighted participation rate ranged from 53 percent to 100 percent.

Table 9. Numbers of NPSAS:04 sampled, eligible, and participating institutions and enrollment list participation rates, by institutional characteristics: state samples

Institutional characteristics ²	Sampled institutions	Eligible institutions	Institutions providing lists ¹		
			Number	Unweighted percent	Weighted percent
California					
Public 2-year	40	40	30	65.8	66.2
Public 4-year	30	30	20	57.6	53.3
Private not-for-profit 4-year	40	40	30	73.2	77.6
Connecticut					
Public 2-year	20	20	10	86.7	99.9
Public 4-year	10	10	10	100.0	100.0
Private not-for-profit 4-year	20	20	20	85.0	99.2
Delaware					
Public 2-year	#	#	#	100.0	100.0
Public 4-year	#	#	#	100.0	100.0
Private not-for-profit 4-year	#	#	#	100.0	100.0
Georgia					
Public 2-year	30	30	30	100.0	100.0
Public 4-year	20	20	20	100.0	100.0
Private not-for-profit 4-year	30	30	30	81.8	91.1
Illinois					
Public 2-year	30	30	30	90.0	90.0
Public 4-year	10	10	10	83.3	87.7
Private not-for-profit 4-year	30	30	20	75.9	77.1
Indiana					
Public 2-year	20	20	20	100.0	100.0
Public 4-year	10	10	10	100.0	100.0
Private not-for-profit 4-year	30	30	30	90.0	92.0
Minnesota					
Public 2-year	30	30	30	100.0	100.0
Public 4-year	10	10	10	100.0	100.0
Private not-for-profit 4-year	40	40	30	85.7	94.6
Nebraska					
Public 2-year	10	10	10	71.4	67.2
Public 4-year	10	10	10	85.7	97.0
Private not-for-profit 4-year	20	20	10	86.7	68.2
New York					
Public 2-year	40	40	30	86.5	93.0
Public 4-year	30	30	30	93.1	94.2
Private not-for-profit 4-year	40	40	30	81.6	82.6
Oregon					
Public 2-year	20	20	10	82.4	85.3
Public 4-year	10	10	10	90.0	97.0
Private not-for-profit 4-year	30	20	20	91.7	94.7
Tennessee					
Public 2-year	20	20	20	100.0	100.0
Public 4-year	10	10	10	100.0	100.0
Private not-for-profit 4-year	30	30	20	80.0	84.6
Texas					
Public 2-year	30	30	30	93.1	91.5
Public 4-year	30	30	30	86.7	87.7
Private not-for-profit 4-year	30	30	20	80.0	84.4

Rounds to zero.

¹ Percents are based on the eligible institutions within the row under consideration.² Institutional characteristics are based on data from the sampling frame which was formed from the 2000–01 and 2002–03 Integrated Postsecondary Education Data System (IPEDS).

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

3.2 Study Respondents

As noted in the previous chapter, student-level data for NPSAS:04 are collected from a variety of sources, including student records (computer-assisted data entry [CADE]), student interviews, and extant federal and private databases (Central Processing System [CPS], National Student Loan Data System [NSLDS], ACT, and SAT files). For NPSAS:04, a definition of the minimum data requirements, regardless of source, to be considered a study respondent was adopted. Specifically, a study respondent is defined as any sample member who is determined to be eligible for the study (based on the eligibility criteria specified in chapter 2) and, minimally, has valid data from any source for the following:

- student type (undergraduate or graduate/first professional);
- date of birth or age;
- gender; and
- at least 8 of the following 15 variables:
 - dependency status;
 - marital status;
 - any dependents;
 - income;
 - expected family contribution (EFC);
 - degree program;
 - class level;
 - first-time beginner (FTB) status;
 - months enrolled;
 - tuition;
 - received federal aid;
 - received non-federal aid;
 - student budget;
 - race; and
 - parent education.

Student-level study response rates for both the national sample and the state samples are presented below.

3.2.1 National Sample

Counts of eligible students are shown in table 10, by type of institution. About 8,200 (8 percent) of the 109,210 students initially selected for the full-scale study were determined to be ineligible for NPSAS:04. Upon the completion of data collection, 90 percent of the 101,010 eligible sample members had sufficient key data to be classified as study respondents. Weighted

response rates were calculated based on the institutional weights and student probabilities of selection and are also shown in table 10.³⁰ The student weighted response rate was 91 percent.³¹

Table 10 also shows that the unweighted student response rates (among eligible students) varied by type of institution, ranging from 81 percent for students from public 2-year institutions to 96 percent for students from private not-for-profit 4-year non-doctorate institutions. Response rates also varied by student type: 91 percent for FTBs, 87 percent for other undergraduates, and 94 percent for graduate and first-professional students.

Table 10. Numbers of NPSAS:04 sampled and eligible students and response rates, by institutional characteristics and student type: national sample

Institutional characteristics and student type ³	Sampled students	Eligible students ⁴	Responding students ^{1,2}	
			Unweighted percent	Weighted percent
All students	109,210	101,010	89.8	91.0
Institutional level				
Less-than-2-year	13,320	11,330	92.6	93.6
2-year	41,510	37,290	83.1	84.6
4-year non-doctorate-granting	21,450	20,550	94.0	94.8
4-year doctorate-granting	32,930	31,840	94.1	94.7
Institutional control				
Public	71,030	65,540	87.0	89.2
Private not-for-profit	22,730	21,660	95.3	96.1
Private for-profit	15,460	13,820	95.0	96.1
Type of institution				
Public less-than-2-year	3,180	2,580	84.2	90.6
Public 2-year	36,300	32,450	81.3	83.9
Public 4-year non-doctorate-granting	9,200	8,880	91.9	93.3
Public 4-year doctorate-granting	22,350	21,620	93.7	94.2
Private not-for-profit less-than-4-year	3,060	2,770	94.3	94.6
Private not-for-profit 4-year non-doctorate	9,740	9,300	96.3	96.9
Private not-for-profit 4-year doctorate-granting	9,930	9,590	94.5	95.4
Private for-profit less-than-2-year	9,270	8,030	94.9	94.3
Private for-profit 2-year or more	6,190	5,790	95.0	96.7
Student type				
Total undergraduates	97,090	89,480	89.3	90.3
Potential FTB	49,410	44,670	91.2	91.4
Other undergraduates	47,680	44,810	87.3	90.0
Graduate/first professional	12,120	11,530	94.2	95.1

¹ A responding student is defined as any eligible student for whom sufficient data were obtained from one or more sources, including student interview, institutional records, and the Department of Education's Central Processing System (CPS).

² Percents are based on the eligible students within the row under consideration.

³ Institutional characteristics are based on data from the sampling frame which was formed from the 2000–01 and 2002–03 Integrated Postsecondary Education Data System (IPEDS). Student type is based on data from the sampling frames which were the enrollment lists received from participating institutions.

⁴ Ineligible students were identified during the student interview or from institutional records if student eligibility was not determined from a student interview.

NOTE: Detail may not sum to totals because of rounding. FTB = first-time beginner.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

³⁰ The weighted response rates can be interpreted as the estimated percentages of students in the population that would have responded, if asked.

³¹ When the weighted response rates differ from the unweighted response rates, it is due to the nonresponding students having, on average, a lower or higher weight than the responding students.

3.2.2 State Samples

Counts of eligible students for the representative undergraduate state samples are shown in table 11, by state and type of institution. Table 11 also shows that the unweighted and weighted response rates (among eligible students) varied by state and type of institution. The weighted response rates range from 61 percent to 100 percent.

Table 11. Numbers of NPSAS:04 sampled, eligible, and responding students and response rates, by institutional characteristics: state samples

Institutional characteristics ³	Sampled undergraduate students	Eligible undergraduate students ⁴	Responding undergraduate students ^{1,2}	
			Unweighted percent	Weighted percent
California				
Public 2-year	5,390	4,800	59.4	64.5
Public 4-year	1,390	1,400	90.2	91.3
Private not-for-profit 4-year	840	820	90.1	91.1
Connecticut				
Public 2-year	610	570	73.9	77.5
Public 4-year	520	500	99.0	99.1
Private not-for-profit 4-year	490	480	95.4	95.5
Delaware				
Public 2-year	900	840	55.0	60.6
Public 4-year	610	590	91.6	98.3
Private not-for-profit 4-year	540	530	85.7	93.0
Georgia				
Public 2-year	2,110	1,930	90.5	93.4
Public 4-year	940	910	95.4	94.9
Private not-for-profit 4-year	470	450	98.2	98.2
Illinois				
Public 2-year	1,950	1,640	86.4	88.8
Public 4-year	740	730	95.2	95.5
Private not-for-profit 4-year	740	710	95.9	96.5
Indiana				
Public 2-year	410	350	98.3	98.4
Public 4-year	930	920	92.8	95.1
Private not-for-profit 4-year	560	540	98.3	98.5
Minnesota				
Public 2-year	1,430	1,320	60.0	61.0
Public 4-year	630	620	79.5	78.4
Private not-for-profit 4-year	510	500	97.8	98.8
Nebraska				
Public 2-year	450	390	97.0	98.2
Public 4-year	520	510	95.7	94.4
Private not-for-profit 4-year	340	330	100.0	100.0
New York				
Public 2-year	2,200	2,030	83.6	87.1
Public 4-year	1,490	1,450	85.2	84.7
Private not-for-profit 4-year	1,660	1,590	96.6	96.8
Oregon				
Public 2-year	1,040	920	90.7	92.8
Public 4-year	640	630	97.1	97.7
Private not-for-profit 4-year	340	330	98.2	99.4

See notes at end of table.

Table 11. Numbers of NPSAS:04 sampled, eligible, and responding students and response rates, by institutional characteristics: state samples—Continued

Institutional characteristics ³	Sampled undergraduate students	Eligible undergraduate students ⁴	Responding undergraduate students ^{1,2}	
			Unweighted percent	Weighted percent
Tennessee				
Public 2-year	1,120	960	89.2	90.5
Public 4-year	790	760	90.9	93.3
Private not-for-profit 4-year	390	390	96.4	95.3
Texas				
Public 2-year	3,170	2,800	88.2	90.8
Public 4-year	1,620	1,560	95.7	96.0
Private not-for-profit 4-year	640	620	98.6	98.4

¹ A responding student is defined as any eligible student for whom sufficient data were obtained from one or more sources, including: student interview, institutional records, and the Department of Education's Central Processing System (CPS).

² Percents are based on the eligible students within the row under consideration.

³ Institutional characteristics are based on data from the sampling frame which was formed from the 2000–01 and 2002–03 Integrated Postsecondary Education Data System (IPEDS).

⁴ Ineligible students were identified during the student interview or from institutional records if student eligibility was not determined from a student interview.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

3.3 Data Collection Results, by Source

Chapter 2 described the various sources of data for NPSAS:04 and the methods through which they were obtained. The following section presents the results of each stage of data collection. This section presents results for individual data sources. An individual sample member's status as a study respondent was determined by the amount of data across sources (see Section 3.2 for a definition of the requirements for study respondent classification). Thus, rates presented for the following data sources do not correspond to study response rates.

3.3.1 Student Record Matching

Central Processing System (CPS)

Table 12 summarizes the results of matching and downloading student data from the U.S. Department of Education's CPS. The CPS contains data provided to the U.S. Department of Education by students and their families when they complete the Free Application for Federal Student Aid (FAFSA). Therefore, successful matching to CPS can only occur for sample members who are federal student financial aid applicants.

The initial CPS matching process began after the student sample had been selected for an institution, but before student record (CADE) data collection activities had begun. This matching was against the CPS data for the 2003–04 financial aid year. Since data obtained from CPS were relevant in determining study response status, match rates are presented for all eligible sample members for whom a social security number was available. As shown in table 12, not all sample students were submitted to the CPS for matching. This was primarily because student Social Security numbers and last names were not obtained from some institutions. Following CADE, a number of student cases that had not previously matched successfully to CPS were resubmitted,

based on either a newly obtained Social Security number or the evidence in the institution records that the student had, in fact, applied for federal student aid for the 2003–04 academic year.

The overall matching rate for the 2003–04 CPS data was 60 percent. Match rates varied by type of institution, ranging from 50 percent for public 2-year institutions to 84 percent for private for-profit 2-year institutions.

Approximately 35 percent of graduate/first-professional students matched to the 2003–04 CPS. Also, 64 percent of undergraduate students matched: of these, 69 percent were first-year undergraduates and 59 percent were other undergraduates. Nearly all institutions require undergraduate aid applicants to file a FAFSA in order to determine their eligibility for federal Pell Grants, federal campus-based aid, and federal loans as part of the undergraduate aid packaging process. Graduate/first-professional students are not usually required to file a FAFSA unless they are specifically applying for federal loans, the only type of federal aid generally available to graduate students. Graduate students often apply directly through their institution or department for fellowships and assistantships, which are usually not need-based and do not require the completion of the federal financial aid forms on which CPS matching is based.

The NPSAS:04 sample students were also matched to the 2004–05 CPS files. It was expected that fewer sample students would successfully match to the 2004–05 CPS files, primarily because some students may have completed their postsecondary education during the 2004–05 NPSAS year. Table 12 shows that, overall, 63 percent of sample students matched to either CPS 2003–04 or CPS 2004–05, and 31 percent matched to both data files.

National Student Loan Data System (NSLDS)

Results of the matching to NSLDS loan and Pell Grant files are shown in table 13. Results presented are based only on study respondents since NSLDS data were not required to determine study response status. Successful matching to NSLDS can only occur for sample members who have received federal loans and/or Pell Grants. NSLDS files are historical, thus, information about receipt of such loans and grants was available not only for the NPSAS study year, but also for prior years (where applicable). Therefore, table 13 shows historical match rates for eligible study respondents, which does not necessarily mean that the match was for the current NPSAS year.

In total, 48,840 study respondents (56 percent of those submitted) were matched to the historical loan database. NSLDS match rates ranged from 34 percent for public less-than-2-year institutions, to 87 percent for private for-profit 2-year or more institutions.

Pell Grant matches were obtained for 39,240 study respondents (45 percent of those submitted). The Pell match rate ranged from 27 percent for private not-for profit 4-year doctorate-granting institutions to 79 percent for private for-profit less-than-2-year institutions.

Table 12. Results of Central Processing System (CPS) matching for 2003–04 and 2004–05, by institutional characteristics and student type: 2004

Institutional characteristics and student type ¹	Eligible students ²	Matched to 2003–04		Matched to 2004–05		Matched to both years		Matched to either year	
		Number ³	Percent	Number ³	Percent	Number ³	Percent	Number ³	Percent
All students	95,180	57,370	60.3	32,080	33.7	29,080	30.6	60,370	63.4
Institution level									
Less-than-2-year	10,250	8,130	79.3	2,690	26.3	2,570	25.1	8,260	80.5
2-year	34,110	18,770	55.0	10,810	31.7	9,230	27.1	20,350	59.6
4-non-doctorate-granting	19,710	13,900	70.5	8,570	43.5	8,130	41.2	14,340	72.7
4-year doctorate-granting	31,100	16,570	53.3	10,010	32.2	9,150	29.4	17,430	56.0
Institutional control									
Public	60,540	32,020	52.9	18,810	31.1	16,390	27.1	34,440	56.9
Private not-for-profit	21,020	14,000	66.6	8,540	40.6	8,100	38.5	14,440	68.7
Private for-profit	13,620	11,350	83.3	4,740	34.8	4,590	33.7	11,500	84.4
Type of institution									
Public less-than-2-year	2,120	1,370	64.6	520	24.5	460	21.9	1,430	67.2
Public 2-year	29,010	14,460	49.9	8,540	29.5	7,040	24.3	15,970	55.0
Public 4-non-doctorate-granting	8,290	5,240	63.3	3,210	38.7	2,970	35.8	5,480	66.1
Public 4-year doctorate-granting	21,120	10,950	51.8	6,540	31.0	5,920	28.0	11,570	54.8
Private not-for-profit 2-year or less	2,600	2,150	82.5	1,210	46.5	1,160	44.6	2,200	84.4
Private not-for-profit 4-non-doctorate-granting	8,730	6,410	73.4	3,950	45.3	3,790	43.4	6,570	75.3
Private not-for-profit 4-year doctorate-granting	9,690	5,440	56.2	3,380	34.8	3,150	32.5	5,670	58.5
Private for-profit less-than-2-year	7,530	6,260	83.2	1,970	26.1	1,900	25.3	6,320	84.0
Private for profit 2-year or more	6,100	5,090	83.5	2,770	45.4	2,690	44.1	5,170	84.9
Student type									
Total undergraduate	84,190	53,490	63.5	29,990	35.6	27,220	32.3	56,260	66.8
FTB student	37,660	25,860	68.7	14,720	39.1	13,550	36.0	27,040	71.8
Other undergraduate	46,530	27,630	59.4	15,260	32.8	13,670	29.4	29,220	62.8
Graduate/first-professional	10,990	3,870	35.3	2,090	19.1	1,860	16.9	4,110	37.4

¹ Both institutional and student classifications were verified to correct classification errors on the sampling frame.

² Includes all eligible students for whom apparently legitimate Social Security numbers were obtained either before or during computer-assisted data entry (CADE).

³ The number presented reflects the total number of matches of those submitted and may include students who were classified as study nonrespondents.

NOTE: Detail may not sum to totals because of rounding. All percentages are unweighted and based on the number of eligible students within the row under consideration. FTB = first-time beginner.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table 13. Results of National Student Loan Data System (NSLDS) matching, by institutional characteristics and student type: 2004

Institutional characteristics and student type ²	Study respondents ³	Sent to NSLDS		Matched to NSLDS loan ¹		Matched to NSLDS Pell ¹	
		Number	Percent ⁴	Number	Percent ⁴	Number	Percent ⁴
All students	90,750	87,890	96.8	48,840	55.6	39,240	44.6
Institution level							
Less-than-2-year	9,690	9,630	99.4	6,400	66.4	7,330	76.1
2-year	31,260	29,730	95.1	12,610	42.4	14,570	49.0
4-non-doctorate-granting	19,400	18,820	97.0	12,520	66.5	8,700	46.2
4-year doctorate-granting	30,400	29,710	97.7	17,320	58.3	8,640	29.1
Institutional control							
Public	56,990	54,610	95.8	25,070	45.9	21,920	40.1
Private not-for-profit	20,630	20,250	98.1	13,050	64.4	7,840	38.7
Private for-profit	13,120	13,030	99.3	10,720	82.3	9,480	72.8
Type of institution							
Public less-than-2-year	1,930	1,910	99.0	640	33.7	1,190	62.4
Public 2-year	26,320	24,830	94.3	8,740	35.2	11,220	45.2
Public 4-non-doctorate-granting	8,160	7,770	95.3	4,390	56.5	3,450	44.4
Public 4-year doctorate-granting	20,600	20,110	97.6	11,300	56.2	6,060	30.1
Private not-for-profit 2-year or less	2,570	2,500	97.3	1,370	54.6	1,750	69.7
Private not-for-profit 4-non-doctorate-granting	8,550	8,430	98.6	5,880	69.7	3,620	42.9
Private not-for-profit 4-year doctorate-granting	9,510	9,320	98.0	5,810	62.3	2,480	26.6
Private for-profit less-than-2-year	7,150	7,130	99.8	5,600	78.5	5,640	79.1
Private for profit 2-year or more	5,970	5,890	98.7	5,120	87.0	3,840	65.1
Student type							
Total undergraduate	79,850	77,380	96.9	42,620	55.1	37,250	48.1
FTB student	35,510	34,700	97.7	17,270	49.8	16,530	47.6
Other undergraduate	44,340	42,680	96.2	25,350	59.4	20,720	48.5
Graduate/first-professional	10,890	10,510	96.5	6,230	59.2	1,990	19.0

¹ Matching was completed on historical files.

² Both institutional and student classifications were verified to correct classification errors on the sampling frame.

³ Includes all study respondents for whom an apparently legitimate social security number was available.

⁴ Percentages are based on the number of eligible students within the row under consideration.

NOTE: Detail may not sum to totals because of rounding. FTB = first-time beginner.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

3.3.2 Outcomes of Student Record Abstraction

As previously indicated, 1,360 of the 1,630 (84 percent) eligible sample institutions provided a student enrollment list that could be used for sample selection (see table 8). These institutions were therefore eligible to participate in the student record abstraction phase of the study referred to as CADE. NPSAS:04 included three abstraction methods for the student record data collection—self-CADE, field-CADE, and data-CADE. Table 14 shows the final data abstraction method for all institutions that completed CADE.

Abstraction method

Of the 1,300 institutions that provided student record data, the majority (66 percent) did so by self-CADE. Data-CADE was the next most common method, with 21 percent of CADE completions being submitted via electronic data files. Field data collectors performed the record abstraction from the remaining 13 percent of CADE completions. Compared to NPSAS:2000, the rate at which institutions opted for the data-CADE in NPSAS:04 was significantly higher: 21 percent compared to 3 percent in NPSAS:2000 ($Z = 12.27, p < 0.05$). As was described earlier, student sample sizes were larger than in NPSAS:2000, making the data-CADE option more attractive. Data-CADE was also useful for institutional systems that provided data for students from multiple institutions. There was a corresponding decrease in the use of field-CADE from NPSAS:2000; 13 percent compared to 23 percent ($Z = 6.0, p < 0.05$).

Table 14. Student record abstraction method: 2004

CADE abstraction method	Institutions providing CADE		Total students ¹	
	Number	Percent ²	Number	Percent ²
Total	1,300	100.0	103,620	100.0
Abstraction method				
Self-CADE	860	65.8	48,860	47.2
Data-CADE	280	21.1	33,210	32.0
Field-CADE	170	13.1	21,550	20.8

¹ The total represents the number of students sampled from institutions that completed computer-assisted data entry (CADE) and may include students who were classified as study nonrespondents.

² Percentage of total number of eligible institutions/students.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

CADE completion rates

At the institution level, an institution was classified as having completed CADE if sufficient data were obtained for at least one sample student. Institution-level weighted and unweighted CADE completion rates are shown in Table 15. Overall, 96 percent (weighted) of the participating institutions (those that provided enrollment lists from which a student sample could be selected) completed CADE.

A student record was considered to represent a CADE record “complete” if it had nonmissing data for any one or more of the following critical items:

- received financial aid;
- enrollment;
- tuition;
- degree program; and
- race.

Table 15. Institutional-level computer-assisted data entry (CADE) completion rates, by institutional characteristics and abstraction method: 2004

Institutional characteristics and abstraction method ¹	Institutions providing lists	Institutions providing CADE		
		Number	Unweighted Percent ²	Weighted Percent
Total	1,360	1,300	95.4	96.3
Institutional level				
Less-than-2-year	200	190	94.0	94.0
2-year	410	390	95.3	96.9
4-year non-doctorate-granting	380	360	95.8	96.5
4-year doctorate-granting	380	360	95.8	95.6
Institutional control				
Public	680	660	96.9	96.2
Private not-for-profit	450	430	94.3	96.8
Private for-profit	230	210	93.0	94.5
Type of institution				
Public less-than-2-year	50	50	100.0	100.0
Public 2-year	310	310	98.1	97.2
Public 4-year nondoctorate-granting	110	110	96.5	96.4
Public 4-year doctorate-granting	200	190	94.5	94.8
Private not-for-profit 2-year or less	60	50	81.0	82.7
Private not-for-profit 4-year non-doctorate granting	220	210	95.8	97.0
Private not-for-profit 4-year doctorate granting	180	170	97.2	97.4
Private for-profit less than-2-year	130	120	93.0	93.1
Private for profit 2-year or more	100	90	93.0	95.0
Abstraction method				
None chosen	10	†	†	†
Self-CADE	910	860	94.5	93.8
Data-CADE	280	280	99.3	99.0
Field-CADE	170	170	97.7	97.5

† Not applicable.

¹ Institutional characteristics were verified (where possible) to correct classification errors on the sample frame.

² Percentage of institutions providing lists.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Completion rates ranged from 94 percent (weighted) for institutions choosing self-CADE to 99 percent for data-CADE. CADE completion rates varied by type of institution, ranging from 83 percent from private not-for-profit 2-year or less institutions to 100 percent for public less-than-2-year institution.

Student-level CADE completion rates are presented in table 16 by type of institution and student type. Overall, the student-level CADE completion rate (the percentage of study-eligible cases for whom a completed CADE record was obtained) was 92 percent (weighted). Weighted student-level completion rates ranged from 71 percent for private not-for-profit 2-year or less institutions, to 96 percent for public less-than-2-year institutions. Weighted completion rates by student type were about 92 percent for undergraduate and 93 percent for graduate and first-professional students.

Table 16. Student-level computer-assisted data entry (CADE) completion rates, by institutional characteristics and student type: 2004

Institutional characteristics and student type ²	Eligible students ³	CADE completes ¹		
		Number	Unweighted percent	Weighted percent
Total	101,010	88,920	88.0	91.7
Institutional level				
Less-than-2-year	10,330	8,800	85.2	87.8
2-year	37,750	32,150	85.2	88.9
4-year non-doctorate-granting	20,630	18,530	89.8	94.4
4-year doctorate-granting	32,310	29,440	91.1	93.7
Institutional control				
Public	65,540	58,400	89.1	91.6
Private not-for-profit	21,660	18,920	87.3	93.2
Private for-profit	13,820	11,600	84.0	89.2
Type of institution				
Public less-than-2-year	2,150	2,020	93.9	95.9
Public 2-year	32,540	28,580	87.8	89.6
Public 4-year non-doctorate-granting	8,890	7,900	88.9	94.8
Public 4-year doctorate-granting	21,960	19,910	90.6	93.2
Private not-for-profit 2-year or less	2,730	1,700	62.2	70.8
Private not-for-profit 4-year non-doctorate granting	8,880	7,990	89.9	93.1
Private not-for-profit 4-year doctorate granting	10,050	9,240	91.9	94.7
Private for-profit less than-2-year	7,550	6,350	84.1	87.0
Private for profit 2-year or more	6,260	5,250	83.8	90.2
Student type				
Total undergraduate	89,460	78,590	87.9	91.5
Potential FTB	39,440	34,590	87.7	90.5
Other undergraduates	50,020	44,000	88.0	92.0
Graduate/first professional	11,560	10,340	89.4	93.0

¹ Eligible students who met the criteria for qualification as a CADE completion, which required an indication of financial aid receipt, enrollment status, tuition, degree program, or race in the CADE instrument. Numbers presented here may include students who were classified as study nonrespondents.

² Both institutional characteristics and student classifications were verified (where possible) to correct classification errors on the sample frame.

³ Students determined to be eligible in CADE and/or the student interview.

NOTE: Detail may not sum to totals because of rounding. FTB = first-time beginner.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

3.3.3 Student Interview Completion

Locating

When dealing with a mobile group such as the NPSAS:04 student sample, locating can be one of the more difficult tasks. A variety of approaches were used during NPSAS:04 to locate and interview sampled students. These approaches included the use of an initial mailing to all students, follow-up letters and e-mails to nonrespondents, telephone tracing (calling local and permanent numbers as well as any other numbers obtained during the course of contacting), and intensive tracing (i.e., using consumer databases, Web searches, and a variety of directories).

As shown in table 17, of the 101,010 eligible sample members, 79 percent were successfully located. The highest location rates were for students attending public 4-year doctorate-granting institutions (86 percent), while the lowest location rates were among those from private for-profit less-than-2-year institutions (66 percent) ($\chi^2 = 2,506, p < 0.001$). Graduate students proved the easiest group to find, with 88 percent of these students being located, compared to 77 percent of other undergraduates, and 80 percent of FTB undergraduates ($\chi^2 = 684, p < 0.001$).

Table 17. Student locating, by institutional characteristics and student type: 2004

Institutional characteristics and student type ¹	Total	Located	
		Number	Percent
Total	101,010	80,050	79.2
Institutional level			
Less-than-2-year	10,330	7,030	68.0
2-year	37,750	28,210	74.7
4-non-doctorate-granting	20,630	17,130	83.0
4-year doctorate-granting	32,310	27,690	85.7
Institutional control			
Public	65,540	52,360	79.9
Private, not-for-profit	21,660	18,140	83.7
Private, for-profit	13,820	9,550	69.2
Type of institution			
Public less-than-2-year	2,150	1,650	76.7
Public 2-year	32,540	24,540	75.4
Public 4-non-doctorate-granting	8,890	7,370	82.9
Public 4-year doctorate-granting	21,960	18,800	85.6
Private not-for-profit 2-year-or-less	2,730	1,930	70.5
Private not-for-profit 4-non-doctorate-granting	8,880	7,580	85.4
Private not-for-profit 4-year doctorate-granting	10,050	8,640	85.9
Private for-profit less-than-2-year	7,550	4,950	65.6
Private for-profit 2-year-or-more	6,260	4,600	73.5
Student type			
Total undergraduate	89,460	69,900	78.1
FTB student	39,440	31,430	79.7
Other undergraduate	50,020	38,470	76.9
Graduate/first-professional	11,560	10,150	87.8

¹ Both institutional and student classifications were verified to correct classification errors on the sampling frame.

NOTE: Detail may not sum to totals because of rounding. Excludes 8,200 cases determined to be ineligible for the study. FTB = first-time beginner.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table 18 presents the results of matching to the various batch searches used to obtain locating information for sample members (described in chapter 2). Telematch was the most successful, with 50 percent of cases returning address information. The National Change of Address (NCOA) system and FastData returned locating information on 9 percent and 6 percent, respectively, of the cases submitted.

Table 18. Batch processing record match rates, by tracing source: 2004

Method of tracing	Number of records sent	Number of records matched	Percent matched ¹
Total	240,750	65,060	27.0
NCOA	109,210	9,360	8.6
Telematch	109,210	54,390	49.8
FastData	22,330	1,310	5.9

¹ Percent is based on the number of records sent for batch tracing. Since records were sent to multiple tracing sources, multiple record matches were possible.

NOTE: NCOA = National Change of Address.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04)

Intensive tracing during data collection

Intensive tracing efforts were required for cases in which no interview was obtained via self-administration nor did the preloaded computer-assisted telephone interview (CATI) locating information result in contact with the sample member. These cases were assigned to RTI Call Center Services' (CCS) Tracing Services for intensive centralized tracing, utilizing searches of public and proprietary databases, the Web, and a variety of information directories. Overall, one-fourth (26 percent) of eligible sample members required intensive tracing efforts (table 19). Intensive tracing varied by institution type, ranging from 17 percent for private not-for-profit 4-year doctorate-granting institutions, to 38 percent for private for-profit less than 2-year institutions. Intensive tracing also varied by student type: 19 percent for graduate and first-professional students, and 27 percent for undergraduate students.

Table 19. Students requiring intensive tracing procedures, by institutional characteristics and student type: 2004

Institutional characteristics and student type ¹	Total	Cases requiring intensive tracing efforts	
		Number	Percent
Total	101,100	25,940	25.7
Institutional level			
Less-than-2-year	10,350	3,730	36.0
2-year	37,780	11,920	31.5
4-non-doctorate-granting	20,640	4,350	21.1
4-year doctorate-granting	32,320	5,940	18.4
Institutional control			
Public	65,590	16,950	25.8
Private, not-for-profit	21,670	4,240	19.6
Private, for-profit	13,840	4,750	34.3
Type of institution			
Public less-than-2-year	2,150	630	29.2
Public 2-year	32,570	10,260	31.5
Public 4-year non-doctorate-granting	8,890	1,910	21.4
Public 4-year doctorate-granting	21,970	4,160	18.9
Private not-for-profit 2-year-or-less	7,570	2,870	37.9
Private not-for-profit 4-year non-doctorate-granting	8,880	1,680	18.9
Private not-for-profit 4-year doctorate-granting	10,060	1,740	17.3
Private for-profit less-than-2-year	7,570	2,870	37.9
Private for-profit 2-year-or-more	6,270	1,880	30.0
Student type			
Total undergraduate	89,540	23,780	26.6
FTB student	39,490	10,170	25.8
Other undergraduate	50,050	13,610	27.2
Graduate/first-professional	11,560	2,160	18.7

¹ Both institutional and student classifications were verified to correct classification errors on the sampling frame.

NOTE: Detail may not sum to totals because of rounding. Excludes 8,200 cases determined to be ineligible for the study. FTB = first-time beginning.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table 20 show that of the 25,940 eligible cases requiring intensive tracing, 10,870 (42 percent) were ultimately located, and approximately 30 percent of them were interviewed.

Table 20. Locate and interview rates, by intensive tracing efforts: 2004

	Total	Located		Interviewed		Weighted percent
		Number	Percent	Number	Percent	
Total	101,100	80,090	79.2	62,220	61.5	69.7
Intensive tracing required	25,940	10,880	41.9	7,850	30.3	77.2
No intensive tracing required	75,160	69,220	92.1	54,370	72.3	42.5

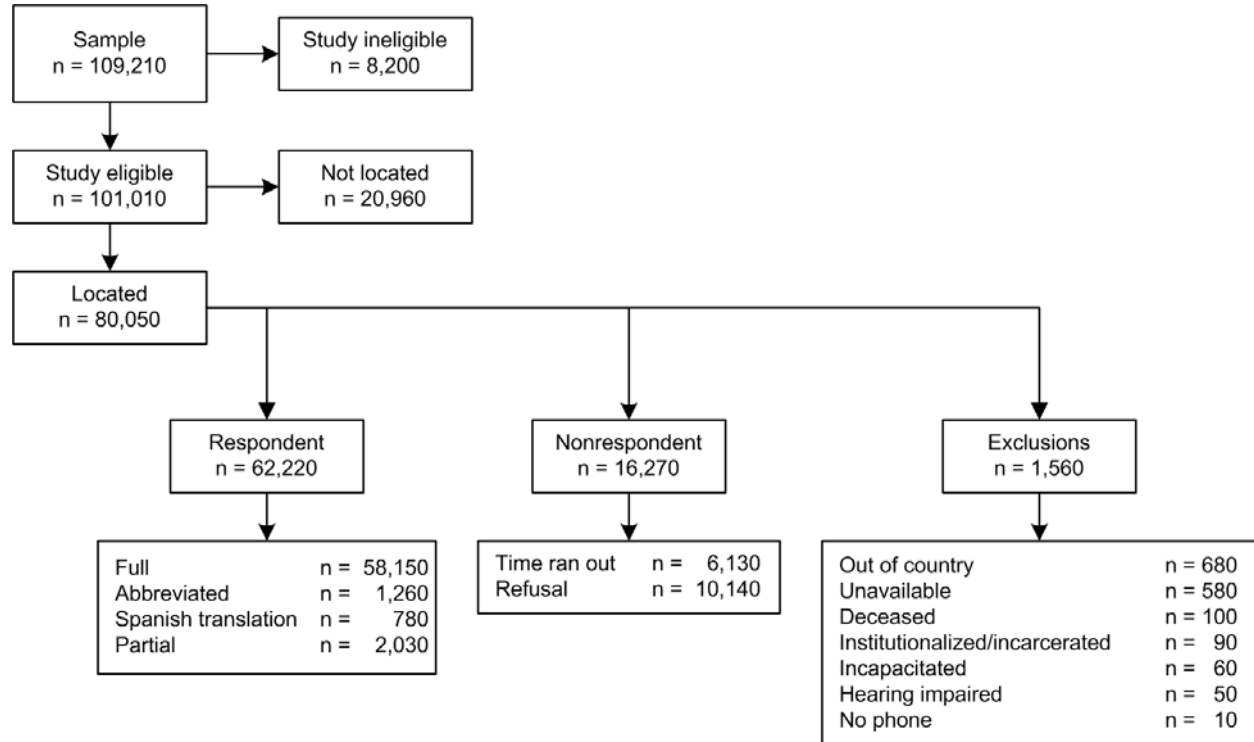
NOTE: Detail may not sum to totals because of rounding. Excludes 8,200 cases determined to be ineligible for the study.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

3.3.4 Student Locating and Response Rate Summary

Overall locating and interviewing outcomes are shown in figure 9. Of the 109,210 sample members, 80,050 (73 percent) were located, 20,960 (19 percent) were not located, and 8,200 (8 percent) were located but determined to be ineligible for the study. Of the located sample members, 78 percent completed either a full interview, an abbreviated interview used to capture critical information from students with a high probability of nonresponse, a hardcopy Spanish interview or completed enough of the questionnaire to be considered a partial interview.³²

Figure 9. NPSAS:04 locating and interview outcomes



NOTE: Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table 21 presents student interview completion rates among eligible sample members by institutional characteristics and student type. The weighted response rate for the student data interview was 71 percent. Weighted student interview completion rates ranged from 49 percent for private-for-profit less-than-2-year institutions, to 74 percent for 4-year doctorate-granting institutions (public and private, not-for-profit). Weighted completion rates by student type were 72 percent for undergraduates and 75 percent for graduate and first-professional students.

³² Students who completed the enrollment section of the questionnaire but did not complete the entire survey were considered partial interviews.

Table 21. Student interview completion results, by institutional characteristics and student type: 2004

Institutional characteristics and student type ²	Eligible students ³	Completed interviews ¹		
		Number	Unweighted percent	Weighted percent
Total	99,450	62,220	62.6	70.6
Institutional level				
Less-than-2-year	10,210	4,830	47.3	50.2
2-year	37,130	20,790	56.0	69.3
4-non doctorate-granting	20,340	13,840	68.0	70.8
4-year doctorate-granting	31,770	22,760	71.6	73.9
Institutional control				
Public	64,520	40,620	63.0	71.3
Private, not-for-profit	21,290	14,620	68.7	71.8
Private, for-profit	13,640	6,970	51.1	60.4
Type of institution				
Public less-than-2 year	2,130	1,200	56.4	61.6
Public 2-year	31,990	18,000	56.3	69.8
Public 4-non-doctorate-granting	8,760	5,890	67.2	71.9
Public 4-year doctorate-granting	21,640	15,530	71.8	73.8
Private not-for-profit 2-year or less	2,690	1,350	50.3	56.3
Private not-for-profit 4-non-doctorate-granting	8,760	6,250	71.3	70.7
Private not-for profit 4-year doctorate-granting	9,840	7,030	71.4	74.0
Private for-profit less than 2-year	7,470	3,420	45.8	48.6
Private for-profit 2-year or more	6,170	3,550	57.5	65.7
Student type				
Total undergraduate	88,030	53,680	61.0	71.9
FTB student	38,850	25,030	64.4	77.4
Other undergraduate	49,180	28,650	58.3	66.3
Graduate/first professional	11,420	8,540	74.8	75.1

¹ Eligible students who met the criteria for qualification as a student interview completion, which required completing at least a partial interview.

² Both institutional and student classifications were verified to correct classification errors on the sampling frame.

³ Excludes 8,200 cases determined to be ineligible for the study and 1,560 cases who were either deceased, unavailable for the duration of the survey, out of the country, incapable/incapacitated, institutionalized/incarcerated, had no phone, or were hearing impaired.

NOTE: Detail may not sum to totals because of rounding. FTB = first-time beginner.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

As was described in chapter 2, data collection notifications were sent to all sample members, inviting them to participate by completing the web-based self-administered interview. Sample members were given 4 weeks to complete the interview, during which time e-mail reminders were sent to cases for whom we had an e-mail address. After the 4-week period, outbound telephone interviewing began. However, sample members were always encouraged to complete the self-administered interview at their convenience.

Completion mode for student interviews is presented in table 22. Among the 62,220 completed student interviews, 28 percent (weighted) were completed via self-administration during the first 4 weeks after notification. Fifty-three percent of completed student interviews were conducted with telephone interviewers, and the remaining 19 percent were completed via self-administration after the early incentive period had expired.

Table 22. Student interview completion mode: 2004

	Number	Completed interviews	
		Unweighted percent	Weighted percent
Total	62,220	100.0	100.0
Self-administered	28,710	46.1	46.7
Self-administered: early response period	17,100	27.5	27.5
Self-administered: with prompting	11,610	18.7	19.2
Interviewer-administered	33,510	53.9	53.3

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

3.3.5 Conversion of Nonrespondents

As described earlier, all sample members were invited to participate in the student interview. Those who did so within the first 4 weeks were offered an incentive. Following the initial 4-week period, data collection continued with telephone prompting, and no offer of incentive. Once cases were identified as nonrespondents, additional mailings and e-mail prompts were used in conjunction with incentives to encourage participation in NPSAS:04. Letters for each mailing contained the same general information but were tailored to the type of nonrespondent (e.g., refusal, hard to reach cases, etc.). (See appendix C for materials sent to the sample members.) Letters, e-mails, and subsequent telephone prompts offered respondents a monetary incentive for completing the interview.

Refusal conversion letters were sent on a flow basis to sample members who initially refused to participate in the study. These letters were tailored to address the typical concerns expressed by those refusing to participate. In all, 11,840 students were sent a refusal letter and 9,320 students were sent an e-mail message containing the same information as the letter. Of the 22,620 eligible students identified as refusals (either by the sample member or someone else), 8,270 were interviewed (37 percent).

Another letter was tailored for use with nonrespondents who did not actively refuse to participate, e.g., those for whom 20 or more call attempts had been made, but an interview had not been completed. In all, 52,930 students were sent a nonresponse letter and 38,060 students were sent an e-mail. Of the 50,070 eligible students identified as nonrespondents, 19,480 were interviewed (39 percent).

Approximately 2 weeks before the end of the data collection period, all nonrespondents (refusals and nonrefusals alike) were sent a final mailing and/or e-mail asking for their participation. Of the 40,950 eligible students that were sent the end-of-study letter or e-mail, 9,070 (22 percent) were ultimately interviewed. A smaller group of respondents (6,890) were sent a final request for participation via a postcard. Of the 6,670 eligible students that were sent the end-of-study postcard, 2,720 (41 percent) were ultimately interviewed.

3.4 Completeness of Data Records among Study Respondents

As discussed in section 3.2, a study respondent is defined as any eligible student for whom sufficient data were obtained from one or more sources. The sources used to define study response status include institutional records, student interview, and the Department of Education's CPS. The completeness of data records across sources among study respondents is presented in table 23. In addition to the three sources used to determine the study respondents, NSLDS loan and Federal Pell Grant data are also included in the table. Like CPS, these sources are used to supplement the institutional record and student interview data.

In total, 92 percent (weighted) of the study respondents have student record data from the NPSAS institution (CADE data). The percentage of study respondents who have student interview data is 70 percent. Additionally, 52 percent of study respondents had a federal aid application for the 2003–04 academic year in the CPS database. The percentage of study respondents who matched to the NSLDS loan database for the 2003–04 academic year is 34 percent. Those that matched to the NSLDS Federal Pell Grant database for the same year is 23 percent.

Table 23. Percent of student respondents with data, by institutional characteristics, student type, and source: 2004

Institutional characteristics and student type ⁵	Number of responding students ⁶	Student record percent ¹		Interview percent ²		CPS percent ³		NSLDS loans Percent ⁷		NSLDS Pell Grants percent ⁴		
		Un-weighted	Weighted	Un-weighted	Weighted	Un-weighted	Weighted	Un-weighted	Weighted	Un-weighted	Weighted	
Total	90,750	90.2	91.7	68.5	69.7	62.7	52.4	37.7	33.8	32.0	23.1	
Institutional level												
Less-than-2-year	9,690	87.6	87.8	49.8	49.6	83.3	69.9	44.5	47.6	63.8	47.7	
2-year	31,260	87.4	88.9	66.3	68.5	59.1	43.1	24.3	16.5	36.1	24.7	
4-year non-doctorate-granting	19,400	91.7	94.4	71.3	70.0	71.2	63.0	51.5	48.7	33.5	26.7	
4-year doctorate-granting	30,400	92.8	93.7	74.8	72.8	54.4	55.0	40.4	43.5	16.8	16.4	
Institutional control												
Public	56,990	91.3	91.6	71.1	70.5	55.5	46.8	28.2	25.6	27.3	21.5	
Private not-for-profit	20,630	89.2	93.2	70.8	70.8	67.7	62.5	49.0	50.7	27.6	19.5	
Private for-profit	13,120	86.9	89.2	53.1	59.8	86.0	82.5	61.2	71.8	59.5	47.4	
Type of institution												
Public less than-2-year	1,930	94.6	95.9	62.1	60.6	71.1	34.1	14.9	11.0	50.4	21.0	
Public 2-year	26,320	90.5	89.6	68.2	69.0	53.9	40.5	17.3	13.0	32.1	22.5	
Public 4-year nondoctorate-granting	8,160	90.8	94.8	72.2	71.1	63.2	55.8	40.0	38.4	30.8	25.0	
Public 4-year doctorate-granting	20,600	92.2	93.2	75.4	72.9	53.0	53.2	38.6	40.6	17.6	18.2	
Private not-for-profit 2-year or less	2,570	64.9	70.8	52.5	55.6	83.1	77.4	41.0	45.1	58.8	46.6	
Private not-for-profit 4-year non-doctorate granting	8,550	91.2	93.1	73.0	69.8	74.8	65.6	56.7	52.6	32.2	25.0	
Private not-for-profit 4-year doctorate granting	9,510	93.9	94.7	73.8	72.7	57.1	58.1	44.2	48.9	15.1	11.7	
Private for-profit less than-2-year	7,150	87.3	87.0	47.9	48.1	86.8	76.1	54.9	55.0	66.8	51.7	
Private for profit 2-year or more	5,970	86.3	90.2	59.3	65.0	85.2	85.4	68.6	79.2	50.8	45.4	
Student type												
Total undergraduate	79,850	90.0	91.5	67.1	69.0	66.4	53.8	38.7	33.0	36.3		
Potential FTB	35,510	89.7	90.5	70.4	76.6	72.1	59.0	38.9	31.3	40.6	30.9	
Other undergraduates	44,340	90.2	92.0	64.5	65.4	61.9	51.3	38.5	33.8	32.9	24.3	
Graduate/first professional	10,890	91.6	93.0	78.3	74.5	35.5	43.0	30.2	39.0	0.4 ⁷	0.7 ⁷	

¹ Percent of study respondents who met the criteria for qualification as a computer-assisted data entry (CADE) completion.

² Percent of study respondents who met the criteria for qualification as a student interview completion.

³ Percent of study respondents who matched to CPS, which contains federal aid application (FAFSA) data.

⁴ Percent of study respondents who matched to the National Student Loan Data System (NSLDS) for loans and Pell Grants during the 2003–04 academic year.

⁵ Both institutional characteristics and student classifications were verified (where possible) to correct classification errors on the sample frame.

⁶ A responding student is defined as any eligible student for whom sufficient data were obtained from one or more sources, including: student interview, institutional records, and the Department of Education's Central Processing System (CPS).

⁷ The small percentage of matched graduate and first-professional study respondents were undergraduates at some time during the year and as such were eligible for this type of aid during the year.

NOTE: Detail may not sum to totals because of rounding. FTB = first-time beginner.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

This page left intentionally blank.

Chapter 4

Evaluation of Field Operations and Data Quality

Evaluation of study methodology and procedures, as well as of study outcomes, were planned and conducted throughout the course of the 2004 National Postsecondary Student Aid Study (NPSAS:04). The results of these quantitative and qualitative analyses provide information pertaining to the efficacy of study data and are also useful in planning for subsequent waves of NPSAS.

4.1 Enrollment List Collection

4.1.1 Early Contacting Activities

Making early contact with institutions was an important part of the design of NPSAS:04. The scheduled release of data required an accelerated data collection schedule, which required that enrollment lists were received in time to allow for sampling, student interviewing, and data processing to be completed by December 2004. As such, much focus was devoted to the activities of institutional early contacting.

Table 24 presents the flow of enrollment list receipt in NPSAS:96³³ and NPSAS:04. The 1,360 lists received by July 2004 provided a sufficiently large and representative student sample to allow list collection to end. The flow of list receipt was very similar for both studies.

Table 24. Cumulative flow of enrollment list receipt: 1996 and 2004

Month	Cumulative percentage of lists received	
	NPSAS:96	NPSAS:04
1	17.7	12.5
2	42.2	38.4
3	63.6	58.8
4	85.1	75.4
5	95.9	88.7
6	98.8	98.2
7	100.0	100.0

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Postsecondary Student Aid Study (NPSAS:96), and 2004 National Postsecondary Student Aid Study (NPSAS:04).

4.1.2 Institutional Participation

Institutional participation was evaluated for potential effects of prior NPSAS participation. Summary results of these analyses are shown in table 25. Among eligible institutions, the NPSAS:04 enrollment list provision rate among the 980 institutions that had previously participated in NPSAS was 84 percent, which is not statistically different than the rate among institutions that had not previously participated (83 percent; $\chi^2 = 0.18, p > 0.05$).

³³ NPSAS:96 is used for this comparison because it was the most recent study from which the BPS cohort identified.

Table 25. Institutional NPSAS:04 enrollment list participation, by prior NPSAS participation

Institutional characteristics ¹	Eligible institutions	No prior NPSAS participation			Participated at least once		
		Number	Provided lists		Number	Provided lists	
			Number	Percent ²		Number	Percent ³
All institutions	1,630	650	540	83.1	980	830	83.8
Institution level							
Less-than-2-year	240	170	150	85.9	70	50	77.9
2-year	480	240	200	83.9	240	200	86.0
4-year non-doctorate-granting	460	180	150	81.0	270	230	84.6
4-year doctorate-granting	460	50	40	77.4	410	340	83.1
Institutional control							
Public	800	240	200	85.0	560	480	84.9
Private not-for-profit	560	210	170	80.3	350	280	81.8
Private for-profit	270	200	160	83.7	80	70	85.5
Type of institution							
Public less than-2-year	70	40	30	85.0	30	20	74.1
Public 2-year	370	170	140	85.7	200	170	84.1
Public 4-year non-doctorate-granting	140	20	20	79.2	110	100	85.6
Public 4-year doctorate-granting	230	10	10	87.5	220	190	86.5
Private not-for-profit 2-year or less	70	40	40	85.7	30	30	96.4
Private not-for-profit 4-year non-doctorate-granting	260	130	100	79.7	140	110	83.1
Private not-for-profit 4-year doctorate-granting	230	40	30	76.7	180	140	78.6
Private for-profit less than-2-year	150	120	100	86.4	30	30	79.4
Private for profit 2-year or more	120	80	60	79.5	40	40	90.5

¹ Institutional classifications were verified by the institutions to correct classification errors on the sampling frame.

² Percents are based on the count of eligible institutions with no prior NPSAS participation within the row under consideration.

³ Percents are based on the count of eligible institutions with prior NPSAS participation within the row under consideration.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Institutional participation was also examined in terms of the 2000 Carnegie classification categories, as shown in table 26. Table 27 shows the number of historically Black colleges and universities (HBCUs) participating in the current and prior NPSAS rounds.

Table 26. Distribution of participating NPSAS:04 institutions, by 2000 Carnegie classification

Carnegie institutional classification (2000)	Number	Percent
All institutions	1,360	100.0
Doctorate-granting/research extensive	130	9.5
Doctorate-granting/research intensive	90	6.9
Master's I	180	13.0
Master's II	20	1.7
Bachelor's I	60	4.1
Bachelor's II	80	6.0
Bachelor/associate's colleges	10	0.8
Associate's colleges	360	26.4
Theological	30	2.2
Medical	40	2.6
Other health	10	0.7
Engineering and technology	20	1.2
Business and management	10	0.7
Other ¹	40	2.6
Not classified	300	21.6

¹ Includes art/music/design, law, teaching, other specialized, and tribal colleges and universities.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table 27. NPSAS participation of historically Black colleges and universities (HBCUs): 1987–2004

NPSAS participation	Number of HBCUs participating	HBCUs as a percent of total number of participating institutions
NPSAS:87	20	1.9
NPSAS:90	20	1.5
NPSAS:93	30	2.6
NPSAS:96	20	1.9
NPSAS:2000	20	2.3
NPSAS:04	30	2.1

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

4.1.3 Quality of Enrollment Lists

Although an electronic list was preferred, institutions were informed that they could provide lists in their preferred format. Of all participating institutions, about 98 percent of institutions provided some type of electronic list, and the remaining 2 percent sent paper lists.

Once lists were received, they were evaluated in terms of appropriateness of format and documentation (relative to instructions provided), as well as for the accuracy of student counts (see chapter 2 for a description of quality control procedures). Table 28 presents the major types of discrepancies encountered. About 44 percent of the institutions provided lists with one or more such problems. The most common problem was that enrollment counts were out of bounds when compared with the Integrated Postsecondary Education Data System (IPEDS) (about 35 percent). The check was not suspended or relaxed (unlike some prior rounds of NPSAS) because

many of the institutions that were called about the discrepancy indicated that the sampling list counts were, in fact, incorrect.

In the event that an enrollment list failed the quality control check, RTI staff contacted the institution to resolve the problem or obtain a new list. After any necessary revisions, all but two lists³⁴ submitted were usable for selecting the student sample.

Table 28. Types of discrepancies encountered with student lists, by highest level of offering: 2004

Type of institution	Number of institutions	Type of discrepancy encountered ¹	Number	Percent ²
All institutions	1,360	None	760	55.9
		Count out of bounds	470	34.8
		Unreadable file/list	#	0.3
		Could not identify strata	40	2.6
		Insufficient documentation	20	1.6
		Multiple problems	70	4.8
		Less-than-2-year	200	None
Less-than-2-year	200	Count out of bounds	60	31.2
		Unreadable file/list	#	0.5
		Could not identify strata	10	5.0
		Insufficient documentation	#	1.5
		Multiple problems	10	5.0
		2-year	400	None
2-year	400	Count out of bounds	170	42.5
		Unreadable file/list	#	0.2
		Could not identify strata	10	1.2
		Insufficient documentation	#	1.0
		Multiple problems	10	3.5
		4-year non-doctorate-granting	380	None
4-year non-doctorate-granting	380	Count out of bounds	110	29.2
		Unreadable file/list	#	0.3
		Could not identify strata	10	2.6
		Insufficient documentation	10	1.3
		Multiple problems	20	4.7
		4-year doctorate-granting	380	None
4-year doctorate-granting	380	Count out of bounds	130	33.9
		Unreadable file/list	#	0.3
		Could not identify strata	10	2.6
		Insufficient documentation	10	2.6
		Multiple problems	20	6.3

Rounds to zero.

¹ Categories are mutually exclusive, with an institution being included in only one category within highest level of offering.

² Percents are based on the number of institutions within each institution type.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

³⁴ These institutions were classified as nonparticipants.

4.2 Student Record Abstraction

Procedures to abstract information from institutional student records (computer-assisted data entry [CADE]) were first implemented in NPSAS:93. Over the years, the procedures have improved for each round of the study to enhance the effectiveness and user-friendliness of the approach, particularly for institutional staff. Most notably, these include the web-based CADE system (web-CADE) used for self-administration by institutional staff and by field interviewers, and the option of submitting data via electronic files (data-CADE).

Other CADE procedures were used to facilitate the timeliness of CADE completion. These included (1) maintaining a help desk to resolve operational or interpretational problems, (2) scheduling calls to prompt self-CADE and data-CADE institutions to complete data abstraction and to answer questions that may have arisen, (3) prescheduling institutions for field staff, and (4) scheduling weekly conferences with field staff to assess their progress.

4.2.1 Preloading Data into CADE

To reduce the data entry effort associated with institutional student record abstraction, certain elements were preloaded into CADE records prior to collection at the institution. Table 29 summarizes the nature and source of preloaded data elements. This included customizing the financial aid award section of CADE to include nonfederal aid that was common to a particular institution. Such customization proved highly successful during NPSAS:96 and NPSAS:2000, and was continued for NPSAS:04.

Table 29. Nature and source of elements preloaded into computer-assisted data entry (CADE): 2004

CADE data element set	Data source
Institution name/ID	IPEDS
Names of most common state financial aid awards	NASSGAP report
Names of most common institution financial aid awards	Institutional coordinator
Institution clock/credit hour indicator	Institutional coordinator
Institution term names and dates	Institutional coordinator
GPA scale	Institutional coordinator
Student name, SSN from institutional records	Enrollment list
Student type indicator (undergraduate/graduate/first-professional)	Enrollment list
Student local and permanent addresses	Enrollment list
Student date of birth, veteran status, and citizenship	CPS record
Student address, phone number, driver's license number and state	CPS record
Student dependency and expected family contribution	CPS record
Flag indicating whether or not student matched to CPS	CPS record

NOTE: IPEDS = Integrated Postsecondary Education Data System; GPA = grade-point average; SSN = Social Security number; CPS = Central Processing System.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Data were preloaded from a variety of sources. These sources include IPEDS and the National Association of State Student Grant and Aid Programs (NASSGAP) state aid report, in addition to data collected from contact with the institutional coordinator and from enrollment lists. The most extensive set of preloaded data were obtained from the Central Processing System (CPS) for federal financial aid applicants. The data from the CPS were used in two different ways. Some items were prefilled with the data from the CPS and users could simply leave it

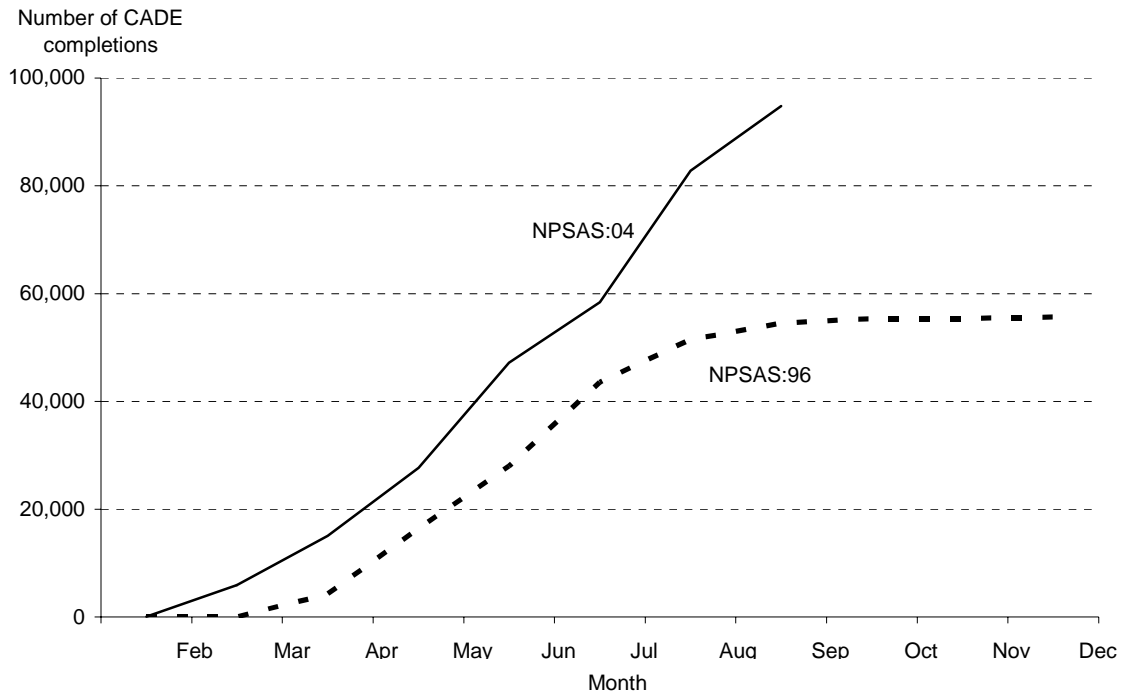
there if it was correct. These data elements included the student's address, phone number, driver's license number, driver's license state, dependency status, and expected family contribution to postsecondary education costs. Other items were preloaded to validate the data entered by users. If users entered something different from what was preloaded from CPS, they would get a warning indicating the difference and could choose to accept the data from CPS or to keep the data originally entered. These variables included citizenship status, veteran status, and student date of birth.

4.2.2 Timeliness of Record Abstraction

CADE systems were prepared on an institution-by-institution basis as enrollment lists were received, samples selected, and matching to CPS was completed. Institutions that opted to provide data via self-CADE began receiving notification that their systems had been initialized in mid-February 2004. An e-mail was also sent to the institutional coordinator informing them that a packet had been mailed and providing them with their username and password to begin accessing the secured website. The first set of field-CADE data collectors began record abstraction activities in April 2004. Final data-CADE specifications and systems for uploading files were also available to institutions in April, with the first successful loading of data files occurring in May. Initialization of CADE systems continued through July 2004.

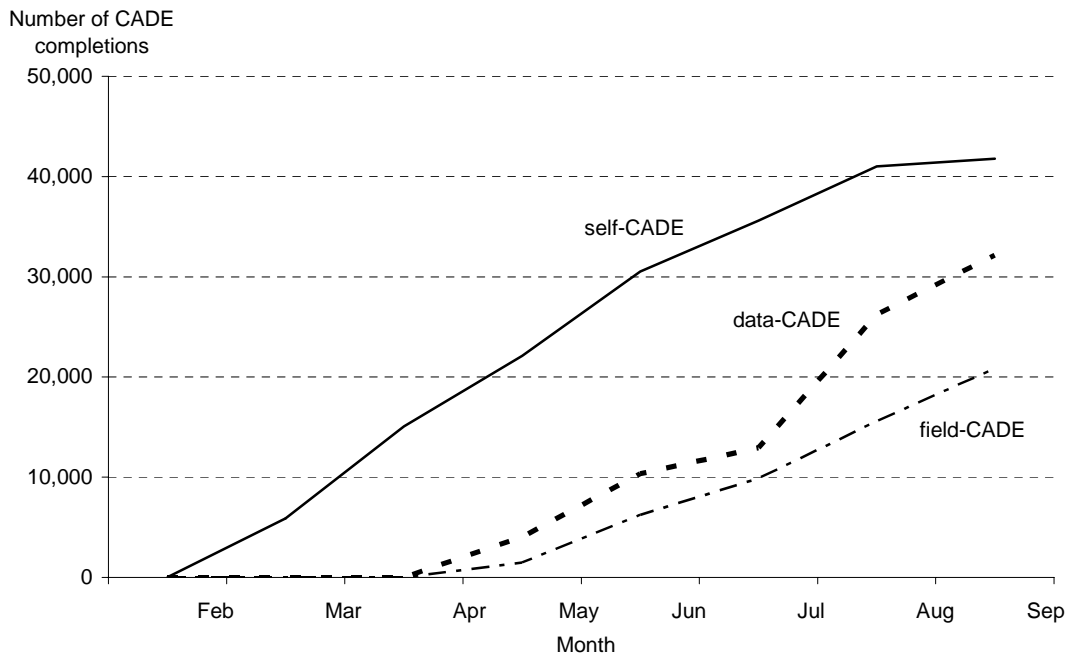
Figure 10 shows the flow of CADE completions, comparing NPSAS:96 and NPSAS:04. Although NPSAS:04 CADE data collection was more condensed than NPSAS:96 CADE data collection, data were collected on many more cases in a shorter time period. The success of early institutional contacting enabled an earlier initialization of CADE data collection. Figure 10 also shows that NPSAS:04 experienced an increase in the number of CADE completions cases in late summer. This increase was primarily due to the large number institutions completing via data-CADE, which can be seen in figure 11. Data-CADE was used largely by institutional systems that provided data files for multiple institutions. Both self-CADE and field-CADE experienced a relatively steady flow of completed cases.

Figure 10. Cumulative flow of computer-assisted data entry (CADE) completions: 1996 and 2004



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Figure 11. Computer-assisted data entry (CADE) completions, by abstraction mode: 2004



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

4.2.3 CADE Data Completeness

As discussed in section 3.3.2, a student-level CADE completion required nonmissing data for any one or more of the following critical items:

- receipt of financial aid;
- enrollment;
- tuition;
- degree program; or
- race.

Under this definition, 92 percent (weighted) of the eligible sample students were classified as CADE completes (see table 17). Of the 88,920 CADE completes, 81,810 (92 percent) were determined to be study respondents. The following evaluation presents results for study respondents only.

Table 30 presents item-level completion rates for key data elements among CADE completes overall and by mode of abstraction. It is not surprising that item-level response rates differ among data elements, since institutional record-keeping systems vary dramatically. Not all data elements are available at every institution. However, most of the key data elements showed a high percentage of item-level completeness.

Overall, item-level response rates were very high. Two items had high rates of missing data: marital status and additional phone numbers. Student records frequently lack these items. Response rates varied somewhat by mode of abstraction; in general, data-CADE showed the highest rates of missing data. With the exception of veteran status and phone numbers, self-CADE had higher item-level completion rates than those completed in field-CADE. Data-CADE experienced the lowest item-level completion rates for all but three items (Hispanic status, student class level, and financial aid.) Both self-CADE and field-CADE utilized online edit checks and verifications. This feature is not available for data-CADE, which may have contributed to the higher rate of missing data for this mode.

Table 30. Comparison of NPSAS:04 student record data element completion rates, by method of abstraction: 2004

Data element	Number	Item response rates ¹			
		Total	Self-CADE	Field-CADE	Data-CADE
Total student record respondents	81,810	100.0	100.0	100.0	100.0
Student characteristics					
Date of birth	75,460	92.2	98.1	97.5	79.9
Gender	75,930	92.8	98.8	98.0	80.0
Marital status	38,400	46.9	57.4	49.0	29.7
Citizenship	69,120	84.5	94.0	90.0	66.3
Veteran status	59,270	72.5	73.8	74.4	68.9
High school completion type	55,840	76.8	82.9	78.0	67.4
Race	63,850	78.1	86.4	78.7	64.7
Hispanic status	63,830	78.0	84.4	64.1	77.5
At least one phone number	76,570	93.6	94.0	94.2	92.3
At least two phone numbers	34,320	42.0	42.9	44.7	38.6
Enrollment					
Type of degree program	77,850	95.2	97.7	92.9	92.5
Student class level	72,900	89.1	92.5	85.4	86.1
Tuition jurisdiction classification	76,880	94.0	99.4	95.8	84.3
Total tuition amount	75,940	92.8	97.2	91.4	86.9
Financial aid ²					
Any aid received (Y/N)	81,600	99.8	99.6	99.2	99.9
Federal aid received (Y/N)	81,600	99.8	99.6	99.2	99.9
State aid received (Y/N)	81,600	99.8	99.6	99.2	99.9
Undergraduate aid received (Y/N)	81,600	99.8	99.6	99.2	99.9
Graduate aid received (Y/N)	81,600	99.8	99.6	99.2	99.9
Other aid received (Y/N)	81,600	99.8	99.6	99.2	99.9
Total financial aid amount ³	81,570	99.7	99.6	99.2	99.9
Expected family contribution (EFC) amount	52,220	90.2	98.7	97.8	75.5

¹ Response rate is based on the number of students to whom the item applied.

² All financial aid gate items were logically coded for data-CADE students, based on the presence or absence of amounts in the nested items.

³ Total financial aid amount was computed by summing the amounts entered for each specific aid program. If the financial aid gate item was missing, then the financial aid amount item was also missing.

NOTE: Mode differences were detected for every item presented in this table. All are significant at the 0.05 level.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

4.3 Student Interviewing

4.3.1 Identification of First Time Beginners (FTBs)

NPSAS:04 serves as the base year of a longitudinal study of students beginning their postsecondary education experience during one of the terms of the NPSAS sample year. An FTB student is one who enrolled in postsecondary education for the first time after high school at some time during the NPSAS year (July 1, 2003–June 30, 2004). Also considered “effective FTBs” are those who had previously enrolled, but had not completed a postsecondary course for credit prior to July 1, 2003. Those determined to be FTBs will be followed at periodic intervals

as part of the Beginning Postsecondary Students Longitudinal Study follow-up surveys (BPS:04/06, BPS:04/09), with the data collected during NPSAS:04 serving as the base year for the subsequent longitudinal studies.

NPSAS:04 is the third NPSAS to “spin off” a cohort of beginning students; NPSAS:90 was the first and NPSAS:96 was the second. Based on past experiences, sampling and screening procedures were implemented that were targeted to yield an adequate number of students *that are accurately identified as FTBs* for the BPS:04 cohort. Procedures specific to this purpose were implemented at almost every step of full-scale study operations (e.g., detailed instructions for institutional identification of FTBs when providing enrollment lists; sample selection procedures; wording of CADE items asked specifically about potential FTBs; comprehensive FTB-eligibility questions in the student instrument to make the final FTB determination; and extra locating/interviewing efforts applied to the sample from the student stratum of potential FTBs). FTB sampling rates were based primarily on NPSAS:96 results. The two major challenges in achieving adequate FTB yields are (1) proper identification of a sufficient base from which to obtain FTBs and (2) locating, identifying, and interviewing FTBs from that base in sufficient numbers.

Locating and interviewing potential FTBs is particularly important, since final FTB determination rests on student responses to specific questions.³⁵ Student records maintained at most postsecondary institutions do not contain all information necessary to make accurate FTB determinations. Insufficiency of institution-level information is quite obvious when considering students who transfer between institutions and may or may not have transfer credits (or other records of such prior education).

Nonetheless, institutions can identify FTBs stochastically; however, instructions to institutions regarding preliminary identification of potential FTBs must also be sufficiently clear and viable that the institution can implement them correctly.³⁶ Sampling procedures implemented during NPSAS:04 accounted for potential definitional difficulties. As a first screening, institutions were asked to identify potential FTBs according to the following conditions.

Potential FTBs must

- be *undergraduate* students between July 1, 2003 and April 30, 2004;
- have enrolled at the institution *for the first time* between July 1, 2003 and April 30, 2004;
- be classified by the institution as *freshman, or first-year student* at the time of that first enrollment; and
- have no transfer credits from another postsecondary institution.

Based on prior experience, it was anticipated that two types of errors would still exist in lists provided by the schools; specifically, (1) students listed as potential FTBs would not be

³⁵ A number of questions were contained in the student interview to screen for first-time beginner (FTB) status, including when the student first attended a postsecondary institution, whether the student received any prior postsecondary degrees or certificates, and whether the student completed the first class toward a postsecondary degree or certificate after high school at a postsecondary institution.

³⁶ Simply asking the institution to identify students who enrolled in the institution for the first time is insufficient, since it can result in identification of undergraduate transfer students as well as first-time enrolling graduate and first-professional students.

actual FTBs (a false positive group) and (2) students not identified as potential FTBs would, in fact, prove to be FTBs (a false negative group). The actual BPS:04 cohort would, thus, consist of those in the potential FTB group *minus* the identified false positives in that group *plus* any false negatives identified in other student strata. Because experience with NPSAS:96 indicated that the false positive rate would exceed (considerably) the false negative rate (Riccobono et al. 1997), the potential FTB stratum was oversampled (see chapter 2). Information to determine FTB status was also collected during CPS matching and record abstraction (CADE).

The student interview FTB screening was accomplished very early in the interview (immediately following NPSAS study eligibility determination).³⁷ The FTB screening questions were asked of all interviewed undergraduate students so that false positives from the potential FTB stratum could be eliminated from the BPS cohort and so false negatives from the other student strata could be identified and included in the BPS cohort.

The final FTB determination was made based on the student interview. However, there are students who were not interviewed but are potential FTBs based on data obtained from institutional records and/or CPS data. Table 31 provides the results of interview-based FTB determination by initial student classification. Overall, 40 percent of the students interviewed (25,000 students) were determined to be FTBs. Among those initially sampled as potential FTBs based on the list acquisition process, 69 percent were confirmed as FTBs, yielding a 31 percent false positive rate. Among students sampled as “other undergraduates,” 25 percent were also determined to be FTBs (false negatives.) The false positive and false negative rates reveal the difficulties that many schools experienced in accurately identifying FTBs.

Table 31. First-time beginner (FTB) determination, by student type: 2004

Sampled student type	Students interviewed ¹	Confirmed FTBs	
		Number	Percent ²
All students	62,130	24,930	40.1
Total undergraduate	53,590	24,900	46.5
Potential FTB	26,040	18,030	69.2
Other undergraduate	27,540	6,870	24.9
Graduate/first-professional	8,540	30	0.4

¹ Includes study respondents who completed the student interview, since confirmation of FTB eligibility status required contact with the sample members.

² Percent is based on the number of students within the row under consideration.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

4.3.2 Data Collection Evaluations

Help desk

As described in chapter 2, a help desk was available to assist respondents in completing the student interview. Help desk staff were trained to answer any calls received from the help desk hotline, as well as conduct telephone interviews as needed. Help desk staff assisted sample members with questions about the Web instrument and provided technical assistance to sample

³⁷ First-time beginner (FTB) status was determined at the start of the student interview because many subsequent questions were to be asked only of the actual Beginning Postsecondary Students Longitudinal Study (BPS) cohort.

members who experienced problems while completing the self-administered Web interview. Help desk agents also responded to voice-mail messages left by respondents when the call center was closed. To gain a better understanding of the problems encountered by students attempting to complete the interview, a software program was developed to record each help desk incident that occurred during data collection. For each occurrence, help desk staff confirmed contact information for the sample member, recorded the type of problem, a description of the problem and resolution, incident status (pending or resolved), and the approximate time it took to assist the caller.

Table 32 summarizes help desk incidents encountered during student data collection. Of all calls to the help desk, about 93 percent called the help desk only once, while 6 percent called twice, and 1 percent called three or more times. Of the students who called the help desk, 86 percent completed either a full, Spanish, abbreviated, or partial interview either on their own or with the telephone agent who took their call. The remaining 14 percent did not complete the interview.

Table 32. Help desk incidents, by type: 2004

Type of incident	Total incidents recorded	Percent of total incidents
Total	1,849	100.0
Study ID/password	1,199	61.0
Called in to complete the interview	203	10.3
Questions about the study	195	9.9
Browser settings/computer	171	8.7
Website down/unavailable	45	2.3
Questionnaire content	21	1.1
Program error call-in	14	0.7
Routing/skip problems	1	0.1
Other	118	6.0

NOTE: Details may not sum due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

The majority of the help desk contacts were requests for study ID and/or password (61 percent). Ten percent of calls to the help desk were to complete a telephone interview. Other calls to the help desk regarded general questions about the study (10 percent), problems with browser settings and computer or both (9 percent), and calls to report the website being down or unavailable (2 percent).

Response burden and effort

Time to complete the student interview. The time burden associated with completion of the NPSAS:04 interview was calculated separately for each mode of data collection: self-administered and computer-assisted telephone interview (CATI).

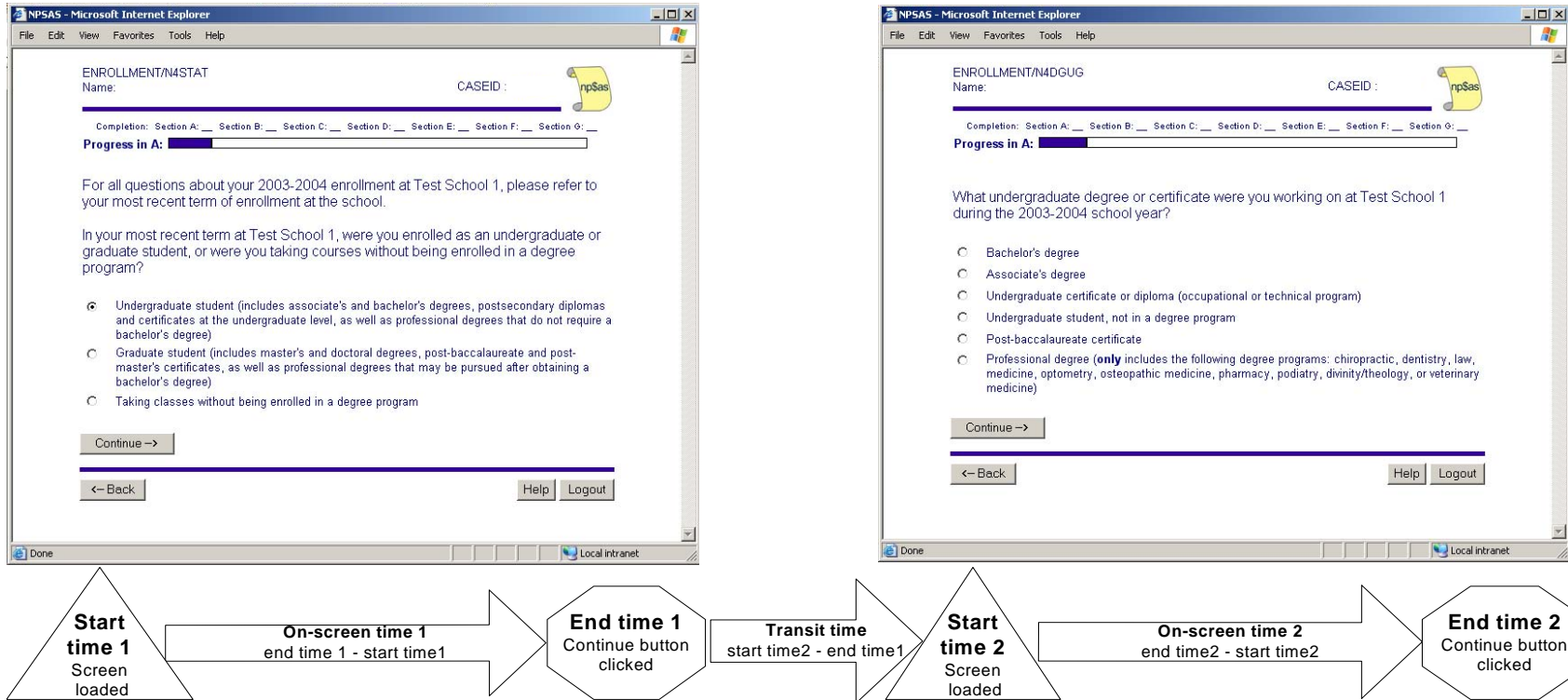
Figure 12 provides a visual representation of how the on-screen and transit times were determined. Two time stamp variables were associated with each interview question. The first, the start timer, was set to the clock time on the respondent's or interviewer's computer at the time that a particular Web page was displayed on the screen. The second time stamp variable, the end timer, was set to the clock time on the respondent's or interviewer's computer at the moment

the respondent or interviewer clicked the “Continue” button to submit the answers from that page.

From the two time stamp variables, an on-screen time and transit time were calculated. The on-screen time was calculated by subtracting the start time from the end time for each Web page that the respondent received. The transit time was calculated by subtracting the end time of the preceding page from the start time of the current page; it includes the time required for the previous page’s data to be transmitted to the server, for the server to store the data and assemble and serve the current page, and for the current page to be transmitted to and loaded on the respondent’s or interviewer’s computer.

A total on-screen time was then calculated for all respondents by summing the on-screen times for each Web page that the respondent received. For each respondent, a total transit time was calculated by summing all the transit times. The total on-screen and total transit times were then summed to determine the total instrument time.

Figure 12. Visual representation of on-screen and transit times: 2004



Total On-screen time = On-screen time 1 + On-screen time 2 +...+ On-screen time N

Total Transit time = Transit time 1 + Transit time 2 +...+ Transit time N

Total Instrument time = Total On-screen time + Total transit time

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table 33 presents the average times for the full interview overall and by student type. The average time to complete the entire interview was about 27 minutes. The interview was longest for FTBs (31 minutes,) largely because they received additional questions not applicable to other students. Total interview time took about 25 minutes for other undergraduates and 20 minutes for graduate and first-professional students ($t = 57.59, p < .0001$).

Table 33. Average time to complete full-scale student interview, by student type: 2004

Interview section	Number of cases	Average time
All students	52,560	26.5
FTB student	20,770	31.1
Other undergraduate	24,320	24.6
Graduate/first-professional student	7,470	20.0

† Not applicable.

NOTE: Detail may not sum to totals because of rounding. FTB = first-time beginner. Outliers were excluded from this analysis. Outliers were identified separately for each section and for the total interview; therefore, individual section times do not sum to the total interview times. An outlier was defined as any case whose completion time exceeded two standard deviations above or below the average time for a given section. Interview times are presented only for completed interviews (partial interviews were excluded). SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table 34. Average time to complete full-scale student interview, by interview section and student type: 2004

Interview section	All respondents		FTB student		Other undergraduate		Graduate/first-professional student	
	Number of cases	Average time	Number of cases	Average time	Number of cases	Average time	Number of cases	Average time
Section A—Enrollment	55,790	7.8	22,030	7.8	25,850	8.2	7,910	6.6
Section B—Financial aid	55,950	3.9	22,070	4.0	25,940	3.9	7,950	3.9
Section C—Employment	56,070	4.7	22,130	4.7	26,020	5.0	7,920	3.2
Section D—Education experiences	56,220	2.7	22,150	5.4	26,120	1.1	7,960	0.5
Section E—Background	55,870	4.7	22,040	4.9	25,880	4.8	7,950	4.1
Section F—Locating	22,080	3.8	22,080	3.8	†	†	†	†

† Not applicable.

NOTE: Detail may not sum to totals because of rounding. FTB = first-time beginner. Outliers were excluded from this analysis. Outliers were identified separately for each section and for the total interview; therefore, individual section times do not sum to the total interview times. An outlier was defined as any case whose completion time exceeded two standard deviations above or below the average time for a given section. Interview times are presented only for completed interviews (partial interviews were excluded). SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table 34 presents the average times for each section overall and by student type. The first section on enrollment collected key information necessary for eligibility determination and FTB identification, as well as information about enrollment, degree program, and field of study³⁸. Much of the critical information needed to assess student status and other characteristics necessary for routing to the appropriate questions in the remainder of the interview was collected in this initial section. This was the longest section, taking just under 8 minutes to complete.

The second section focused on financial aid. It contained items about school-related jobs such as work-study and assistantships, as well as questions about other forms of financial aid such as grants, loans, and scholarships. Additional items asked about parental support and the

³⁸ See the student interview facsimile in Appendix E for more detail about the content of the interview sections.

use of educational tax credits. Overall, respondents took an average of 4 minutes to complete this section.

The employment section collected information on jobs held while enrolled, balancing school and work, and assets and debts. This section took approximately 5 minutes to complete.

The section on education experiences contained a few items applicable to all respondents, such as the items about distance education. However, many items were administered only to FTBs, such as those focusing on undergraduate experiences, transfers, and factors related to choice of postsecondary institution. This section averaged about 3 minutes overall, but took 5 minutes for FTBs, 1 minute for other undergraduates, and less than 1 minute for graduate and first-professional students.

The background section focused on basic demographics about the students and their families. Citizenship status, community service, and education-related disabilities were also topics of interest in the background section. Overall, the average time to complete this section was about 5 minutes.

The final section applied only to FTBs for the purpose of collecting locating information for future follow-up studies with this cohort. FTBs took an average of 4 minutes to complete this section.

Interview times were also evaluated by mode of administration. Table 35 shows the total interview time. The difference in total interview completion by mode was small but significant; approximately 26 minutes for self-administered respondents and 27 minutes for interviewer-administered respondents ($t = 8.92, p < .0001$).

Table 35. Average time to complete full-scale student interview, by interview section and mode of administration: 2004

Interview section	All respondents		Self-administered respondents		Interviewer-administered respondents	
	Number of cases	Average time	Number of cases	Average time	Number of cases	Average time
Section A—Enrollment	55,790	7.8	25,280	7.9	30,520	7.7
Section B—Financial aid	55,950	3.9	25,330	4.3	30,630	3.7
Section C—Employment	56,070	4.7	25,490	4.4	30,580	4.8
Section D—Education experiences	56,220	2.7	25,820	2.4	30,400	3.0
Section E—Background	55,870	4.7	25,190	5.0	30,680	4.5
Section F—Locating	22,080	3.8	8,980	3.8	13,100	3.7

NOTE: Detail may not sum to totals because of rounding. Outliers were excluded from this analysis. Outliers were identified separately for each section and for the total interview; therefore, individual section times do not sum to the total interview times. An outlier was defined as any case whose completion time exceeded two standard deviations above or below the average time for a given section. Interview times are presented only for completed interviews (partial interviews were excluded).

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table 36 presents the average time on-screen and in transit by response mode. Average transit times were twice as long for self-administered respondents than for interviewer-administered respondents (6 minutes and 3 minutes, respectively; $t = 90.03, p < .0001$). On-screen times were significantly less for self-administered respondents than for interviewer-administered respondents (20 minutes and 24 minutes, respectively; $t = -53.95, p < .0001$).

It is likely that interviewer-administered respondents took slightly longer to complete the interview sections because respondents and interviewers were engaged in a conversation, and respondents had to wait for interviewers to read the entire question and response options (depending on the nature of the screen and the interviewer instructions³⁹). Self-administered respondents, however, could read and respond to interview questions more quickly because they were able to read the entire screen at once.

Table 36. Average on-screen and transit time, by response mode: 2004

Response mode	Number of cases	Average total interview time	Average on-screen time	Average transit time
All respondents	52,560	26.5	22.3	4.2
Self-administered respondents	22,100	26.1	20.4	5.8
Interviewer-administered respondents	30,460	26.8	23.7	3.1

NOTE: Detail may not sum to totals because of rounding. Outliers were excluded from this analysis. Outliers were identified separately for each section and for the total interview; therefore, individual section times do not sum to the total interview times. An outlier was defined as any case whose completion time exceeded two standard deviations above or below the average time for a given section. Interview times are presented only for completed interviews (partial interviews were excluded).

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

At the end of the survey, a short debriefing section asked questions about users' experiences in completing the Web survey. As part of the debriefing section, self-administered respondents were asked which type of internet connection they used to access the survey. Table 37 presents the average total interview times and transit times by type of internet connection.

Among self-administered respondents, about 6 percent completed the interview through a dial-up modem, and about 41 percent completed with a fast connection (i.e., cable modem, DSL, ISDN, LAN). Total interview time for dial-up modem connections was nearly 35 minutes, compared to 24 minutes for those using a fast connection ($t = -49.24, p < .0001$). This large variation can be attributed to transit times, which were also much higher for the dial-up connection versus the fast connections (13 minutes compared with 5 minutes; $t = -85.82, p < .0001$).

³⁹ To minimize mode differences and ensure that all respondents were exposed to the same information, interviewer instructions were included on every form of the questionnaire for computer-assisted telephone interviews (CATIs). These instructions indicated to interviewers how to handle response options (e.g., whether the response options should be read aloud or not).

Table 37. Average time to complete self-administered student interview, by internet connection type: 2004

Internet connection type	Average total interview time	Transit time	Percent of time in transit
Dial-up modem	34.6	13.3	38.5
Fast connection	24.4	4.6	18.7
Cable modem	24.7	4.4	18.0
Digital subscriber line (DSL)	24.8	4.8	19.3
Integrated services digital network (ISDN)	23.4	4.9	20.9
Corporate local area network (LAN; T1 or T3)	23.7	4.5	19.0
Do not know connection type	27.7	6.1	22.2
Other	27.8	6.6	23.6

NOTE: At the end of the interview, a debriefing section was included that asked questions about self-administered respondents experiences in completing the Web survey. Data presented here are based on the self-administered respondents who answered the debriefing questions. Fast connection is the average interview time of respondents with a Cable Modem, Digital Subscriber Line, ISDN, or Corporate LAN. Average total time is sum of on-screen and transit times.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Number of calls

A total of 94,503 telephone interviewer hours (exclusive of training, supervision, monitoring, and administration) were expended to obtain completed interviews from 62,130 sample members. Since the time to administer the interview was, on average, under 30 minutes, the large majority of interviewer time was spent on other case-related activities. A small percentage of this time was required to bring up a case, review its history, and close the case (with appropriate reschedule, comment, and disposition entry) when completed. The bulk of the time, however, was devoted to locating and contacting sample members.

Table 38 shows the average number of calls per case, by interview status and administration mode. The overall average was about 14 calls per case. Among all completed cases, an average of 10 call attempts was required, while the average for nonrespondents was about 21 calls.

Table 38. Average calls per case, by interview status: 2004

Interview status	Number of cases	Number of calls	Mean calls per case
Total	101,010	1,394,948	13.8
Interviewed	62,220	598,556	9.6
Not interviewed	38,800	796,564	20.5
By mode			
Self administered—no telephone follow-up	17,040	†	†
Self administered—with telephone follow-up	11,670	195,589	16.8
Interviewer administered	33,510	402,790	12.0

† Not applicable.

NOTE: Detail may not sum to totals because of rounding. Excludes 8,200 cases determined to be ineligible for the study.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

The average call count varied by mode of data collection. Of the 62,220 completed cases, approximately 27 percent were completed via self-administration and required no telephone prompting. However, an average of 17 calls was made to the remaining 11,670 self-administered cases to encourage interview completion. Finally, approximately one-half of the completions (54 percent) were obtained by a telephone interviewer and required an average of 12 call attempts.

As seen in table 39, the number of calls per case varied by type of students and type of institution. On average, potential FTB students and other types of undergraduates required more calls (14 calls) than graduate and first-professional students (11 calls) ($F = 314.6, p < 0.001$). Additionally, those from less than 2-year institutions and 2-year institutions required more calls on average (16 calls and 14 calls, respectively) than those from either 4-year doctorate-granting or 4-year non-doctorate-granting institutions (13 calls and 14 calls, respectively) ($F = 111.5, p < 0.001$).

Table 39. Average calls per case, by institutional characteristics and student type: 2004

Institutional characteristics and student type ¹	Number of cases	Number of calls	Mean calls per case
Total	101,010	1,394,948	13.8
Institutional level			
Less than 2-year	10,330	166,830	16.2
2 Year	37,750	529,633	14.0
4-year non-doctorate-granting	20,630	283,250	13.7
4-year doctorate-granting	32,310	415,507	12.9
Institutional control			
Public	65,540	889,378	13.6
Private not-for-profit	21,660	289,161	13.4
Private for-profit	13,820	216,421	15.7
Type of institution			
Public less than 2-year	2,150	33,841	15.7
Public 2-year	32,540	453,282	13.9
Public 4-year non-doctorate-granting	8,890	120,548	13.6
Public 4-year doctorate-granting	21,960	281,966	12.8
Private not-for-profit 2-year or less	2,730	37,046	13.6
Private not-for-profit 4-year non-doctorate-granting	8,880	122,189	13.8
Private not-for-profit 4-year doctorate-granting	10,050	129,746	12.9
Private for-profit less-than-2-year	7,550	124,802	16.5
Private for-profit 2-year or more	6,260	91,396	14.6
Student type			
Total undergraduate	89,460	1,275,252	14.3
FTB student	39,440	558,470	14.2
Other undergraduate	50,020	717,787	14.4
Graduate/first-professional	11,560	118,837	10.3

¹ Both institutional and student classifications were verified to correct classification errors on the sampling frame.

NOTE: Detail may not sum to total due to rounding. Excludes 8,200 cases determined to be ineligible for the study.

FTB = first-time beginner.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

4.3.3 Instrument Usability

Coding

The NPSAS:04 student interview obtained students' field of study by first collecting a verbatim string and then providing a list of options from which the appropriate category could be selected. To assess the accuracy of coding procedures, a random sample of 10 percent was selected from all strings provided. Expert coders evaluated the verbatim strings for completeness and for the appropriateness of the assigned codes, determining whether a different code should have been assigned or if a string was too vague to code.

Table 40 provides the results of the coding analyses. Of all the strings analyzed, 79 percent were coded correctly. The coding results for major field of study were similar between modes of data collection, indicating that expert coders agreed with self-administered respondent coding at about the same rate as they agreed with interviewer-administered interview coding ($\chi^2 = 0.79, p > 0.05$). The quality of the text strings was high, with only 2 percent of text strings too vague to be coded.

Table 40. Summary of coding results for major field of study, by respondent type: 2004

Respondent type	Coding attempts sampled	Percent original code correct	Percent text string too vague to code
Total	4,598	78.8	2.0
Self-administered	2,361	79.3	1.9
Interviewer-administered	2,237	78.3	2.1

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Help text usage

Each Web screen in the NPSAS:04 instrument was equipped with help text to aid respondents with general and screen-specific instrument inquiries. The instrument provided general help text which outlined basic information on internet browsers and response types (i.e., how to use a check box, drop-down, or radio button). Each help text screen provided a toll-free number to the NPSAS:04 help desk for further questions. The screen-specific help text defined instrument vocabulary, instructed respondents on how to enter responses, and explained the type of information requested for each form.

Counters placed within the instrument calculated the number of times help text for each screen was accessed. These were analyzed overall and by administration mode to determine which screens may have been problematic for users.

The screen-level rate of help text access was below 2 percent for most of the screens in the NPSAS:04 interview. Help text access rates were analyzed overall and by administration mode. Across all interview forms, cases completed with an interviewer accessed help text more often than did self-administered cases (1.3 percent compared with 0.3 percent, respectively; $t = 6.43, p < 0.0001$). Table 41 presents the interview screens⁴⁰ for which help text was accessed at a rate of 5 percent or more, based on the number of cases to whom the form was administered. Differences by administration mode are all significantly different ($p < 0.0001$) with interviewer-

⁴⁰ See appendix E for a facsimile of the student interview questionnaire.

administered cases accessing help text more frequently than self-administered respondents. It should be noted that interviewers were trained to use help text, whereas self-administered respondents may have forgotten it was available.

Table 41. Rates of help text usage for items accessed by 5 percent or more of respondents, by interview screen and administration mode: 2004

Screen name	Description	Number administered to	Number of help text accesses	Percent		
				All modes	Self-administered	Interviewer-administered
N4ASSOC	Type of associate's degree	12,770	1,300	10.2	2.8	14.2
N4CLSLV	Class level for non-degree students	6,990	570	8.2	1.9	11.8
N4SCHJOB	School-related job	52,490	3,540	6.7	1.9	10.4
N4VOCREC	Received vocational rehabilitation services	5,900	390	6.6	1.1	10.7
N4GRAID	Graduate assistantships	9,290	480	5.2	1.9	10.6
N4EMPTYP	Type of employer	39,680	2,000	5.0	0.5	8.7
N4OTAID	Other aid received	13,920	660	4.7	1.3	9.3
N4CMPCLS	Completed postsecondary class before 7/1/2003	21,400	1,010	4.7	1.9	6.4

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

N4ASSOC had the highest rate of help text accesses. Among students who were administered this form, 10 percent used help text. This form was asked of students who reported that they were working on an associate's degree. It was a follow-up question to differentiate between Associate of Arts (AA) and Associate of Science (AS) degrees. Self-administered respondents (3 percent) were less likely than interviewer-administered respondents (14 percent) to seek help text for this form ($Z = -20.50, p < 0.0001$). This result is likely due to the way the question was asked; "What type of associate's degree were you working on at [NPSAS institution]?" While self-administered respondents could read the response options and immediately understand the intent of the question, those who completed a telephone interview did not receive the same visual cues. This item will be revised in future studies to minimize the mode difference observed here.

N4CLSLV asked non-degree students to classify themselves as primarily undergraduate, graduate, or an equal mix of both. The overall help text rate was about 8 percent but was primarily used by CATI respondents (12 percent compared with 2 percent for self-administered respondents; $Z = -14.54, p < 0.0001$).

N4SCHJOB asked respondents if they participated in a work study or paid assistantship through their institution. The help text usage rate for this screen was about 7 percent. CATI yielded the most help text hits for N4SCHJOB with an average of 10 percent, compared to 2 percent for self-administered respondents ($Z = -38.33, p < 0.0001$).

Respondents who had indicated having some type of disability were asked to report whether or not they had received Vocational Rehabilitation in N4VOCREC. Valid response options for this screen consisted of only yes or no answers. The help text rate was about 7 percent overall.

N4GRAID was a form that contained several check-box items that asked graduate students about graduate assistantships and aid amounts. It asked about teaching and research

assistantships, as well as other less common types (traineeships). Help text provided definitions of each type of graduate aid listed. It is likely that respondents were seeking the definitions for the less common types of aid on this form. Of all graduate students who were administered this form, 5 percent used help text.

The help text rate for N4EMPTYP was about 5 percent. N4EMPTYP asked respondents to categorize their employer type among six options (the NPSAS institution, a for-profit company, nonprofit organization, military, self employed, or local, state, or federal government). Response options were read to interviewer-administered respondents to ensure that they would know what the choices were, as did self-administered respondents. However, the help text rate was still 5 percent overall (1 percent for self-administered and 9 percent for interviewer-administered respondents; $Z = -37.07, p < 0.0001$).

N4OTAID was a screen that asked respondents about alternative sources of financial aid not administered through institutional financial aid offices. Items focused on employer aid (both the student's and parents' employers), aid from private organizations, and veteran's benefits. This is information that has traditionally been very hard to collect from students because many do not know, which likely explains the high rate of help text access (5 percent).

N4CMPCLS was a critical item used in the final determination of FTB eligibility status. It was asked of any undergraduate who appeared to be an FTB but who had possibly enrolled in postsecondary education prior to the beginning of the NPSAS year. It asked whether students had ever completed a postsecondary course for credit prior to enrolling at the NPSAS institution. Among students who were asked this question, 5 percent used the help text as a reference prior to providing an answer.

4.3.4 Item Nonresponse

Critical item conversion

As noted earlier, NPSAS:04 is the first cycle to provide the option for self-administration of the student instrument. To minimize item-level nonresponse for certain key items, conversion text was displayed to emphasize the confidential nature of the study and reiterate the importance of individual responses. These items focused on enrollment status and dates, the employment history of the respondent, and parent income.

If a respondent did not answer one of the six items (i.e., left the item blank and hit the continue button), the item screen was reloaded with additional text emphasizing the importance of the item. For some items, a "don't know" option was added to determine if the initial nonresponse was for that reason. The intent was to encourage respondents to provide an answer to the item and to discern the reason for leaving the item blank originally (e.g., refusal or did not know the answer).

Overall, conversion text was moderately successful in converting blank responses either to a valid response or to a don't know response. Results are presented in table 42. The percent of initially blank responses subsequently converted to a valid response ranged from 21 percent for parents' income to 87 percent for student status. There were no differences between self-administered and telephone interviews in rates of conversion, with one exception. Critical item text conversion was more successful for self-administered interviews than telephone interviews for obtaining valid responses to the number of jobs held ($t = 42.80, p < 0.05$).

Table 42. Conversion rates for critical items: 2004

Variable	Cases viewing conversion text	Percent converted by subsequently providing a valid response	Percent converted by subsequently providing a "don't know" response	Total percent converted
Student status at NPSAS	180	87.4	†	87.4
NPSAS enrollment by month ¹	400	57.3	34.3	91.6
Date first began NPSAS ¹	390	65.1	0.0	65.1
Date first attended school	360	47.0	†	47.0
Number of jobs during NPSAS year	440	65.8	†	65.8
Parents' income 2002 ¹	7,260	21.1	69.7	90.8

† Not applicable.

¹ For these items, a "don't know" response option was added when the screen reloaded, in addition to text emphasizing the importance of the item.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Three of the items that presented conversion text also displayed a "don't know" response option when the screen was shown for a second time: NPSAS enrollment by month, date of first attendance at the NPSAS school, and parents' income.

For NPSAS enrollment by month, 34 percent of the cases who initially provided no response reported "don't know" when the conversion text was displayed, resulting in a total conversion of 92 percent of all initially blank responses to either a valid response or a "don't know."

The "don't know" option was selected by 70 percent of all respondents who did not provide an initial response to the question about parents' income, yielding a total conversion rate of 91 percent to either a valid or don't know response.

While the "don't know" option was presented when the question about date of first enrollment at the NPSAS school, it was not selected by any respondents who saw the conversion text. This result is likely due to the format of the response options. Respondents were instructed to select their answers from two drop-boxes: one for month and one for year. The "don't know" option was embedded within the drop-boxes, and it is likely that respondents did not see the new options when the screen was re-displayed. In future studies, this format will be revised so that the "don't know" option is more visible to respondents.

Item-level nonresponse

All respondents to the student interview were provided the option to decline to answer any item. In previous rounds of the NPSAS survey, interviewers were provided with one of two options for this purpose: "don't know" and "refused." In NPSAS:04, the don't know response was only available for key items and provided only as a follow-up option when the screen was initially left blank. Respondents may have given a don't know response for a number of reasons. The most obvious is that the answer is truly unknown or in some way inappropriate for the respondent. Don't know responses may also be evoked when the question wording is not understood by the respondent or when the respondent hesitates to provide a "best guess" response. If respondents failed to give a valid answer or to respond "don't know," their response was considered "blank." There was no explicit "refusal" option in NPSAS:04. This section

presents the results of an analysis of missing data among student interview respondents to better understand which items may be sensitive or difficult to answer.⁴¹

Item nonresponse rates were calculated for items asked of at least 100 respondents. Item nonresponse rates in the NPSAS:04 interview were low, with 24 items of approximately 210 items containing over 10 percent missing data. These items are shown in table 43 and grouped by interview section. Most nonresponse resulted from respondents leaving the item blank. Five of these 24 items were missing values due to respondents reporting that they did not know the answer.

Table 43. NPSAS:04 interview item nonresponse for items with more than 10 percent missing

Interview section	Variable name	Description	Number asked	Percent “don’t know”	Percent blank	Total percent nonresponse ¹
Section A: Eligibility and Enrollment	N4PRBA	Earned bachelor’s while a first-professional student	1,510	†	13.0	13.0
	N4MAJ2A	Major-secondary string	1,420	†	10.8	10.8
	N4MAJ2B	Major-secondary category	1,420	†	9.8	9.8
	N4LT30	Age: less than 30	390	†	17.7	17.7
	N4SCH2	School 2 name	540	0.0	13.9	13.9
	N4CT2	School 2 city	540	0.0	11.3	11.3
	N4LEVL2	School 2 level	540	0.2	15.0	15.2
	N4CTRL2	School 2 control	540	0.0	15.4	15.4
Section B: Financial Aid	N4TASSM	Teaching assistantship amount	1,240	†	9.6	9.6
	N4RASSM	Research assistantship amount	1,240	†	9.6	9.6
	N4TRNSM	Traineeship amount	130	†	21.3	21.3
	N4GASSM	Other graduate assistantship amount	340	†	13.1	13.1
	N4STAMT	State grant/scholarship amount	8,310	†	13.0	13.0
	N4AMNEMP	Amount of employer aid	3,960	†	11.2	11.2
	N4AMNVET	Amount of veteran’s benefits	1,610	†	18.5	18.5
	N4AMNPMP	Amount of parents’ employer aid	1,080	†	16.6	16.6
Section C: Expenses	N4HOPE	Claim Federal Hope scholarship	59,220	31.9	5.4	37.3
	N4DEDUCT	Claim tuition tax deduction	59,250	33.6	3.7	37.3
	N4LFLNG	Claim lifetime learning tax credit	59,070	33.0	4.9	37.8
	N4PARNC	Parents income in 2003	40,210	12.6	1.7	14.3
Section E: Background	N4TRIBE	State/federally recognized tribe	1,380	†	13.1	13.1
	N4RACES	Race: other specify	6,870	†	17.6	17.6
	N4SERCS	Service: other specify	440	†	20.3	20.3
	N4NEEDS	Needs: other specify	510	†	32.9	32.9

† Not applicable.

¹ Item nonresponse rates were calculated based on the number of student interview respondents for whom the item was applicable and asked.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

The item with the highest rate of nonresponse in the student eligibility and enrollment section pertained to date of birth. Respondents who did not provide a date of birth were asked to provide a categorical age range (N4LT30). Of the respondents who did not provide a date of birth, about 18 percent also failed to provide a categorical age range. Students in first-professional programs were asked whether they had completed a baccalaureate degree in order to determine student status (N4PRBA). About 13 percent of students to whom this item was

⁴¹ See chapter 6 and appendix K for analyses of nonresponse bias among all study respondents.

administered failed to provide a response. Two related items collected information about the second major (N4MAJ2A, N4MAJ2B; a verbatim string and categorical major code) for students working on a double major, which was missing for approximately 10 percent of cases. For students who attended other institutions in addition to the NPSAS school between July 1, 2003, and June 30, 2004, information was collected on the other institutions attended (N4LEVL2, N4CTRL2). The items pertaining to the level and control of the other institution were both collected for schools not codeable within the online IPEDS coding system. These items were missing for about 15 percent of respondents to whom these items applied.

The financial aid section contained several forms that collected information about different types of financial aid received. In one series of items, graduate students were asked whether they had different types of assistantships or a traineeship, and then those who indicated having such aid were asked to provide a dollar amount (N4TASSM, N4RASSM, N4TRNSM, N4GASSM). About 10 percent of cases with either a graduate teaching or research assistantship did not provide a dollar amount. About 13 percent of those reporting another graduate assistantship did not provide a dollar amount, and 21 percent of students with a traineeship also left the dollar amount blank. In another series of items regarding financial aid, students were asked whether they had received certain types of aid not administered through the institutional financial aid office, including employer aid and veteran's benefits (N4AMNEMP, N4AMNVET, N4AMNPMP). Rates of missing data ranged from 11 to 19 percent for the dollar amount items associated with these types of financial aid. Finally, about 13 percent of students who reported receiving a state grant or scholarship did not provide a dollar amount (N4STAMT).

Items with the highest rates of nonresponse were from the section on expenses and pertained to tax deductions. The following three items were collected on one screen. Students were asked "whether or not they claimed a lifetime learning tax credit" (N4LFLNG), and only 62 percent provided a valid response. Additionally, 37 percent of respondents had missing information on "whether or not they claimed a tax deduction for receipt of the Federal Hope scholarship" (N4HOPE) and "whether or not they claimed a tax deduction for tuition" (N4DEDUCT). The majority of nonresponse for these items was "don't know" rather than "blank." A substantial portion of respondents failed to provide information about their parents' financial situation. Despite the use of conversion text (described in the previous section), about 14 percent of respondents contain missing data on their parents' income (N4PARNC). This is mostly because they do not know this information: about 13 percent do not know their parents' income, while 2 percent left the item blank.

Among the student background variables, items with the highest rates of nonresponse were those asked to respondents who reported having a disability. Of these, 33 percent had missing information on "other disability-related services and accommodations needed to assist with schooling that was not received" (N4NEEDS), and 20 percent had missing information on "other disability services or accommodations received to assist with schooling in the last 12 months" (N4SERCS).

In the telephone interview, attempts to convert item-level nonresponse are from a trained interviewer, while in the self-administered interview prompts to obtain answers for nonresponse are read by the respondent from a computer screen. It is important to understand which items, if any, are difficult for self-administered respondents to understand because they do not have the additional assistance of a trained interviewer while completing the interview. Therefore, in

addition to the overall analysis, item-level nonresponse was analyzed by administration mode. Items with 10 percent or more missing data in either mode are presented in table 44.

Table 44. NPSAS:04 interview item nonresponse for items with more than 10 percent "don't know," by mode of administration

Interview section	Variable name	Variable label	Percent missing in self-administered interview	Percent missing in interviewer-administered interview
Section A: Eligibility and Enrollment	N4PRBA	Earned bachelor's while a first-professional student	6.3	24.8*
	N4MAJ2A	Major-secondary string	8.1	17.2*
	N4MAJ2B	Major-secondary category	6.6	17.2*
	N4GPAEST	Estimate of grade-point average (GPA)	13.4	6.6*
	N4CMPDGN	Completed requirements for degree	1.9	13.1*
	N4LT30	Age: less than 30	17.8	17.7
	N4SCH2	School 2 name	18.5	8.3*
	N4CT2	School 2 city	13.5	8.7
	N4ST2	School 2 state	10.1	6.6
	N4LEVL2	School 2 level	19.9	9.5*
N4CTRL2	School 2 control	20.5	9.1*	
Section B: Financial Aid	N4TASSM	Teaching assistantship amount	9.7	9.5
	N4RASSM	Research assistantship amount	9.5	9.8
	N4GASSM	Other graduate assistantship amount	14.5	9.8
	N4STAMT	State grant/scholarship amount	8.4	17.9*
	N4INAMT	School grant/scholarship amount	4.8	11.3*
	N4AMNEMP	Amount of employer aid	9.6	12.7*
	N4AMNVET	Amount of veteran's benefits	19.1	18.0
N4AMNPMP	Amount of parents' employer aid	10.1	21.3*	
Section C: Expenses	N4DEP03	Claimed as a dependent	11.3	7.4*
	N4HOPE	Claim Federal Hope scholarship	48.7	27.1*
	N4DEDUCT	Claim tuition tax deduction	49.1	26.7*
	N4LFLNG	Claim lifetime learning tax credit	49.6	27.2*
	N4INCSP	Spouse's earnings in 2003	2.3	13.0*
	N4PARNC	Parents' income in 2003	5.6	21.4*
Section E: Background	N4TRIBE	State/federally recognized tribe	6.1	17.9*
	N4DADED	Father's education	6.9	10.9*
	N4RACES	Race: other specify	20.4	16.3*
	N4SERCS	Service: other specify	15.6	23.0
	N4NEEDS	Needs: other specify	47.0	26.0*

* Indicates a significant difference at the 0.05 level.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Twenty items had rates of nonresponse higher than 10 percent among self-administered respondents. Of these, six were unique to those completing the survey online. Four of these items (N4ST2, N4CTRL2, N4SCH2, and N4CT2) were administered to respondents who attended another school in addition to their NPSAS school during the 2003–04 school year. It is possible that respondents were unsure whether and/or how to provide information about multiple postsecondary attendance without the assistance of a trained interviewer. The other two items were self-estimated grade-point average (GPA, N4GPAEST) and whether or not they were claimed as a dependent on their 2003 taxes (N4DEP03).

Twenty-four items had rates of nonresponse higher than 10 percent from respondents who completed a telephone interview. Of these, 10 were unique to CATI respondents. Most of

these were items that inquired about information that could be deemed sensitive, such as personal information and family finances. For example, two were about grants/scholarships (N4STAMT; N4INAMT), two were about income (N4INCSP; N4PARNC), and one was about enrollment in a state or federally recognized tribe (N4TRIBE). It might be the case that respondents felt uncomfortable providing this information to an interviewer.

To discern if there were systematic differences in item nonresponse between interviewer- and self-administered interviews, all items administered to at least 100 respondents and that had at least 10 percent total missing in either self-administration or CATI administration mode were analyzed. The variables meeting this criterion are shown in table 43. For 12 of the 30 items, telephone interviews were more likely than self-administered interviews to have missing information ($p < 0.05$). For another 10 items, self-administered interviews were more likely than telephone interviews to have missing information ($p < 0.05$). There were no significant differences between telephone and Web interviews on 8 items. Items pertaining to sensitive information such as family finances tend to be missing in telephone interviews while items that might require further explanation such as multiple institutional attendance and tax deductions tend to be missing in self-administered interviews.

4.3.5 CATI Monitoring and Quality Assurance

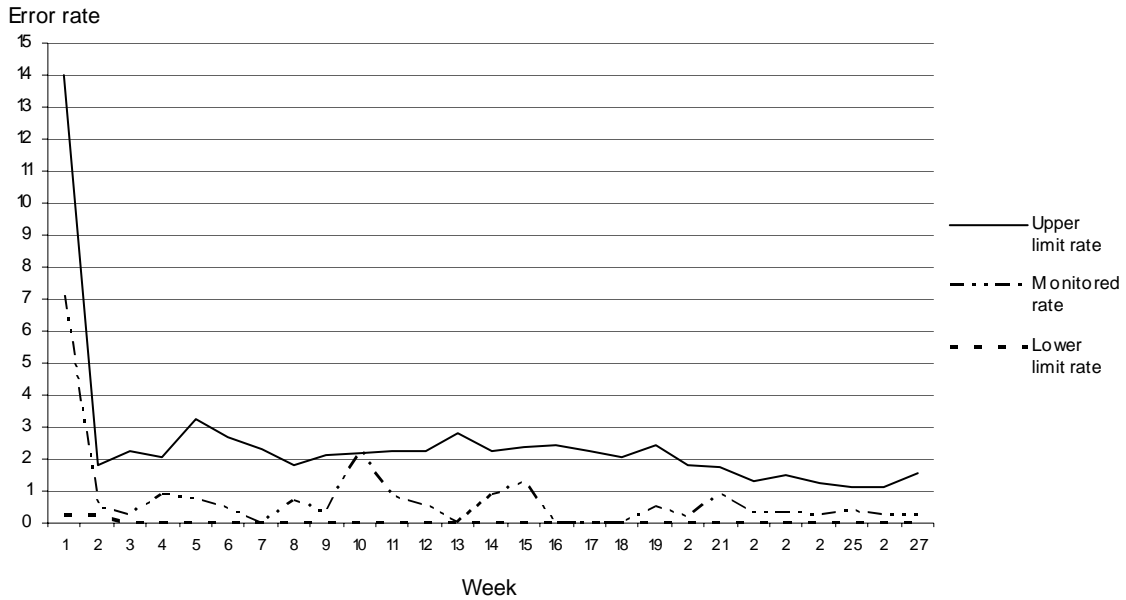
Regular monitoring of telephone interviews leads to better interviewing and data quality as well as improvements in data collection costs and in the efficiency of the telephone facilities. To ensure that sufficient monitoring occurred for the full-scale NPSAS:04, monitoring sessions were conducted during day, evening, and weekend shifts. Monitors listened to and simultaneously viewed the progress of interviews using remote monitoring telephone and computer equipment. Monitors listened to up to 20 questions during an ongoing interview and, for each question, evaluated two aspects of interviewer performance: (1) correct delivery of questions (error in question delivery) and (2) accurate keying of the response (error in data entry).

Measures of question delivery and data entry were developed and daily, weekly, and cumulative reports were produced. Monitoring took place throughout data collection, with a total of 14,775 items monitored. During the initial weeks of data collection, the number of observations was lower because telephone interviews were slow to start. Likewise, monitoring efforts were scaled back during the final weeks of data collection due to lighter caseloads. Among the 14,775 items observed, 77 delivery errors and 25 data entry errors were observed. Error rates in delivery and data entry, by week of data collection are shown in figures 13 and 14, respectively. Overall error rates were low (typically below 2 percent) and within control limits.⁴² The peaks in error rates can be attributed to the assignment of new monitors who were learning how to monitor and count errors, and new interviewers who were becoming familiar with the student instrument.⁴³

⁴² The upper and lower control limits were defined by three times the standard error of the proportion of errors to the number of questions observed for the period (+3 times the standard error for the upper limit; -3 times the standard error for the lower limit). Peaks in control limits can be attributed to variation in the number of observations across weeks.

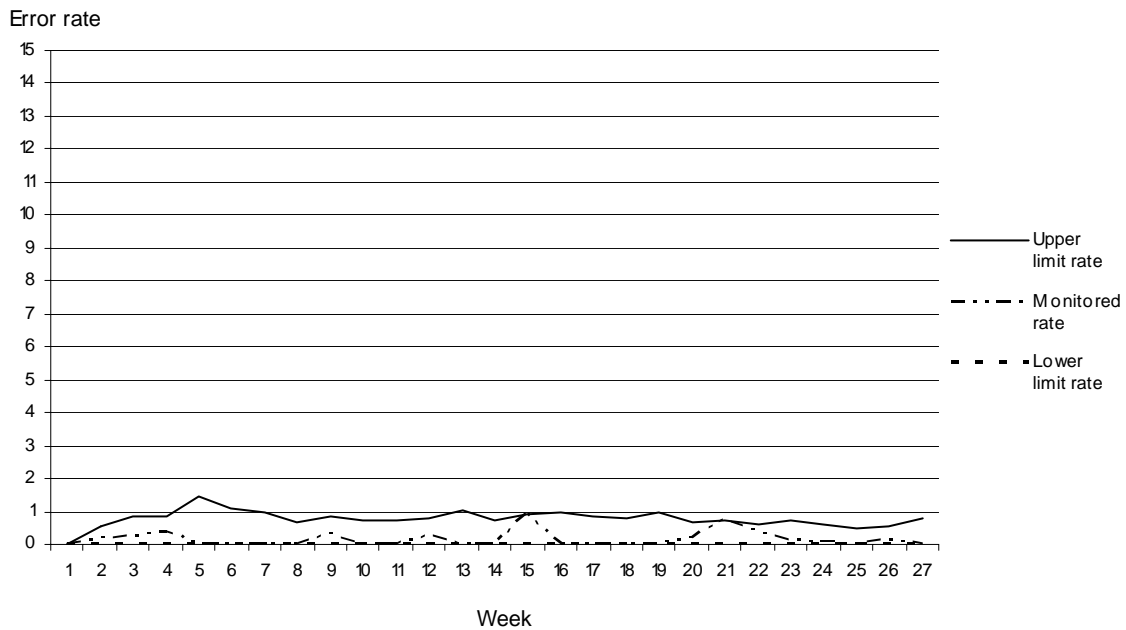
⁴³ The number of student interviews to be completed required a large interviewing staff. There were several training sessions for new interviewers throughout data collection.

Figure 13. The 2004 National Postsecondary Student Aid Study (NPSAS:04) error rate: question delivery



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Figure 14. The 2004 National Postsecondary Student Aid Study (NPSAS:04) error rate: data entry



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Quality circle meetings

Quality circle meetings provided an opportunity for NPSAS:04 interviewers to discuss data collection issues with project staff. Topics discussed during these meetings covered all aspects of data collection, including help desk, tracing and locating, and interviewing. Meetings were scheduled weekly during the day and evening shifts to ensure that all telephone interviewers had an opportunity to attend. Summaries of the discussions and decisions addressed during these meetings were compiled and distributed to all interviewers in the form of a newsletter. Issues covered in quality circle meetings included problem sheets, coding strategies, achieving gatekeeper cooperation, interview logic, and clarification of the intent of questions and help text.

This page left intentionally blank.

Chapter 5

Variable Construction and File Development

The data files for the 2004 National Postsecondary Student Aid Study (NPSAS:04) contain student-level and institution-level data collected from institution records, government databases, and student interviews. These files are available as a set of restricted research files, fully documented by an electronic codebook (ECB), and as a public release Data Analysis System (DAS), which also contains full documentation.⁴⁴ This chapter describes each file and details the editing and documentation process.

5.1 Overview of the NPSAS:04 Data Files

The primary analysis file, from which the study DASs were constructed, contains data for approximately 90,700 study respondents. The primary analysis file contains over 500 variables, developed from multiple sources (see table 23 for information on the completeness of data available for study respondents). Throughout the data collection period, data were processed and examined for quality control purposes. Editing of student data began shortly after the start of self-administered Web data collection, when procedures and programs for this purpose were first developed. Similarly, editing of the institution record data began shortly after computer-assisted data entry (CADE) data collection was initialized. Anomalous values were investigated and resolved, where appropriate, through the use of data corrections and logical recodes. Interim files were delivered to the National Center for Education Statistics (NCES) for review throughout the data collection period.

Following completion of all study data collection, separate DAS files were created for undergraduate and graduate/first-professional students. The first DASs, both undergraduate and graduate/first-professional, were adjudicated and approved for public release in February 2005.

Complete data for NPSAS:04 are located on the restricted access files and are documented by the ECB. The restricted files and the ECB are available to researchers who have applied for and received authorization from NCES to access restricted research files. Authorization may be obtained by contacting the NCES Data Security Office. The restricted use NPSAS:04 ECB contains information about the following files:

- NPSAS Analysis File—Contains analytic variables derived from all NPSAS data sources as well as selected direct student interview variables.
- Student Base Data File—Contains raw data collected from institutional records and the student interview for the study respondents.
- Student Interview School Data File—Contains institution data obtained from the student interview for all study respondents. It is a student-level file; however, a student can have more than one record in the file. There is a separate record for each

⁴⁴ The electronic codebook (ECB) and Data Analysis System (DAS) are both fully documented software products available from the National Center for Education Statistics (NCES). The DAS is available online at <http://nces.ed.gov/das>.

student for each postsecondary institution the student attended during the study year (up to six institutions).

- **Institution File**—Contains selected institution-level variables for the sampled institutions. This file can be linked to the Student Base Data File by the Integrated Postsecondary Education Data System (IPEDS) UNITID number.
- **CPS 2003–04 Data File**—Contains data received from the Central Processing System (CPS) for the study respondents who matched to the 2003–04 financial aid application files.
- **CPS 2004–05 Data File**—Contains data received from CPS for the study respondents who matched to the 2004–05 financial aid application files.
- **NSLDS Federal Pell Data File**—Contains raw grant-level data received from the National Student Loan Data System (NSLDS) for the study respondents who received Pell Grants during the NPSAS year or prior years. This is a history file with separate records for each transaction in the Pell system.
- **NSLDS Federal Loans Data File**—Contains raw loan-level data received from NSLDS for the study respondents who received loans during the NPSAS year or prior years. This is a history file with separate records for each transaction.
- **Weights File**—Contains all the sampling and analysis weights created for NPSAS:04. There is a separate record for each study respondent.
- **Weight History File**—Contains all intermediate weight adjustment factors, as well as the final institution and student weights created for NPSAS:04. There is a separate record for each study respondent.

5.2 Online Coding and Verification

5.2.1 Online Coding

The web-based student interview included an online coding system used to obtain IPEDS information for postsecondary institutions (other than the NPSAS institution from which they were sampled) that the student attended during the study year. After providing the state and city in which the institution is located, the online coding system displayed the list of all postsecondary institutions in that location, and the respondent or interviewer could select the appropriate institution. Upon selection, the name of the institution, as well as selected IPEDS variables (institutional level, control) were inserted into the database. This online coding system greatly reduced the IPEDS coding effort and amount of IPEDS file merging necessary after data collection was over.

5.2.2 Range and Consistency Checks

NPSAS:04 included two major web-based data collection systems: student record abstraction and the student interview. Both systems included edit checks to ensure data collected were within valid ranges. To the extent feasible, both systems incorporated across-item consistency edits. Whereas more extensive consistency checks would have been technically possible, use of such edits was limited to prevent excessive respondent burden. Below is a

description of the online range and consistency checks incorporated into the two Web instruments.

General verifications

- Range checks were applied to all numerical entries, such that only valid numeric responses could be entered.
- If, in response to a “check all that apply” question, a valid answer and the “none of the above” option were both checked, respondents and interviewers were notified to uncheck other options before checking the “none of the above” option.
- Pop-up messages confirmed responses that fell outside prespecified ranges for selected numeric values such as income and hours worked per week. Some checks were soft, allowing the respondent to keep the out-of-range response, and some checks were hard, requiring that the respondent update the response to one that fell within the valid range.
- Consistency checks identified conflicting responses (e.g., if the highest degree expected to earn was lower than the current degree) and allowed respondents the opportunity to change answers as appropriate.

5.3 Data Editing

The NPSAS:04 data were edited using procedures developed and implemented for previous NCES-sponsored studies, including NPSAS:2000. Edit checks were performed on the NPSAS:04 student interview data and CADE data, both during and upon completion of data collection, to confirm that the intended skip patterns were implemented in both instruments. At the conclusion of data collection, special codes were added as needed to indicate the reason for missing data. Missing data within individual data elements can occur for a variety of reasons. Table 45 lists each missing value code and its associated meaning in the NPSAS:04 data files.

Table 45. Description of missing data codes: 2004

Missing data code	Description
	Don't know (student interview)
-1	Data not available (computer-assisted data entry [CADE])
-3	Not applicable
-6	Value out of range
-7 ¹	Item was not reached (either partial interviews or student interview nonrespondents)
-8	Item was not reached due to an error
-9	Data missing, reason unknown

¹ This code was only applicable for student interview data items.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Skip-pattern relationships in the database were examined by methodically running cross-tabulations between gate items and their associated nested items. In many instances, gate-nest relationships had multiple levels within the CADE or student instrument. That is, items nested within a gate question may themselves have been gate items for additional items. Therefore, validating the gate-nest relationships often required much iteration and many multiway cross-tabulations.

The data cleaning and editing process for the NPSAS:04 CADE and student interview data involved a multistage process that consisted of the following steps:

Step 1. Blank or missing data were replaced with -9 for all variables in the instrument database. A one-way frequency distribution of every variable was reviewed to confirm that no missing or blank values remained. These same one-way frequencies revealed any out-of-range or outlier values, which were investigated and checked for reasonableness against other data values. Example: hourly wages of \$0.10, rather than \$10.00. Creating SAS formats from expected values and the associated value labels also revealed any categorical outliers.

Descriptive statistics were produced for all continuous variables. All values less than zero were temporarily recoded to missing. Minimum, median, maximum, and mean values were examined to assess reasonableness of responses and anomalous data patterns were investigated and corrected as necessary.

Step 2. Legitimate skips were identified using instrument source code. Gate-nest relationships were defined to replace -9's (missing for unknown reason) with -3's (not applicable) as appropriate. Two-way cross-tabulations between each gate-nest combination were evaluated, and high numbers of nonreplaced -9 codes were investigated to ensure skip-pattern integrity.

Nested values were further quality checked to reveal instances in which the legitimate skip code overwrote valid data which typically occurred if a respondent answered a gate question and the appropriate nested item(s), but then backed up and changed the value of the gate, following an alternate path of nested item(s). Responses to the first nested item(s) remained in the database and, therefore, required editing.

In cases where it could not be determined whether nested items had been legitimately skipped because the response to the gate item was indeterminate (either blank, -9, or don't know, -1), the edit code replaced -9's in nested items with the same value as the gate item. In this way, the value of the gate item was carried through to the nested items.

Step 3. Variable formatting (e.g., formatting dates as YYYYMM) and standardization of time units, for items which collected amount of time in multiple units, were performed during this step. In addition, any new codes assigned by expert coders reviewing IPEDS codes from the student interview (including those institutions that were unable to be coded during the interview) were merged back with the interview data files.

Also at this step, logical recodes were performed when the value of missing items could be determined from answers to previous questions or preloaded values. For instance, if the student did not work while enrolled, then the amount earned should have been coded to \$0 rather than -3 or -9. If a student indicated he or she was not disabled, then the "nested" disability items under the gate question were logically recoded to "no."

- Step 4.** At this step,⁴⁵ special codes of -3 and -9 in the student interview file were replaced with -7 (item not administered) based on the section completion indicators. The -7 code allows analysts to easily distinguish items that were either skipped or simply left blank from items not administered (cases where the respondent broke off during the Web interview, or for study respondents who were nonrespondents to the student interview.)
- Step 5.** One-way frequency distributions for all categorical variables and descriptive statistics for all continuous variables were examined. Out-of-range or outlier values were either replaced with the value of -6 (bad data, out of range) or recoded to a more reasonable value. For example, in CADE, if a user reported a Pell Grant amount for a student of more than \$4,050 (the maximum amount allowed) that value was set to \$4,050.
- Step 6.** One-way frequencies on all categorical variables were regenerated and examined. Variables with high counts of -9 values were investigated. Because self-administered Web respondents could skip over most items without providing an answer, -9's did remain a valid value, especially for sensitive items, such as those asking for financial information.

Concurrent with the data cleaning process, detailed documentation was developed to describe question text, response options, logical recodes, and the “applies to” text for each delivered variable.

5.4 Data Perturbation

To protect the confidentiality of NCES data that contain information about specific individuals, NPSAS:04 data were subject to perturbation procedures to minimize disclosure risk. Perturbation procedures, which have been approved by the NCES Disclosure Review Board, preserve the central tendency estimates but may result in slight increases in non-sampling errors.

In a study like NPSAS, there are multiple sources of data for some variables (CPS, CADE, student interview, etc.) and reporting differences can occur in each. Data swapping and other forms of perturbation, implemented to protect respondent confidentiality, can lead to inconsistencies as well.

5.5 Statistical Imputations

All variables with missing data were imputed, following procedures⁴⁶ described by Ault et al. (2003). The imputation procedures employed a two-step process. In the first step, the matching criteria and imputation classes that were used to stratify the dataset were identified such that all imputation was processed independently within each class. In the second step, the weighted sequential hot deck process was implemented,⁴⁷ whereby missing data were replaced with valid data from donor records that match the recipients with respect to the matching criteria.

⁴⁵ This step was not applicable for student record (computer-assisted data entry [CADE]) data.

⁴⁶ The methodology described by Ault et al. (2003), was followed with the exception that variances resulting from imputing variable values were not calculated.

⁴⁷ The term “hot deck” refers to the fact that the set of potential donors changes for each recipient. In contrast, cold deck imputation defines one static set of donors for all recipients. In all such imputation schemes, the selection of the donor from the entire deck is a random process.

Variables requiring imputation were not imputed simultaneously. However, some variables that were related substantively were grouped together into blocks, and the variables within a block were imputed simultaneously. Basic demographic variables were imputed first using variables with full information to determine the matching criteria. The order in which variables were imputed was also determined to some extent by the substantive nature of the variables. For example, basic demographics (such as age) were imputed first and these were used to process education variables (such as student level and enrollment intensity) which in turn were used to impute the financial aid variables (such as aid receipt and loan amounts).

For variables with less than 5 percent missing data, the variables used for matching criteria were selected based on prior knowledge about the dataset and the known relationships between variables. For example, in almost all cases student's age and enrollment intensity (full-time/part-time status) were used as matching variables in the imputation process.

For variables with more than 5 percent missing data, a statistical process called Chi-Square Automatic Interaction Detection (CHAID) was used to identify the matching criteria that were most closely related to the variable being imputed (Kass 1980). This step produced a number of imputation classes which contained sets of donors that were used to impute recipients belonging to that class. Imputation classes were formed based on a CHAID analysis of likely candidates for variables related to those being imputed. Efficiency was improved by introducing a common set of related variables as input into the CHAID process (see Ault et al. 2003). The resulting imputation classes varied for each variable or blocks of variables input to CHAID. In the case of the analytically less important variables that were imputed later in the process, such as the raw student interview variables, one common set of imputation classes was used. Efforts were made to define groups of imputation variables for which a common set of imputation classes would be optimal.

Next, the imputation classes were input to a SAS macro that implemented the weighted sequential hot deck procedure. Data were sorted within each imputation class to increase the chance of obtaining a close match between donor and recipient. The hot deck process searches for donors sequentially, starting with the recipient and progressing up and down the sorted file to find the set of eligible donors from which a random selection of one was made. The process is weighted since it incorporates the sample weight of each record in the search and selection routine (Cox 1980; Iannacchione 1982).

In some cases, further intervention was needed to ensure accuracy and consistency of imputation as determined by preexisting edit rules. For example, to impute the level of parents' education, when it is known that the parents have some college but not the parents' specific education level, the potential pool of donors was limited to those with at least some college education, to prevent imputing parents' education level as less than college.

Finally, given the number of variables and the complexity of the relationships among them, it was virtually impossible to identify and eliminate all inconsistencies. The objective was to reduce inconsistencies as much as possible, especially for key analytic variables. The objective of the imputation program was to efficiently impute for all missing data such that the process could be completed within a very short timeframe after the end of data collection. The aim was to replace missing data with data that were valid in all cases, with only a few relatively minor and unimportant exceptions.

Imputation diagnostics consisted of three checks: overall imputation checks, imputation checks by class variables, and multivariate consistency checks. The overall imputation checks compared the sum of the weights and unweighted counts for each level of the imputed variable before and after imputation. The imputation checks by class variables evaluated the number of times a given observation was used as a donor, and compared the sum of the weights and unweighted counts for each level of the imputed variable in the defined imputation classes before and after the imputation. Differences of 5 percent or more flagged the imputation class for further review. Finally, multivariate consistency checks ensured that relationships between variables were maintained and that any special instructions for the imputation were implemented properly.

In any of the three aforementioned checks, if there was any evidence of substantial deviation from the weighted sums or any identified inconsistencies, the imputation process was revised and rerun. For a few variables, the inconsistencies were corrected without rerunning the imputation. In these cases, the inconsistencies were corrected after the imputation.

Some results of the imputation process are provided in appendix H which presents the percentage missing for each variable subject to imputation, both for the total sample and for undergraduate students, as well as pre- and post-imputation distributions for eight key variables.

5.6 Composite and Derived Variable Construction

Analytic variables were created by examining the data available for each student from the various data sources, establishing relative priorities of the data sources—on an item-by-item basis—and reconciling discrepancies within and between sources. In some cases, the derived or composite variables were created by simply assigning a value from the available source of information given the highest priority. In other cases, raw interview items were recoded or otherwise summarized to create a derived variable. A listing of the set of analysis variables derived for NPSAS:04 appears in appendix I. Specific details regarding the creation of each variable appear in the variable descriptions contained in the ECB and DAS.

This page left intentionally blank.

Chapter 6

Unit Nonresponse Bias Analyses, Weighting, and Variance Estimation

Statistical analysis weights were computed for study respondents (defined in section 3.2), so that the study respondents represent the target population described in section 2.1. The statistical analysis weights compensated for the unequal probability of selection of institutions and students in the 2004 National Postsecondary Student Aid Study (NPSAS) sample. The weights also adjusted for multiplicity at the institution and student levels, unknown student eligibility, nonresponse, and poststratification. The institution weight was computed and then used as a component of the student weight. Weights were computed for study respondents as the product of the following 13 weight components:

- (1) institution sampling weight (WT1);
- (2) institution multiplicity adjustment (WT2);
- (3) institution poststratification adjustment (WT3);
- (4) institution nonresponse adjustment (WT4);
- (5) student sampling weight (WT5);
- (6) student subsampling weight (WT6);
- (7) first student multiplicity adjustment (WT7);
- (8) student unknown eligibility adjustment (WT8);
- (9) student not located adjustment (WT9);
- (10) student refusal adjustment (WT10);
- (11) student other nonresponse adjustment (WT11);
- (12) second student multiplicity adjustment (WT12); and
- (13) student poststratification adjustment (WT13).

Each weight component, described in the following sections, represents either a probability of selection or a weight adjustment. All nonresponse, extreme weight, and poststratification adjustments were computed using RTI's proprietary generalized exponential models (GEM) (Folsom and Singh 2000), which are similar to logistic models using bounds for adjustment factors and bounds on variance inflation. The GEM approach is a general version of weighting adjustments based on Deville and Särndal's logit model (1992). GEM is not a competing method to weighting class adjustment, rather it is a method utilized to do weight adjustments with a choice of optional features to employ. GEM controls at the margins as opposed to controlling at the cell level, as with weighting class adjustments. This allows consideration of greater numbers of variables. GEM is designed so that the sum of the unadjusted weights for all eligible units equals the sum of the adjusted weights for the respondents. GEM also constrains the nonresponse adjustment factors to be greater than or equal to one.

To prevent the variance from becoming too large, the bounds on adjustment factors were loosened, where necessary. The unequal weighting effects (UWEs) and maximum adjustment factors were monitored to ensure reasonable values.

A key feature and advantage of the GEM software is that the nonresponse adjustment and weight trimming and smoothing are all accomplished in one step. Lower and upper bounds are set on the weight adjustment factors. The bounds on the weight adjustment factors can vary, depending on whether the weight falls inside or outside a range, such as the one defined by the bounds used to identify extreme weights (median weight ± 3 times the interquartile range). This allows different bounds to be set for adjustments for weights that are considered high extreme (weight = median +3 times the interquartile range), low extreme (weight = median -3 times the interquartile range), or non-extreme. In this way, the extreme weights can be controlled and the design effect due to unequal weighting can be reduced. See appendix J for details of the GEM procedure.

The bias in an estimated mean based on respondents, \bar{y}_R , is the difference between this mean and the target parameter, π , i.e., the mean that would be estimated if a complete census of the target population was conducted and everyone responded. This bias can be expressed as follows:

$$B(\bar{y}_R) = \bar{y}_R - \pi$$

The estimated mean based on nonrespondents, \bar{y}_{NR} , can be computed if data for the particular variable are available for most of the nonrespondents. The true target parameter, π , can be estimated for these variables as follows:

$$\hat{\pi} = (1 - \eta) \bar{y}_R + \eta \bar{y}_{NR}$$

where η is the weighted unit (or item) nonresponse rate. For the variables that are from the frame, rather than from the sample, π can be estimated without sampling error. The bias can then be estimated as follows:

$$\hat{B}(\bar{y}_R) = \bar{y}_R - \hat{\pi}$$

or equivalently

$$\hat{B}(\bar{y}_R) = \eta(\bar{y}_R - \bar{y}_{NR}).$$

This formula shows that the estimate of the nonresponse bias is the difference between the mean for respondents and nonrespondents multiplied by the weighted nonresponse rate.

Nonresponse bias analysis was conducted when the response rate at any level (institutions, students, items) was below 85 percent.⁴⁸ Institution and student nonresponse bias analyses were performed and are described in sections 6.1 and 6.2, respectively. An item nonresponse bias analysis was also performed and is described in section 6.3. Section 6.4 discusses variance estimation, including Taylor series, bootstrap replicate weights, and variance approximation using design effects.

⁴⁸ See National Center for Education Statistics (NCES) statistical standards for a discussion of nonresponse bias analysis (U.S. Department of Education 2003).

6.1 Institution Nonresponse Bias Analysis and Weighting

6.1.1 Initial Institution Weight Components

There were two initial institution weight components, described below.

(1) Institution Sampling Weight (WT1)

The sampling weight for each sample institution was the reciprocal of its probability of selection. As described in appendix B, the probability of selection for institution i was

$$\pi_r(i) = \begin{cases} \frac{n_r S_r(i)}{S_r(+)} & \text{for noncertainty selections} \\ 1 & \text{for certainty selections.} \end{cases}$$

where

$$\begin{aligned} n_r &= \text{the sample size in stratum } r, \\ S_r(i) &= \text{the measure of size for the } i\text{-th school in stratum } r, \text{ and} \\ S_r(+) &= \text{the total measure of size for all schools in stratum } r. \end{aligned}$$

Therefore, the institution sampling weight was assigned as follows:

$$WT1 = 1 / \pi_r(i).$$

(2) Institution Multiplicity Adjustment (WT2)

Each institution on the sampling frame initially had one chance of selection. However, the lists for some sample institutions came from a system office or a main campus. Such lists contained students from more than one institution. Some of these lists clearly identified the campus that each student attended, and each campus was treated as a separate institution.

If a student attended more than one institution or campus, then the student had multiple chances of selection. Student multiplicity adjustments are described below. In NPSAS:04, about 10 enrollment lists were provided that represented more than one institution without clearly identifying which institution or campus each student attended. Therefore, the sample of students was selected from the one list. These institutions were treated as having multiple chances of being selected into the sample because each institution was sampled individually but also was brought into the sample by another institution or campus.

When an institution had two chances of selection, a multiplicity adjustment was performed by first estimating, as if the selections were independent, the probability that either record could be selected:

$$P(A \text{ or } B) = P(A) + P(B) - P(A)P(B).$$

Then, the new sampling weight was calculated as the reciprocal of this probability:

$$NEW_WT1 = 1 / P(A \text{ or } B).$$

When an institution had three chances of selection, a multiplicity adjustment was performed by first estimating the probability that any record could be selected:

$$P(A \text{ or } B \text{ or } C) = (P(A) + P(B) + P(C)) - (P(A)P(B) + P(A)P(C) + P(B)P(C)) + P(A)P(B)P(C).$$

Then, the new sampling weight was calculated as the reciprocal of this probability:

$$NEW_WT1 = 1 / P(A \text{ or } B \text{ or } C).$$

When an institution had four or more chances of selection, a multiplicity adjustment was performed by first estimating the probability that any record could be selected:

$$P(A \text{ or } B \text{ or } C \text{ or } D\dots) \approx 1 - (1-P(A)) * (1-P(B)) * (1-P(C)) * (1-P(D)) * \dots$$

Then, the new sampling weight was calculated as the reciprocal of this probability:

$$NEW_WT1 = 1 / P(A \text{ or } B \text{ or } C \text{ or } D\dots).$$

Finally, the multiplicity adjustment factor was derived by dividing the new sampling weight by the old sampling weight,

$$WT2 = NEW_WT1 / WT1,$$

for the institutions with positive multiplicity, and setting it to unity (1.00) for all other institutions. Hence, the product of WT1 and WT2 equals NEW_WT1 for the institutions with positive multiplicity and equals WT1 for all other institutions.

6.1.2 Assessing Institution Nonresponse Bias

As shown in chapter 3 (table 8), the institution weighted response rate was below 85 percent for all institutions and for six of the nine types of institutions. Therefore, a nonresponse bias analysis was conducted for all institutions and for the six types of institutions with a weighted response rate below 85 percent. A nonresponse bias analysis was also conducted for eight state-level sectors with a weighted response rate less than 85 percent. The nonresponse bias was estimated for variables known, i.e., nonmissing, for most respondents and nonrespondents. There are extensive data available for all institutions from the Integrated Postsecondary Education Data System (IPEDS), and the following variables were used:⁴⁹

- type of institution;⁵⁰
- Carnegie classification;
- degree of urbanization;
- Office of Business Economics (OBE) region;
- historically Black college or university indicator;
- percent of students receiving federal grant aid;
- percent of students receiving state/local grant aid;
- percent of students receiving institutional grant aid;
- percent of students receiving student loan aid;
- percent of students enrolled: Hispanic;

⁴⁹ For the continuous variables, categories were formed based on medians, quartiles, or logical breaks.

⁵⁰ Type of institution was only used in the nonresponse bias analysis for all institutions.

- percent of students enrolled: Asian or Pacific Islander;
- percent of students enrolled: Black, non-Hispanic;
- total undergraduate enrollment;
- male undergraduate enrollment;
- female undergraduate enrollment;
- total graduate/first-professional enrollment;
- male graduate/first-professional enrollment; and
- female graduate/first-professional enrollment.

For the institution-level variables listed above, the nonresponse bias was estimated and tested (adjusting for multiple comparisons) to determine if the bias was significant at the 5 percent level. Table 46 shows that about 6 percent of the variable categories are significantly biased for all institutions before nonresponse weight adjustments. When nonresponse bias was evaluated by institution type, the percent of the variable categories with significant bias before nonresponse weight adjustments ranged from 0 to 11 percent. Results of nonresponse bias analysis after weight adjustments are discussed in section 6.1.4.

Table 46. Summary of institution nonresponse bias analysis for all institutions, by type of institution: 2004

Nonresponse bias statistics	All institutions	Public less-than-2-year	Public 2-year	Public 4-year non-doctorate	Private not-for-profit 4-year non-doctorate	Private not-for-profit 4-year doctorate	Private for-profit less-than-2-year
Before weight adjustments							
Mean estimated bias	0.10	0.24	0.14	0.2	0.10	0.19	0.12
Median estimated bias	0.05	0.17	0.08	0.14	0.06	0.06	0.07
Percent significant bias	5.61	6.35	6.85	10.84	2.22	#	4.48
After weight adjustments							
Mean estimated bias	0.13	0.32	0.24	0.25	0.18	0.22	0.22
Median estimated bias	0.05	0.29	0.12	0.23	0.09	0.1	0.19
Percent significant bias	#	#	#	2.41	1.11	#	1.49

Rounds to zero.

NOTE: Nonresponse bias analysis was conducted for all institutions and the six types of institutions with a weighted response rate less than 85 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

6.1.3 Adjusting Institution Weights

There were two additional institution weight components, described below.

(3) Institution Poststratification Adjustment (WT3)

To ensure population coverage, the institution sampling weight adjusted for multiplicity was adjusted to control totals for enrollment by institution type and size using GEM. The enrollment totals came from the 2003 IPEDS fall enrollment file.

Table 47 presents the variables associated with the control totals and the average weight adjustment factors by these variables. The weight adjustment factors from GEM met the following constraints:

- minimum: 0.72;
- median: 1.02; and
- maximum: 1.21.

Table 47. Weight adjustment factors for institution poststratification: 2004

Model predictor variables ¹	Control total ²	Average weight adjustment factor (WT3)
Total	17,610,549	†
Public less-than-2-year, small	23,644	1.11
Public less-than-2-year, large	54,708	0.96
Public 2-year, small	1,590,649	1.13
Public 2-year, large	4,668,436	0.94
Public 4-year non-doctorate-granting, small	775,807	0.72
Public 4-year non-doctorate-granting, large	1,291,391	1.04
Public 4-year doctorate-granting, small	1,395,624	1.12
Public 4-year doctorate-granting, large	3,235,188	0.98
Private not-for-profit 2-year or less, small	37,930	1.21
Private not-for-profit 2-year or less, large	60,212	0.95
Private not-for-profit 4-year, non-doctorate-granting, small	442,161	1.03
Private not-for-profit 4-year, non-doctorate-granting, large	1,161,689	0.96
Private not-for-profit 4-year doctorate-granting, small	422,843	1.08
Private not-for-profit 4-year doctorate-granting, large	1,406,581	1.02
Private for-profit less-than-2-year, small	101,034	0.95

†Not applicable.

¹ Size for poststratification weighting classes was based on the median enrollment within sector for the institutions on the sampling frame.

² Control totals are the sum of enrollment across institutions based on Integrated Postsecondary Education Data System (IPEDS) 2003 enrollment data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

(4) Institution Nonresponse Adjustment (WT4)

The institutional respondent definition is provided in section 3.1.1. A weighting adjustment using GEM was performed to compensate for nonresponding institutions. The nonresponse adjustments were designed to significantly reduce or eliminate nonresponse bias for variables included in the models. Predictor variables were chosen that were thought to be predictive of response status and were nonmissing for most respondents and nonrespondents. The candidate predictor variables are those used in the nonresponse bias analysis described above with the addition of state.

Predictors used in the nonresponse modeling included all the candidate predictor variables identified as well as certain potentially important interactions. To identify these interactions, the Chi-square automatic interaction detection (CHAID) algorithm (Kass 1980) was used. CHAID is a hierarchical clustering algorithm that successively partitions individuals according to categorical predictors for a categorical dependent variable. The algorithm begins with all study individuals as a whole and cycles over each predictor, finding for each predictor an optimal partition of the individuals according to its levels. The most significant optimal partition is then retained, and the CHAID algorithm is again applied to the members of that partition to

find further partitions using the remaining predictors. The algorithm is stopped after a specified number of partitioning steps or if none of the partitions at a given step is found to be significant.

Application of the CHAID algorithm provided interaction terms for the nonresponse adjustment models. CHAID was run for up to three segments, resulting in identification of two-way and three-way interactions.

Some of the predictor variables (Carnegie classification, female undergraduate enrollment, and graduate/first-professional enrollment) were dropped from the adjustment model due to singularity, which prevents the model from running properly. Singularity occurs when a combination of variables can be used to determine the values of another variable, e.g., total enrollment and male enrollment can be used to determine female enrollment.

Table 48 presents the response rates and the resulting adjustment factors by the model variables. The weight adjustment factors from GEM met the following constraints:

- minimum: 1.00;
- median: 1.08; and
- maximum: 5.10.

Table 48. Weight adjustment factors for institution nonresponse adjustment: 2004

Model predictor variables	Number of respondents	Weighted response rate	Average weight adjustment factor (WT4)
Total	1,360	80.0	†
Institution strata			
Public less-than-2-year	50	74.3	1.32
Public 2-year	320	77.6	1.19
Public 4-year non-doctorate-granting	110	70.3	1.32
Public 4-year doctorate-granting	200	87.1	1.15
Private not-for-profit 2-year or less	70	92.6	1.10
Private not-for-profit 4-year non-doctorate-granting	220	78.1	1.21
Private not-for-profit 4-year doctorate-granting	170	80.8	1.24
Private for-profit less-than-2-year	140	82.3	1.25
Private for-profit 2-year or more	90	88.2	1.14
State			
California	130	65.4	1.46
Connecticut	40	95.8	1.15
Delaware	10	100.0	1.19
Georgia	90	98.6	1.02
Illinois	70	86.8	1.19
Indiana	60	98.3	1.02
Minnesota	70	97.7	1.03
Nebraska	20	81.0	1.37
New York	120	88.7	1.10
Oregon	50	91.9	1.13
Tennessee	70	96.4	1.02
Texas	100	88.9	1.23
Other	540	77.9	1.27

See notes at end of table.

Table 48. Weight adjustment factors for institution nonresponse adjustment: 2004—Continued

Model predictor variables	Number of respondents	Weighted response rate	Average weight adjustment factor (WT4)
Total male graduate/first-professional enrollment ¹			
<= 727	330	75.3	1.24
> 727	310	84.0	1.22
Total Enrollment = 0	730	78.6	1.19
Total graduate/first-professional enrollment ¹			
<= 1,820.5	320	72.6	1.26
> 1,820.5	320	84.9	1.20
Total enrollment = 0	730	78.6	1.19
Total male undergraduate enrollment ²			
<=281	340	81.8	1.19
>281, <=1251	340	75.7	1.24
>1,251, <=4,208.5	340	77.2	1.21
>4,208.5	350	82.1	1.18
Total undergraduate enrollment ²			
<= 825.5	330	79.2	1.21
>825.5, <=2,938	340	75.5	1.23
>2,938, <=9,799.5	350	77.8	1.21
>9,799.5	350	82.0	1.18
Percent receiving federal grant aid			
<=25	400	82.3	1.17
>25, <=50	490	77.0	1.19
>50, <=75	230	82.2	1.16
>75	120	79.4	1.36
Unavailable or unknown	120	79.6	1.32
Percent receiving institutional grant aid			
<=25	710	78.7	1.20
>25, <=50	210	83.1	1.17
>50, <=75	130	78.1	1.30
>75	200	82.5	1.16
Unavailable or unknown	120	79.6	1.32
Percent receiving student loan aid			
<=25	430	79.7	1.15
>25, <=50	330	82.9	1.17
>50, <=75	320	82.2	1.17
>75	180	64.0	1.40
Unavailable or unknown	120	79.6	1.32
Percent enrolled: Black, non-Hispanic			
<=25	1,150	80.8	1.22
>25, <=50	130	85.6	1.14
>50, <=75	30	76.8	1.32
>75	50	89.8	1.07
Unavailable or unknown	10	12.7	1.16

See notes at end of table.

Table 48. Weight adjustment factors for institution nonresponse adjustment: 2004—Continued

Model predictor variables	Number of respondents	Weighted response rate	Average weight adjustment factor (WT4)
Percent enrolled: Hispanic			
<=25	1,180	81.6	1.20
>25, <=50	100	76.9	1.22
>50, <=75	30	76.1	1.47
>75	40	88.4	1.24
Unavailable or unknown	10	12.7	1.16
Percent receiving state/local grant aid			
<=25	620	79.2	1.23
>25, <=50	360	76.8	1.21
>50, <=75	180	87.7	1.11
>75	90	86.8	1.10
Unavailable or unknown	120	79.6	1.32
Historically Black college or university			
Yes	30	89.9	1.04
No	1,340	79.8	1.21
Degree of urbanization			
Large city	360	80.6	1.24
Mid-size city	370	81.1	1.18
Urban fringe of large city	260	75.2	1.30
Urban fringe of mid-size city	80	80.7	1.14
Large town	50	85.7	1.15
Small town	170	78.7	1.19
Rural	40	90.0	1.05
Not assigned	30	94.1	1.05
Bureau of Economic Analysis Code (Office of Business Economics [OBE]) Region ³			
New England	90	67.8	1.32
Mid East	200	74.6	1.32
Great Lakes	210	84.5	1.14
Plains	140	86.6	1.13
Southeast	320	87.3	1.09
Southwest	130	86.0	1.22
Rocky Mountains	40	73.1	1.31
Far West	200	70.3	1.35
Outlying areas	30	99.6	1.00
CHAID segments			
In California	130	65.4	1.46
In one of the 12 states other than California; public, private not-for-profit less-than-4-year or private not-for-profit 4-year non-doctorate-granting; percent receiving institutional grant aid <= 50 percent	380	94.6	1.05
In one of the 12 states other than California; private not-for-profit 4-year doctorate-granting or private for-profit; percent receiving institutional grant aid <= 50 percent	70	82.8	1.22
In one of the 12 states other than California; percent receiving institutional grant aid > 50 and <= 75	70	79.2	1.30

See notes at end of table.

Table 48. Weight adjustment factors for institution nonresponse adjustment: 2004—Continued

Model predictor variables	Number of respondents	Weighted response rate	Average weight adjustment factor (WT4)
In one of the 12 states other than California; percent receiving institutional grant aid > 75	130	90.6	1.09
In one of the 12 states other than California; percent receiving institutional grant aid unavailable or unknown	50	81.4	1.22
Not in one of the 12 states; in New England or Mid East; percent receiving student loan aid <= 75	80	71.4	1.29
Not in one of the 12 states; in New England or Mid East; percent receiving student loan aid > 75 or unavailable or unknown	40	39.9	2.18
Not in one of the 12 states; in region other than New England or Mid East; female graduate/first-professional enrollment > 1,073.5 ⁴	190	86.6	1.13
Not in one of the 12 states; in region other than New England or Mid East; female graduate/first-professional enrollment = 0 ⁴	230	77.5	1.21

†Not applicable.

¹ Graduate/first-professional enrollment categories were defined by the median.

² Undergraduate enrollment categories were defined by quartiles.

³ New England = Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; Mid East = Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania; Great Lakes = Illinois, Indiana, Michigan, Ohio, Wisconsin; Plains = Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota; Southeast = Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia; Southwest = Arizona, New Mexico, Oklahoma, Texas; Rocky Mountains = Colorado, Idaho, Montana, Utah, Wyoming; Far West = Alaska, California, Hawaii, Nevada, Oregon, Washington; Outlying Areas = American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana, Puerto Rico, Palau, Virgin Islands.

⁴ Female enrollment variables were used in Chi-square automatic interaction detection (CHAID) to determine segments but were later excluded from the nonresponse adjustment due to singularities in the model.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

6.1.4 Institution Weighting Adjustment Performance

As shown in table 46, the institution weighting adjustments eliminated some, but not all, significant bias. However, for all institutions, public less-than-2-year institutions, and public 2-year institutions, no significant bias remains after weighting for the variables analyzed. For the other types of institutions, the percent of variable categories with significant bias decreased after weight adjustments. Significant bias was reduced for the variables known for most respondents and nonrespondents, which are considered to be some of the more analytically important variables and are correlated with many of the other variables. Appendix K contains detailed tables showing the estimated bias before and after weight adjustments for each domain for which nonresponse bias analysis was conducted.

Table 49 summarizes the institution weight distributions and the variance inflation due to unequal weighting, i.e., UWE, by institutional type. The median institution weights range from 1.1 for public 4-year non-doctorate-granting institutions to 5.0 for private for-profit less-than-2-year institutions. The mean institution weight ranges from 1.5 for public 4-year doctorate-granting institutions to 11.2 for private for-profit 2-year or more institutions. The UWE is 5.7 overall and ranges from 1.8 for public 4-year doctorate-granting institutions to 6.5 for public less-than-2-year institutions.

Table 49. Institution weight distribution and unequal weighting effects (UWEs): 2004

Analysis domain	Minimum	First quartile	Median	Third quartile	Maximum	Mean	UWE ¹
Total	0.7	1.1	1.5	4.1	152.1	4.6	5.7
Type of institution							
Public less-than-2-year	1.1	1.3	1.8	6.0	123.1	7.7	6.5
Public 2-year	0.9	1.1	1.3	3.1	73.5	3.8	4.5
Public 4-year non-doctorate-granting	0.7	0.9	1.1	2.7	49.9	3.2	4.8
Public 4-year doctorate-granting	1.0	1.0	1.2	1.3	10.7	1.5	1.8
Private not-for-profit 2-year or less	1.0	1.6	2.7	5.6	54.8	5.3	3.1
Private not-for-profit 4-year, non-doctorate-granting	1.0	1.0	1.4	4.6	71.8	4.8	4.2
Private not-for-profit 4-year doctorate-granting	1.0	1.1	1.3	1.8	67.2	2.8	6.4
Private for-profit less-than-2-year	1.1	2.8	5.0	9.1	152.1	8.6	3.8
Private for-profit 2-year or more	1.0	2.4	4.6	10.6	125.8	11.2	4.1

¹ UWE calculated as $n S(Wt)^2 / (S Wt)^2$.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

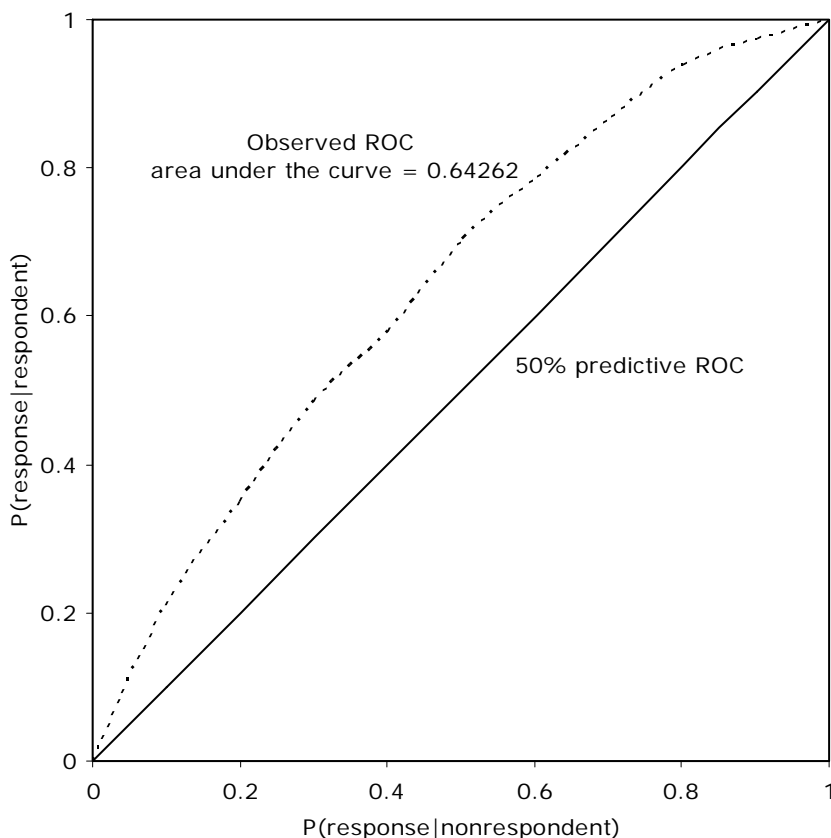
To assess the overall predictive ability of the nonresponse model, a Receiver Operating Characteristics (ROC) curve was used (Hanley and McNeil 1982). The ROC provided a measure of how well the model correctly classified individuals of known response type.⁵¹ The ROC curve was developed in the following manner. For any specified probability, c , two proportions were calculated:

- the proportion of respondents with a predicted probability of response greater than c , and
- the proportion of nonrespondents with a predicted probability of response greater than c .

The plot of the first probability against the second, for c from 0 to 1, resulted in the ROC curve shown in figure 15. The area under the curve equals the probability that the fitted model correctly classifies two randomly chosen individuals—one of which is a true respondent and the other a true nonrespondent—where the individual with the higher predicted probability of response is classified as the respondent. An area of 0.5 under an ROC curve indicates that a correct classification is made 50 percent of the time, with the model providing no predictive benefit. An area of 1 indicates that the true respondent always has the higher predicted probability of response, and so the model always classifies the two individuals correctly. Figure 15 shows that the area under the ROC curve is 0.64, so the predicted probabilities give the correct classification 64 percent of the time (about two of every three pairings). Predictive probabilities from ROC curves can also be interpreted in terms of the nonparametric Wilcoxon test statistic, where the ROC area of 0.64 equals the value of the Wilcoxon test statistic. Viewed in this way, the Wilcoxon test provides a significant rejection of the null hypothesis of no predictive ability ($p < 0.05$). This result can be interpreted to mean that the variables used in the model are highly informative but not definitive predictors of a sample institution's overall response propensity.

⁵¹ For a more detailed example of the Receiver Operating Characteristics (ROC) curve use in nonresponse modeling see Iannacchione (2003).

Figure 15. Receiver Operating Characteristics (ROC) curve for overall institution response propensity: 2004



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

6.2 Student Nonresponse Bias Analysis and Weighting

6.2.1 Initial Student Weight Components

There were four initial student weight components, described below.

(5) Student Sampling Weight (WT5)

The overall student sampling strata were defined by crossing the institution sampling strata with the student strata within institutions. The overall sampling rates for these sampling strata can be found in appendix B. The sample students were systematically selected from the enrollment lists at institution-specific rates that were inversely proportional to the institution's probability of selection. Specifically, the overall stratum sampling rate divided by the institution's probability of selection or

$$f_{si} = \frac{f_s}{\pi_r(i)},$$

where f_s = the overall student sampling rate, and

$\pi_r(i)$ = the institution's probability of selection.

As discussed in appendix B, the institution-specific rates were designed to obtain the desired sample sizes and achieve nearly equal weights within the overall student strata.

If the institution's enrollment list was larger than expected based on the IPEDS data, the preloaded student sampling rates would yield larger-than-expected sample sizes. Likewise, if the enrollment list was smaller than expected, the sampling rates would yield smaller-than-expected sample sizes. To maintain control on the sample sizes, the sampling rates were adjusted, when necessary, so that the number of students selected did not exceed by more than 50 students the expected sample size of the institution based on the IPEDS data. A minimum sample size constraint of 10 students also was imposed so that there would be at least four respondents from each participating institution for variance estimation.

The student sampling weight was calculated as the reciprocal of the institution-specific student sampling rates, or

$$WT5 = 1 / f_{s|i}.$$

(6) Student Subsampling Weight (WT6)

For paper lists, samples were selected manually, and then the list of sample students was entered into an electronic file. When students from different strata, e.g., first-time beginners (FTBs) and other undergraduates, were combined on a list, the sampling rate from the stratum with the higher rate was used. Then after the sample was entered into an electronic file, the students from the other stratum (or strata) were subsampled.

The student subsampling weight adjustment factor, WT6, was the reciprocal of this subsampling rate. This weight factor was unity (1.00) for most students because this subsampling was not necessary for most institutions.

(7) First Student Multiplicity Adjustment (WT7)

Students who attended more than one eligible institution during the 2003–04 academic year had multiple chances of being selected. That is, they could have been selected from any of the institutions they attended. Therefore, these students had a higher probability of being selected than was represented in their sampling weight.

This multiplicity was adjusted by dividing their sampling weight by the number of institutions attended that were eligible for sample selection. Specifically, the student multiplicity weight adjustment factor was defined as

$$WT7 = 1 / M,$$

where M is the multiplicity, or number of institutions attended. The multiplicity was determined from the computer-assisted telephone interview (CATI), the Pell Grant payment file, and the National Student Loan Data System (NSLDS). If student multiplicity was missing, the average number of institutions attended based on students with known number of institutions attended was used. Averages were computed based on type of institution and federal aid receipt.

The weight adjustment factors met the following constraints:

- minimum: 0.03;
- median: 1.02; and

- maximum: 8.32.

(8) Student Unknown Eligibility Adjustment (WT8)

Final eligibility status could not be determined for nonresponding students who were never contacted. These students were treated as eligible, and their weights were adjusted to compensate for the small portion of students who were actually ineligible (as described below).

Weighting classes were defined by the intersection of institution type with the students' matching status to financial aid files (Central Processing System [CPS], Pell, and loan). Table 50 presents the weight adjustment factors applied to the students with unknown eligibility. These weight adjustment factors were based on the estimated rate of eligibility among students with known eligibility status. For the known-eligible students, the weight adjustment factor was set equal to one.

Table 50. Weight adjustment factors for unknown student eligibility status: 2004

Weighting class (institution type, by student type, by matching status to financial aid files)	Number adjusted for unknown eligibility	Weight adjustment factor (WT8)
Total	6,530	†
Public less-than-2-year	Matched Pell or Stafford file	# 1.00
	Matched CPS file only	# 1.00
	No matches	260 0.70
Public 2-year	Matched Pell or Stafford file	180 1.00
	Matched CPS file only	# 1.00
	No matches	3,690 0.81
Public 4-year non-doctorate-granting, undergraduate	Matched Pell or Stafford file	50 1.00
	Matched CPS file only	# 1.00
	No matches	360 0.93
Public 4-year non-doctorate-granting, graduate	Matched Pell or Stafford file	# 1.00
	Matched CPS file only	# 1.00
	No matches	30 0.87
Public 4-year non-doctorate-granting, undergraduate	Matched Pell or Stafford file	30 1.00
	Matched CPS file only	# 1.00
	No matches	570 0.93
Public 4-year non-doctorate-granting, graduate	Matched Pell or Stafford file	10 1.00
	Matched CPS file only	# 1.00
	No matches	210 0.93
Private not-for-profit less-than-4-year	Matched Pell or Stafford file	20 1.00
	Matched CPS file only	# 1.00
	No matches	80 0.66
Private not-for-profit 4-year non-doctorate-granting, undergraduate	Matched Pell or Stafford file	10 1.00
	Matched CPS file only	# 1.00
	No matches	200 0.87
Private not-for-profit 4-year non-doctorate-granting, graduate	Matched Pell or Stafford file	# 1.00
	Matched CPS file only	# 1.00
	No matches	# 0.88
Private not-for-profit 4-year doctorate-granting, undergraduate	Matched Pell or Stafford file	# 1.00
	Matched CPS file only	# 1.00
	No matches	190 0.91
Private not-for-profit 4-year doctorate-granting, graduate	Matched Pell or Stafford file	# 1.00
	Matched CPS file only	# 1.00
	No matches	120 0.91

See notes at end of table.

Table 50. Weight adjustment factors for unknown student eligibility status: 2004—Continued

Weighting class (institution type, by student type, by matching status to financial aid files)		Number adjusted for unknown eligibility	Weight adjustment factor (WT8)
Private for-profit, less-than-2-year	Matched Pell or Stafford file	110	1.00
	Matched CPS file only	#	1.00
	No matches	200	0.46
Private for-profit 2-year	Matched Pell or Stafford file	50	1.00
	Matched CPS file only	#	1.00
	No matches	40	0.63
Private for-profit 4-year, undergraduate	Matched Pell or Stafford file	10	1.00
	Matched CPS file only	#	1.00
	No matches	110	0.83
Private for-profit 4-year, graduate	Matched Pell or Stafford file	#	1.00
	Matched CPS file only/no matches combined	#	0.93

† Not applicable.

Rounds to zero.

NOTE: CPS = Central Processing System.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04)

6.2.2 Assessing Student Nonresponse Bias

As described in section 3.2, a study respondent is defined as any sample member who is determined to be eligible for the study and has valid data from any source for a selected set of key analytical variables. These are minimal data requirements and the vast majority of study respondents were characterized by considerably more complete data.

As shown in table 10, of the 101,010 eligible sample students the unweighted response rate was about 90 percent, and the weighted response rate was 91 percent. The student weighted response rate is also above 85 percent for all types of institutions with the exception of public 2-year institutions. The weighted response rates by type of institution range from about 84 percent for public 2-year institutions to about 97 percent for private not-for-profit 4-year non-doctorate-granting institutions.

Therefore, a nonresponse bias analysis was conducted only for students from public 2-year institutions. A nonresponse bias analysis was also conducted for six state-level sectors with a weighted response rate less than 85 percent. The nonresponse bias was estimated for seven variables known for both respondents and nonrespondents. Five of these variables were known for most sample members, and the remaining two variables were only known for federally aided students. These variables are listed below.

For all sample members:

- region;
- institution total enrollment;
- CPS match (yes/no);
- Pell Grant recipient (yes/no); and
- Stafford Loan recipient (yes/no).

For federally aided students:

- Pell Grant amount; and
- Stafford Loan amount.

Additionally, it was determined that percent part-time fall enrollment and in-state tuition are important variables to include in the nonresponse bias analysis for students in public 2-year institutions. These variables are not known for both respondents and nonrespondents; however, institution-level data available from IPEDS were used to conduct the analyses.

The nonresponse bias was estimated and tested (adjusting for multiple comparisons) for the above variables to determine if the bias was significant at the 5 percent level. Table 51 shows that about 35 percent of the variable categories are significantly biased for students from public 2-year institutions before weight adjustments. Results of the nonresponse bias analysis after weight adjustments will be discussed in section 6.2.4.

Table 51. Summary of student nonresponse bias analysis for all students, in public 2-year institutions: 2004

Nonresponse bias statistics	Public 2-year
Before weight adjustments	
Mean estimated bias	0.11
Median estimated bias	0.04
Percent significant bias	35.42
After weight adjustments	
Mean estimated bias	0.15
Median estimated bias	0.05
Percent significant bias	29.17

NOTE: Nonresponse bias analysis was conducted only for the one type of institution with a weighted response rate less than 85 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

6.2.3 Adjusting Student Weights

There were five additional student weight components, described below. The student weights were further adjusted for nonresponse. The adjustments for nonresponse was performed in three stages because the predictors of response propensity were potentially different at each stage:

- inability to locate the student;
- refusal to be interviewed; and
- other nonresponse.

Using these three stages of nonresponse adjustment achieved greater reduction in nonresponse bias to the extent that different variables were significant predictors of response propensity at each stage.

(9) Student Not Located Adjustment (WT9)

The first type of adjustment for student nonresponse was an adjustment for the inability to locate the student. These weight adjustments were made to compensate for the potential study nonresponse bias.

Predictor variables were chosen that were thought to be predictive of response status and were nonmissing for both study respondents and nonrespondents. The candidate predictor variables included

- institution type;
- in 1 of 12 states with state- representative sample of undergraduates (yes/no);
- region;
- institution enrollment from IPEDS file (categorical);
- student type;
- FTB status;
- Pell Grant receipt (yes/no);
- Pell Grant amount (categorical);
- Stafford Loan receipt (yes/no);
- Stafford Loan amount (categorical);
- Plus Loan amount (categorical);
- federal aid receipt (yes/no);
- CPS record indicator (yes/no);
- Social Security number indicator (yes/no);
- phone number count;
- e-mail address count; and
- mailing address count.

Predictors used in the nonresponse modeling included all the candidate predictor variables identified as well as certain potentially important interactions. CHAID was used to identify these interactions (see description in section 6.1.3). Application of the CHAID algorithm provided interaction terms for each of the nonresponse adjustment models. For each model, CHAID was run for up to three segments, resulting in identification of two-way and three-way interactions. Segments were retained if they were both statistically and practically significant.

The weight adjustments were computed using GEM. The initial model included all of the predictor variables listed above and the interaction segments identified by the CHAID analysis. The model failed to converge with all the variables included, i.e., there was no solution to satisfy all model equations simultaneously. Therefore, a stepwise approach was taken to reduce the variables in the model. In the same step, high-extreme weights were adjusted, truncated, and smoothed by GEM, while the other weights were adjusted for nonresponse.

Table 52 presents the final predictor variables used in GEM to adjust the weights and the average weight adjustment factors resulting from these variables.⁵² The weight adjustment factors met the following constraints:

- minimum: 0.20;
- median: 1.00; and
- maximum: 1.00.

Table 52. Weight adjustment factors for student location nonresponse adjustment: 2004

Model predictor variables	Number of located respondents	Weighted response rate	Average weight adjustment factor (WT9)
Total	95,170	95.4	1.07
Type of institution			
Public less-than-2-year	2,340	95.8	1.70
Public 2-year	29,030	91.7	1.10
Public 4-year non-doctorate-granting	8,490	96.7	1.03
Public 4-year doctorate-granting	20,880	97.0	1.03
Private not-for-profit less-than-4-year	2,680	97.4	1.03
Private not-for-profit 4-year non-doctorate-granting	9,120	98.7	1.03
Private not-for-profit 4-year doctorate-granting	9,310	97.7	1.04
Private for-profit less-than-2-year	7,740	96.1	1.07
Private for-profit 2-year or more	5,590	97.8	1.04
Representative state institution			
No	56,880	96.8	1.07
Yes	38,290	93.1	1.08
Bureau of Economic Analysis Code (Office of Business Economics [OBE]) Region ¹			
New England	5,520	96.7	1.05
Mid East	14,630	96.2	1.10
Great Lakes	14,350	96.4	1.05
Plains	7,440	95.1	1.07
Southeast	22,570	96.8	1.05
Southwest	10,410	97.3	1.04
Rocky Mountains	3,760	98.1	1.13
Far West	14,260	89.4	1.13
Outlying Areas, including Alaska and Hawaii	2,230	94.6	1.06
Institution enrollment size ²			
0 < enrollment total <=1,596	23,550	97.8	1.10
1,596 < enrollment total <=6,567	24,240	96.5	1.05
6,567 < enrollment total <=15,397	22,950	94.0	1.09
Enrollment total >15397	24,430	94.9	1.05
Education level			
Undergraduate	83,940	94.9	1.08
Graduate	9,530	97.8	1.03
First-professional	1,700	98.9	1.02
First-time beginner (FTB) status			
FTB	40,370	95.4	1.08
Not FTB	52,210	95.4	1.07
FTB status unknown	2,590	94.9	1.06

See notes at end of table.

⁵² See description of the generalized exponential model (GEM) procedure at the beginning of chapter 6.

Table 52. Weight adjustment factors for student location nonresponse adjustment: 2004—Continued

Model predictor variables	Number of located respondents	Weighted response rate	Average weight adjustment factor (WT9)
Pell Grant recipient			
No	65,640	94.2	1.10
Yes	29,530	99.2	1.02
Stafford Loan recipient			
No	60,870	93.5	1.10
Yes	34,300	99.4	1.02
Federal aid recipient			
No	45,940	92.2	1.13
Yes	49,230	99.3	1.02
In Central Processing System (CPS)			
No	38,280	90.4	1.16
Yes	56,890	100.0	1.01
Count of phone numbers			
0	1,670	60.4	1.68
1	46,020	95.3	1.09
2	34,410	97.2	1.04
More than 2	13,080	97.9	1.03
Count of e-mail addresses			
0	31,960	90.0	1.15
1	36,700	96.0	1.05
2	18,460	99.5	1.01
More than 2	8,050	100.0	1.01
Count of mailing addresses			
0 or 1	38,800	92.4	1.12
2	36,000	97.1	1.05
More than 2	20,360	98.7	1.03
Chi-square automatic interaction detection (CHAID) segments			
In CPS	56,890	100.0	1.01
Not in CPS, no preloaded Social Security number (SSN), undergraduate student	7,570	82.0	1.28
Not in CPS, no preloaded SSN, graduate student	1,730	93.5	1.08
Not in CPS, preloaded SSN, undergraduate student	23,400	90.9	1.16
Not in CPS, preloaded SSN, graduate student	5,580	97.4	1.03

¹ New England = Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; Mid East = Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania; Great Lakes = Illinois, Indiana, Michigan, Ohio, Wisconsin; Plains = Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota; Southeast = Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia; Southwest = Arizona, New Mexico, Oklahoma, Texas; Rocky Mountains = Colorado, Idaho, Montana, Utah, Wyoming; Far West = Alaska, California, Hawaii, Nevada, Oregon, Washington
Outlying Areas = American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana, Puerto Rico, Palau, Virgin Islands.

² Enrollment categories were defined by quartiles.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

(10) Student Refusal Adjustment (WT10)

The second stage of the student nonresponse adjustment was an adjustment for refusal, given that the student was located. This additional type of nonresponse adjustment was made to

further compensate for the potential student nonresponse bias. The same GEM procedure was used as in the adjustment for not locating students (WT9). Once again, high-extreme weights were adjusted, truncated, and smoothed by GEM. Candidate predictor variables were the same as those used in the location nonresponse adjustment. As in the location nonresponse adjustment, a CHAID analysis was performed on the predictor variables to detect important interactions.

Table 53 presents the final predictor variables used in GEM to adjust the student weights and the average weight adjustment factor resulting from these variables. The weight adjustment factors met the following constraints:

- minimum: 0.03;
- median: 1.01; and
- maximum: 1.44.

Table 53. Weight adjustment factors for student refusal nonresponse adjustment: 2004

Model predictor variables	Number of nonrefusal respondents	Weighted response rate	Average weight adjustment factor (WT10)
Total	92,690	97.1	1.03
Type of institution			
Public less than 2-year	2,250	94.9	1.12
Public 2-year	27,500	94.7	1.06
Public 4-year non-doctorate-granting	8,310	97.8	1.02
Public 4-year doctorate-granting	20,540	98.3	1.02
Private not-for-profit less-than-4-year	2,650	98.7	1.01
Private not-for-profit 4-year non-doctorate-granting	9,030	98.9	1.01
Private not-for-profit 4-year doctorate-granting	9,170	98.5	1.02
Private for-profit less-than-2-year	7,700	99.2	1.02
Private for-profit 2-year or more	5,540	99.4	1.01
Representative state institution			
No	55,790	97.8	1.03
Yes	36,900	96.1	1.04
Bureau of Economic Analysis Code (Office of Business Economics [OBE]) Region ¹			
New England	5,360	97.4	1.03
Mid East	14,180	97.2	1.04
Great Lakes	14,000	97.5	1.03
Plains	7,180	96.7	1.03
Southeast	22,150	97.9	1.03
Southwest	10,260	98.4	1.02
Rocky Mountains	3,700	98.9	1.01
Far West	13,660	94.2	1.05
Outlying Areas, including Alaska and Hawaii	2,220	99.3	1.01
Institution enrollment size ²			
0 < enrollment total <=1,596	23,300	98.7	1.03
1,596 < enrollment total <=6,567	23,590	97.5	1.03
6,567 < enrollment total <=15,397	22,060	96.5	1.04
Enrollment total >15,397	23,750	96.8	1.03
Education level			
Undergraduate	81,650	97.0	1.03
Graduate	9,360	98.0	1.02
First-professional	1,680	99.3	1.01

See notes at end of table.

**Table 53. Weight adjustment factors for student refusal nonresponse adjustment: 2004—
Continued**

Model predictor variables	Number of nonrefusal respondents	Weighted response rate	Average weight adjustment factor (WT10)
First-time beginner (FTB) status			
FTB	39,500	97.5	1.03
Not FTB	50,700	97.1	1.03
FTB status unknown	2,490	96.5	1.05
Pell Grant recipient			
No	63,230	96.3	1.04
Yes	29,460	99.8	1.01
Stafford Loan recipient			
No	58,460	95.9	1.05
Yes	34,230	99.8	1.01
Federal aid recipient			
No	43,580	95.0	1.06
Yes	49,110	99.8	1.01
In Central Processing System (CPS)			
No	35,800	94.0	1.07
Yes	56,890	100.0	1.00
Count of phone numbers			
0	1,660	99.4	1.00
1	44,410	96.1	1.04
2	33,690	97.7	1.02
More than 2	12,930	98.7	1.02
Count of e-mail addresses			
0	30,550	94.4	1.05
1	35,720	97.1	1.03
2	18,370	99.5	1.01
More than 2	8,050	100.0	1.00
Count of mailing addresses			
0 or 1	36,890	95.0	1.06
2	35,520	98.5	1.02
More than 2	20,280	99.5	1.01
Chi-square automatic interaction detection (CHAID) segments			
In CPS	56,890	100.0	1.00
Not in CPS, no preloaded Social Security number (SSN), no phone number	440	99.1	1.00
Not in CPS, no preloaded SSN, phone number	7,960	90.3	1.12
Not in CPS, preloaded SSN, undergraduate student	21,940	94.2	1.07
Not in CPS, preloaded SSN, graduate student	5,460	97.5	1.02

¹ New England = Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; Mid East = Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania; Great Lakes = Illinois, Indiana, Michigan, Ohio, Wisconsin; Plains = Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota; Southeast = Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia; Southwest = Arizona, New Mexico, Oklahoma, Texas; Rocky Mountains = Colorado, Idaho, Montana, Utah, Wyoming; Far West = Alaska, California, Hawaii, Nevada, Oregon, Washington; Outlying Areas = American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana, Puerto Rico, Palau, Virgin Islands.

² Enrollment categories were defined by quartiles.

NOTE: FTB = First-Time Beginner, SSN = Social Security number, CPS = Central Processing System.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

(11) Student Other Nonresponse Adjustment (WT11)

The third, and final, stage of adjustment for student nonresponse was an adjustment for other study nonresponse, given that the student was located and did not refuse. This additional type of student nonresponse adjustment was made to further compensate for the potential student nonresponse bias. The same GEM procedure was used as in the adjustment for not locating students and student refusals (WT9 and WT10). Candidate predictor variables were the same as those used in the student location and refusal nonresponse adjustments, using a representative state by school-type variable instead of the representative state indicator. The representative state variable was able to be “expanded” for this model without encountering convergence problems, i.e., the model was able to produce adjustment factors with these variables included. As in the other two nonresponse adjustments, a CHAID analysis was performed on the predictor variables to detect important interactions. The resulting segment interactions and all the main effect variables were then included in GEM. High-extreme weights were adjusted, truncated, and smoothed by GEM as in the previous two adjustments.

Table 54 presents the final predictor variables used in GEM to adjust the student weights and the average weight adjustment factor resulting from these variables. The weight adjustment factors met the following constraints:

- minimum: 0.03;
- median: 1.01; and
- maximum: 1.48.

Table 54. Weight adjustment factors for student other nonresponse adjustment: 2004

Model predictor variables	Number of respondents	Weighted response rate	Average weight adjustment factor (WT11)
Total	90,750	97.5	1.02
Type of institution			
Public 4-year or above	2,170	93.1	1.01
Private not-for-profit 4-year or above	26,400	95.3	1.04
Private for-profit 4-year or above	8,160	98.3	1.01
Public 2 year	20,260	98.6	1.01
Private not-for-profit 2-year	2,610	98.0	1.02
Private for-profit 2-year	8,960	99.1	1.01
Public less-than-2-year	9,060	98.9	1.01
Private not-for-profit less than 2-year	7,620	98.2	1.02
Private for-profit less than 2-year	5,500	99.3	1.01
Representative state institution			
All non-representative state institutions	54,950	98.4	1.02
California, public 2-year	2,860	88.3	1.11
California, public 4-year	1,750	97.6	1.02
California, private not-for-profit 4-year	1,230	97.2	1.03
Connecticut, public 2-year	420	94.0	1.05
Connecticut, public 4-year	580	99.9	1.00
Connecticut, private not-for-profit 4-year	540	99.0	1.01
Delaware, public 2-year	460	87.0	1.14
Delaware, public 4-year	570	99.7	1.00
Delaware, private not-for-profit 4-year	480	99.0	1.01

See notes at end of table.

**Table 54. Weight adjustment factors for student other nonresponse adjustment: 2004—
Continued**

Model predictor variables	Number of respondents	Weighted response rate	Average weight adjustment factor (WT11)
Georgia, public 2-year	1,740	98.9	1.02
Georgia, public 4-year	1,100	98.5	1.01
Georgia, private not-for-profit 4-year	520	100.0	1.00
Illinois, public 2-year	1,430	96.8	1.03
Illinois, public 4-year	1,020	98.9	1.01
Illinois, private not-for-profit 4-year	990	98.7	1.01
Indiana, public 2-year	350	99.9	1.00
Indiana, public 4-year	1,080	99.3	1.01
Indiana, private not-for-profit,4-year	660	99.5	1.00
Minnesota, public 2-year	790	87.6	1.12
Minnesota, public 4-year	620	94.3	1.05
Minnesota, private not-for-profit 4-year	580	99.2	1.01
Nebraska, public 2-year	380	99.5	1.03
Nebraska, public 4-year	540	99.4	1.00
Nebraska, private not-for-profit 4-year	340	100.0	1.00
New York, public 2-year	1,700	96.3	1.03
New York, public 4-year	1,550	96.0	1.03
New York, private not-for-profit, 4-year	2,220	99.2	1.01
Oregon, public 2-year	830	98.9	1.01
Oregon, public 4-year	690	98.9	1.01
Oregon, private not-for-profit 4-year	390	99.8	1.00
Tennessee, public 2-year	850	97.0	1.03
Tennessee, public 4-year	800	98.5	1.01
Tennessee, private not-for-profit 4-year	450	98.8	1.01
Texas, public 2-year	2,470	97.3	1.03
Texas, public 4-year	2,060	98.9	1.01
Texas, private not-for-profit 4-year	780	99.7	1.00
Bureau of Economic Analysis Code (Office of Business Economics [OBE]) Region ¹			
New England	5,230	97.8	1.02
Mid East	13,850	97.8	1.02
Great Lakes	13,760	98.2	1.02
Plains	7,000	97.4	1.03
Southeast	21,880	98.5	1.02
Southwest	10,130	98.8	1.01
Rocky Mountains	3,650	98.9	0.99
Far West	13,070	93.7	1.04
Outlying areas, including Alaska and Hawaii	2,180	98.0	1.02
Institution enrollment size ²			
0 < enrollment total <=1,596	23,050	98.8	1.01
1,596 < enrollment total <=6,567	23,120	98.1	1.02
6,567 < enrollment total <=15,397	21,390	96.9	1.03
Enrollment total >15,397	23,180	97.0	1.02
Education level			
Undergraduate	79,840	97.2	1.02
Graduate	9,240	98.9	1.01
First-professional	1,660	99.0	1.01

See notes at end of table.

**Table 54. Weight adjustment factors for student other nonresponse adjustment: 2004—
Continued**

Model predictor variables	Number of respondents	Weighted response rate	Average weight adjustment factor (WT11)
First-time beginner (FTB) status			
FTB	38,800	97.5	1.02
Not FTB	49,520	97.5	1.02
FTB status unknown	2,430	96.7	1.02
Pell Grant recipient			
No	61,360	96.8	1.03
Yes	29,390	99.8	1.00
Pell Grant amount ³ (in dollars)			
Pell Grant amount=0	61,520	96.8	1.03
0 < Pell Grant amount <=1,487	7,310	99.8	1.00
1,487 < Pell Grant amount <=2,500	7,340	99.8	1.00
2,500 < Pell Grant amount <=4,000	7,360	99.9	1.00
Pell Grant amount > 4,000	7,220	99.8	1.00
Stafford Loan recipient			
No	56,600	96.4	1.03
Yes	34,150	99.8	1.00
Federal aid recipient			
No	41,750	95.6	1.04
Yes	48,990	99.8	1.00
Plus amount ⁴ (in dollars)			
Plus amount=0	86,750	97.4	1.02
0 < Plus amount <=4,764	990	99.3	1.01
4,764 < Plus amount <=7,775	1,010	100.0	1.00
7,775 < Plus amount <=11,700	1,000	100.0	1.00
Plus amount >11,700	1,000	99.5	1.00
In Central Processing System (CPS)			
No	33,860	94.8	1.05
Yes	56,890	100.0	1.00
Count of phone numbers			
0	1,630	97.4	1.01
1	43,170	96.8	1.03
2	33,120	97.9	1.02
More than 2			
Count of e-mail addresses	12,830	99.0	1.01
0	29,430	94.7	1.04
1	34,950	97.7	1.02
2	18,310	99.7	1.00
More than 2	8,050	100.0	1.00
Count of mailing addresses			
0 or 1	35,450	95.7	1.04
2	35,100	98.6	1.01
More than 2	20,200	99.5	1.01
Social Security number (SSN) preloaded			
No	12,860	94.4	1.05
Yes	77,890	98.1	1.02

See notes at end of table.

**Table 54. Weight adjustment factors for student other nonresponse adjustment: 2004—
Continued**

Model predictor variables	Number of respondents	Weighted response rate	Average weight adjustment factor (WT11)
Chi-square automatic interaction detection (CHAID) segments			
In CPS	56,890	100.0	1.00
Not in CPS; undergraduate or first-professional student; public 4-year or private not-for-profit	14,250	91.6	1.09
Not in CPS; undergraduate or first-professional student; Public 2-year or less, private for-profit	13,040	96.5	1.04
Not in CPS; graduate student; private for-profit 2-year or more, public 4-year in Georgia, Indiana, Oregon, or Texas, or private not-for profit 4-year in New York	4,830	98.9	1.01
Not in CPS; graduate student; public 2-year in IL, public 4-year in California, Connecticut, Delaware, or Nebraska, or private not-for-profit 4-year in Connecticut, Delaware, Georgia, Indiana, Minnesota, Nebraska, Oregon, Tennessee, or Texas	770	99.8	1.00
Not in CPS; graduate student; public 4-year in Minnesota or New York, or private not-for-profit 4-year in California	510	93.2	1.07
Not in CPS; graduate student; public 4-year in Illinois or Tennessee, or private not-for-profit 4-year in Illinois	450	96.9	1.03

†Not applicable.

¹ New England = Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; Mid East = Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania; Great Lakes = Illinois, Indiana, Michigan, Ohio, Wisconsin; Plains; = Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota;

Southeast = Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia; Southwest = Arizona, New Mexico, Oklahoma, Texas; Rocky Mountains = Colorado, Idaho, Montana, Utah, Wyoming; Far West = Alaska, California, Hawaii, Nevada, Oregon, Washington; Outlying Areas = American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana, Puerto Rico, Palau, Virgin Islands.

² Enrollment categories were defined by quartiles.

³ Pell Grant amounts were defined by quartiles.

⁴ Plus amounts were defined by quartiles.

NOTE: FTB = First-Time Beginner, SSN = Social Security number, CPS = Central Processing System.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

(12) Second Student Multiplicity Adjustment (WT12)

An additional adjustment was made to adjust for student multiplicity. This multiplicity adjustment was calculated by dividing the number of institutions attended that were eligible for sample selection (used in the first multiplicity adjustment) by the imputed value for the number of institutions. Specifically, the second student multiplicity weight adjustment factor was defined as

$$WT12 = M / M_i,$$

where M is the multiplicity, or number of institutions attended, and M_i is the imputed value for multiplicity (see appendix H). M was used in calculating WT7 (the first adjustment for student multiplicity described above), and if the student multiplicity was missing, an average number of students was used. This second adjustment for student multiplicity (WT12) helps correct for underestimating the number of students that only attended one institution.

The weight adjustment factors met the following constraints:

- minimum: 0.23;
- median: 1.00; and
- maximum: 2.00.

(13) Student Postratification Adjustment (WT13)

To ensure population coverage, the student weights were further adjusted to control totals using GEM. Control totals were established for

- amount of Stafford Loans awarded by institution type;
- amount of Stafford Loans awarded by state (for the 12 representative states);
- amount of Pell Grants awarded by institution type;
- amount of Pell Grants awarded by institution type and state (for the 12 representative states);
- non-fall undergraduate enrollment by institution type;
- fall enrollment by institution type; and
- fall enrollment by student type.

The Stafford Loan and Pell Grant control totals were obtained from the Department of Education. The fall enrollment counts were obtained from the 2003 IPEDS Fall Enrollment Survey, and the non-fall enrollment counts were derived from the 2003 IPEDS Fall Enrollment Survey. There were no separate adjustments for extreme weights.

Table 55 presents the variables associated with the control totals and the average weight adjustment factors by these variables. The weight adjustment factors from GEM are summarized below and met the following constraints:

- minimum: 0.51;
- median: 1.16; and
- maximum: 26.83.

After this last weight adjustment was performed, the final student weight (STUDYWT) was computed as the product of the 13 weight components described in this section and in section 6.2.1.

Table 55. Weight adjustment factors for student poststratification: 2004

Model predictor variables	Control total	Average weight adjustment factor (WT13)
Amount of Stafford Loans awarded, by institution type (in dollars)		
Undergraduate students, public less than 2-year	13,026,697,545	1.18
Undergraduate students, public 2-year	7,717,008,637	1.26
Undergraduate students, public 4-year non-doctorate-granting	3,717,049,121	1.76
Undergraduate students, public 4-year doctorate-granting	2,974,409,702	1.30
Undergraduate students, private not-for-profit less-than-4-year	211,125,017	1.28
Undergraduate students, private not-for-profit 4-year non-doctorate-granting	1,888,975,153	1.95
Undergraduate students, private not-for-profit 4-year doctorate-granting	52,213,325	1.14
Undergraduate students, private for-profit less-than-2-year	34,520,490	2.78
Undergraduate students, private for-profit 2-year or more	1,245,598,300	1.87
Graduate/first-professional students, public 4-year non-doctorate-granting	1,172,917,964	2.11
Graduate/first-professional students, public 4-year doctorate-granting	5,580,695,587	1.23
Graduate/first-professional students, private not-for-profit 4-year non-doctorate-granting	2,415,321,110	1.33
Graduate/first-professional students, private not-for-profit 4-year doctorate-granting	6,571,005,610	1.26
Graduate/first-professional students, private for-profit 4-year non-doctorate-granting	1,058,971,758	2.43
Graduate/first-professional students, private for-profit, 4-year doctorate-granting	433,411,394	9.11
Amount of Stafford Loans awarded, by state (in dollars)		
Undergraduate students, California	1,561,080,368	1.23
Undergraduate students, Connecticut	218,611,394	1.06
Undergraduate students, Delaware	65,525,884	1.28
Undergraduate students, Georgia	599,920,776	1.37
Undergraduate students, Illinois	838,754,263	1.22
Undergraduate students, Indiana	612,784,996	1.10
Undergraduate students, Minnesota	582,912,983	1.29
Undergraduate students, Nebraska	197,239,618	1.16
Undergraduate students, New York	1,659,110,944	1.24
Undergraduate students, Oregon	365,006,653	1.23
Undergraduate students, Tennessee	466,198,839	1.24
Undergraduate students, Texas	1,554,631,434	1.23
Amount of Pell Grants awarded, by institution type (in dollars)		
Public less than 2-year	4,307,638,429	1.12
Public 2-year	1,976,176,806	1.16
Public 4-year non-doctorate-granting	683,716,100	1.56
Public 4-year doctorate-granting	4,130,067,523	1.22
Private not-for-profit less-than-4-year	94,928,580	1.07
Private not-for-profit 4-year non-doctorate-granting	780,702,835	1.84
Private not-for-profit 4-year doctorate-granting	40,841,511	0.82
Private for-profit less-than-2-year	39,523,616	1.33
Private for-profit 2-year or more	628,452,073	1.53
Amount of Pell Grants awarded, by institution type for certainty states (in dollars)		
California public 4-year	471,246,772	1.23
California private not-for-profit 4-year	88,579,366	0.91
California public 2-year	574,590,087	1.38
Connecticut public 4-year	19,614,100	1.13
Connecticut private not-for-profit 4-year	15,555,559	0.87
Connecticut public 2-year	20,677,198	1.00
Delaware public 4-year	7,915,051	0.87
Delaware private not-for-profit 4-year	3,709,571	0.81
Delaware public 2-year	6,714,056	4.57
Georgia public 4-year	117,048,105	1.20

See notes at end of table.

Table 55. Weight adjustment factors for student poststratification: 2004—Continued

Model predictor variables	Control total	Average weight adjustment factor (WT13)
Georgia private not-for-profit 4-year	39,698,418	1.11
Georgia public 2-year	109,081,382	1.26
Illinois public 4-year	110,436,966	1.20
Illinois private not-for-profit 4-year	92,229,899	1.05
Illinois public 2-year	168,401,116	1.16
Indiana public 4-year	95,438,161	1.14
Indiana private not-for-profit 4-year	33,005,264	1.12
Indiana public 2-year	65,763,811	1.22
Minnesota public 4-year	53,324,870	1.18
Minnesota private not-for-profit 4-year	25,408,515	1.13
Minnesota public 2-year	76,570,615	1.49
Nebraska public 4-year	26,816,294	1.12
Nebraska private not-for-profit 4-year	13,641,551	1.28
Nebraska public 2-year	22,416,262	1.47
New York public 4-year	293,940,117	1.27
New York private not-for-profit 4-year	254,594,891	1.13
New York public 2-year	247,361,323	1.15
Oregon public 4-year	52,356,782	1.12
Oregon private not-for-profit 4-year	12,010,633	0.84
Oregon public 2-year	64,850,335	1.45
Tennessee public 4-year	84,713,432	1.04
Tennessee private not-for-profit 4-year	38,955,880	1.49
Tennessee public 2-year	79,352,937	1.28
Texas public 4-year	344,812,406	1.14
Texas private not-for-profit 4-year	66,922,625	1.02
Texas public 2-year	422,479,836	1.21
Non-fall enrollment, by institution type		
Public less than 2-year	26,615	0.96
Public 2-year	2,203,978	1.95
Public 4-year non-doctorate-granting	268,489	1.62
Public 4-year doctorate-granting	407,302	1.84
Private not-for-profit less-than-4-year	14,994	1.05
Private not-for-profit 4-year non-doctorate-granting	285,524	2.93
Private not-for-profit 4-year doctorate-granting	67,835	1.20
Private for-profit less-than-2-year	241,908	2.68
Private for-profit 2-year or more	351,043	2.09
Fall enrollment, by institution type		
Public less than 2-year	65,982	0.95
Public 2-year	6,271,184	1.29
Public 4-year non-doctorate-granting	2,156,077	1.13
Public 4-year doctorate-granting	4,572,108	1.06
Private not-for-profit less-than-4-year	94,080	1.25
Private not-for-profit 4-year non-doctorate-granting	1,757,518	1.24
Private not-for-profit 4-year doctorate-granting	1,711,139	0.98
Private for-profit less-than-2-year	266,832	1.31
Private for-profit 2-year or more	764,395	1.22
Fall enrollment, by student type		
Undergraduate	15,186,075	1.18
Graduate	2,134,427	1.01
First-professional	338,813	1.51

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

6.2.4 Student Weighting Adjustment Performance

As shown earlier in table 51, the student weighting adjustments eliminated some, but not all, bias for students in public 2-year institutions. Significant bias was reduced somewhat for the variables known for most respondents and nonrespondents, which are considered to be some of the more analytically important variables and are correlated with many other variables. However, significant bias still remains because there were small numbers of nonrespondents in this type of institution applying for and receiving federal aid. This may be due to the definition of a respondent. All significant bias was eliminated for the non-aid variables, i.e. region, institution total enrollment, percent part-time fall enrollment, and in-state tuition. Appendix K contains detailed tables showing the estimated bias before and after weight adjustments for each domain for which nonresponse bias was conducted.

Table 56 summarizes the institution weight distributions and the variance inflation due to unequal weighting, i.e., UWE, by student type and type of institution. The median student weight ranges from 22 for students in public less-than-2-year institutions to 266 for students in public 4-year non-doctorate-granting institutions. The mean student weight ranges from 42 for students in private not-for-profit less-than-4-year institutions to 322 for students in public 2-year institutions. The UWE is 2.4 overall and ranges from 1.3 for first-professional students to 5.4 for graduate students.

To assess the overall predictive ability of the nonresponse model, an ROC curve was used and developed as described in section 6.1.4. The predicted probabilities of response (c) were obtained as the product of the predicted response probabilities obtained at each of the three GEM nonresponse adjustment steps. Note that for the last two GEM steps (refusal and other nonresponse adjustments), predicted probabilities were not directly available for students who had already been dropped from the model due to nonresponse in an earlier step. For these students, their predicted probability was set equal to the mean of the predicted probabilities of students still in the model.

The plot of the first probability against the second, for c from 0 to 1, resulted in the ROC curve shown in figure 16. The area under the curve equals the probability that the fitted model correctly classifies two randomly chosen individuals—one of which is a true respondent and the other a true nonrespondent—where the individual with the higher predicted probability of response is classified as the respondent. Figure 16 shows that the area under the ROC curve is 0.86, so 86 percent of the time (or close to 9 of every 10 pairings) the predicted probabilities give the correct classification. Predictive probabilities from ROC curves can also be interpreted in terms of the nonparametric Wilcoxon test statistic, where the ROC area of 0.86 equals the value of the Wilcoxon test statistic. Viewed in this way, the Wilcoxon test provides a significant rejection of the null hypothesis of no predictive ability ($p < 0.05$). This level of discrimination implies that the variables used in the model are highly informative but not definitive predictors of a sample student's overall response propensity.

Table 56. Student weight distribution and unequal weighting effects (UWEs): 2004

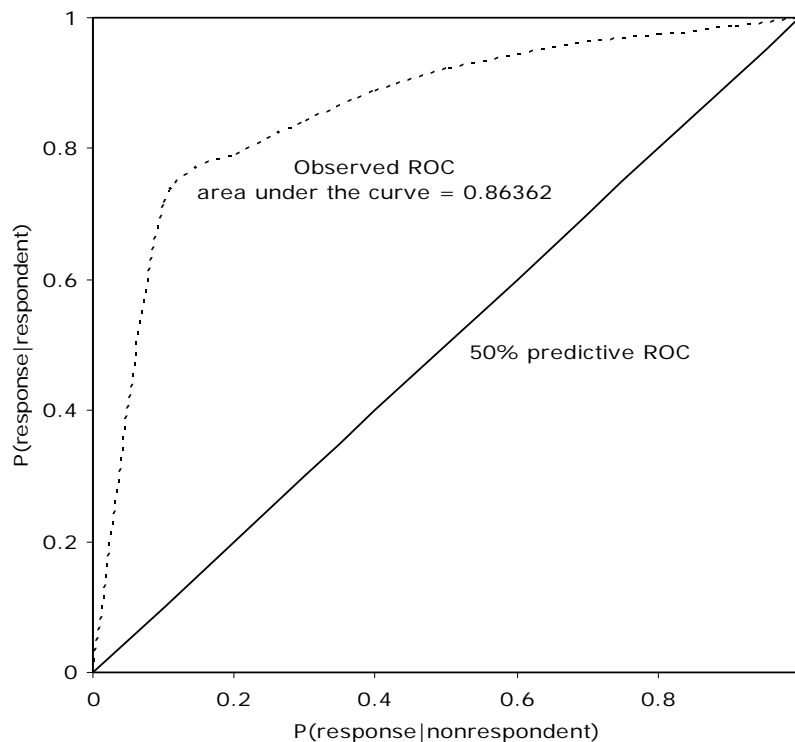
Analysis domain	Minimum	First quartile	Median	Third quartile	Maximum	Mean	UWE ¹
Total	0.2	75.6	166.4	332.6	23468.7	241.1	2.37
Student type							
Undergraduate	0.2	79.2	167.0	331.7	4137.6	238.6	1.97
Graduate	0.6	64.6	118.4	349.1	23468.7	258.0	5.38
First-professional	6.7	193.8	243.3	319.4	2451.9	270.4	1.32
Type of institution							
Public less than 2-year	0.7	11.5	21.7	52.8	745.9	48.1	2.75
Public 2-year	0.9	108.3	201.1	457.8	4137.6	322.0	1.88
Public 4-year non-doctorate-granting	0.8	148.8	266.0	396.3	4220.1	303.5	1.65
Public 4-year doctorate-granting	0.6	116.0	221.9	348.1	2593.3	248.9	1.44
Private not-for-profit less-than-4-year	1.4	16.7	26.1	38.4	1113.2	42.4	2.62
Private not-for-profit 4-year non-doctorate-granting	0.6	85.7	164.1	325.5	23468.7	244.0	5.17
Private not-for-profit 4-year doctorate-granting	0.2	76.8	146.5	274.7	12026.5	195.6	2.10
Private for-profit less-than-2-year	2.0	33.9	52.7	86.7	1362.8	71.2	1.91
Private for-profit 2-year or more	2.4	59.1	106.7	207.4	10216.3	192.0	3.67

¹ UWE calculated as $n S(Wt)^2 / (S Wt)^2$.

NOTE: UWE = Unequal Weighting Effects.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Figure 16. Receiver Operating Characteristic (ROC) curve for overall student response propensity: 2004



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

6.3 Item Nonresponse Bias Analysis

When item response rates were less than 85 percent, a nonresponse bias analysis was conducted. Item response rates (RRI) are calculated as the ratio of the number of respondents for whom an in-scope response was obtained (I^x for item x) to the number of respondents who are asked to answer that item. The number asked to answer an item is the number of unit level respondents (I) minus the number of respondents with a valid skip item for item x (V^x). When an abbreviated questionnaire is used to convert refusals, the eliminated questions are treated as item nonresponse (U.S. Department of Education 2003).

$$RRI^x = I^x / (I - V^x)$$

A student is defined to be an item respondent for an analytic variable if that student has data for that variable from any source, including logical imputation. Item response rates were computed using non-imputed data. Valid skips were later logically imputed to the follow-up items after the gate question was imputed. As shown in table 57, the weighted item response rates for all study respondents ranged from about 10 percent to 100 percent. The item response rates by type of institution ranged from about 2 percent to 100 percent.

While values for many variables were derived from multiple sources, including the student interview, student record data, and extant data sources, some variables were obtained from only one source. Given that the weighted response rate to the student interview was about 70 percent, items obtained solely from that source have 30 percent nonresponse even when all interview respondents provided an answer. This issue is compounded for nested items following gate questions, especially those applicable to a small subset of the sample members since follow-up items to unanswered gate items are also treated as nonresponse.

To illustrate an example, the student interview included a set of items about distance education, and was the only source for these data. Students were first asked if they had taken any distance education courses. Those that had were then asked about the types of courses taken. If the first item in the set was not answered, the following questions about the types of distance education courses were treated as nonresponse. More specifically, the gate question (DISTEDUC) had a weighted response rate of about 66 percent, and was therefore missing for about a third of study respondents. Of those who responded to the gate, only about 16 percent reported that they had taken distance education courses. One of the follow-up items, DISTNUM, was not applicable (skipped) for the majority that reported not having taken any distance education courses. These not applicable cases were excluded from the response rate calculation, so the denominator used in computing the response rate for DISTNUM included those cases with a value of 'yes' for the gate item (DISTEDUC), as well as those who were nonrespondents to the gate item. Additionally, some students who responded to the gate did not provide a response to the follow-up item, thus DISTNUM has item nonresponse for some cases where DISTEDUC is 'yes'. Therefore, the low response rate for DISTNUM is driven both by the large amount of missing data for DISTEDUC and the small number of cases where DISTNUM was applicable.

Table 57. Summary of item response rates for all students, by type of institution: 2004

Variable	Variable label	Weighted response rates									
		All students	Public less-than-2-year	Public 2-year	Public 4-year non-doctorate	Public 4-year doctorate	Private not-for-profit less-than-4-year	Private not-for-profit 4-year non-doctorate	Private not-for-profit 4-year doctorate	Private for-profit less-than-2-year	Private for-profit 2-year or more
AGE	Age as of 12/31/03	99.9	100.0	99.9	99.9	100.0	100.0	100.0	100.0	100.0	100.0
AGEGROUP	Age groups as of 12/31/03	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
AIDAPP	Applied for aid	99.4	98.8	98.9	99.7	99.8	99.5	99.9	99.7	99.8	99.9
ATTENDA	Reason for attending NPSAS: complete associate's degree	64.3	58.2	67.1	53.6	47.3	53.9	45.4	35.1	45.6	59.9
ATTENDB	Reason for attending NPSAS: complete certificate	64.3	58.2	67.1	53.6	47.3	53.9	45.4	35.1	45.6	59.9
ATTENDC	Reason for attending NPSAS: learn job skills	64.3	58.2	67.1	53.6	47.3	53.9	45.4	35.1	45.6	59.9
ATTENDD	Reason for attending NPSAS: personal interest or enrichment	64.3	58.2	67.1	53.6	47.3	53.9	45.4	35.1	45.6	59.9
ATTENDE	Reason for attending NPSAS: transfer to 2-year school	64.3	58.2	67.1	53.6	47.3	53.9	45.4	35.1	45.6	59.9
ATTENDF	Reason for attending NPSAS: transfer to 4-year school	64.3	58.2	67.1	53.6	47.3	53.9	45.4	35.1	45.6	59.9
ATTENDG	Reason for attending NPSAS: transfer to another school	64.3	58.2	67.1	53.6	47.3	53.9	45.4	35.1	45.6	59.9
BAYEAR	Year received bachelor's degree	78.4	†	†	84.2	80.4	†	69.0	78.5	†	74.4
CC2000A	Carnegie code (2000) with control	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
CITIZEN2	Citizenship (max non-citizen)	97.5	83.4	95.9	98.9	98.5	99.3	98.4	98.8	97.0	99.2
CLASSA	Type of class: business	55.6	62.3	60.3	55.4	47.3	39.2	48.7	35.1	20.2	24.1
CLASSB	Type of class: health	55.6	62.3	60.3	55.4	47.3	39.2	48.7	35.1	20.2	24.1
CLASSC	Type of class: education	55.6	62.3	60.3	55.4	47.3	39.2	48.7	35.1	20.2	24.1
CLASSD	Type of class: engineering and engineering technology	55.6	62.3	60.3	55.4	47.3	39.2	48.7	35.1	20.2	24.1
CLASSE	Type of class: computer and information sciences	55.6	62.3	60.3	55.4	47.3	39.2	48.7	35.1	20.2	24.1
CLASSF	Type of class: social sciences	55.6	62.3	60.3	55.4	47.3	39.2	48.7	35.1	20.2	24.1
CLASSG	Type of class: natural sciences and mathematics	55.6	62.3	60.3	55.4	47.3	39.2	48.7	35.1	20.2	24.1
CLASSH	Type of class: arts and humanities	55.6	62.3	60.3	55.4	47.3	39.2	48.7	35.1	20.2	24.1
CLASSI	Type of class: communications	55.6	62.3	60.3	55.4	47.3	39.2	48.7	35.1	20.2	24.1
CLASSJ	Type of class: vocational program	55.6	62.3	60.3	55.4	47.3	39.2	48.7	35.1	20.2	24.1
CLASSK	Type of class: university transfer	55.6	62.3	60.3	55.4	47.3	39.2	48.7	35.1	20.2	24.1
CLASSL	Type of class: general education	55.6	62.3	60.3	55.4	47.3	39.2	48.7	35.1	20.2	24.1
CLASSX	Type of class: other	55.6	62.3	60.3	55.4	47.3	39.2	48.7	35.1	20.2	24.1
COMHOUR	Number of hours volunteered per month	38.5	19.5	32.8	40.4	46.4	20.8	43.2	49.5	9.2	28.2
COMONE	One time event	43.3	21.5	36.7	45.3	52.0	23.7	48.3	54.5	10.8	31.8
COMPTO87	Comparable to 1987 NPSAS	99.0	99.7	98.6	99.6	99.4	98.6	99.7	99.8	97.3	97.2
COMREQ	Volunteer work required for graduation/class	42.3	21.6	37.0	46.0	50.8	24.7	50.7	55.6	11.5	28.7
COMSERV	Community service/volunteer in last year	65.5	53.8	64.4	67.2	69.7	49.1	64.5	69.1	41.9	61.6

See notes at end of table.

Table 57. Summary of item response rates for all students, by type of institution: 2004—Continued

Variable	Variable label	Weighted response rates ¹									
		All students	Public less-than-2-year	Public 2-year	Public 4-year non-doctorate	Public 4-year doctorate	Private not-for-profit less-than-4-year	Private not-for-profit 4-year non-doctorate	Private not-for-profit 4-year doctorate	Private for-profit less-than-2-year	Private for-profit 2-year or more
COMSERVA	Volunteer: fundraising (political and non-political)	44.4	22.8	37.9	46.8	53.0	24.9	49.5	55.7	12.1	32.6
COMSERVB	Volunteer: homeless shelter/soup kitchen	44.4	22.8	37.9	46.8	53.0	24.9	49.5	55.7	12.1	32.6
COMSERVC	Volunteer: health services	44.4	22.8	37.9	46.8	53.0	24.9	49.5	55.7	12.1	32.6
COMSERVD	Volunteer: neighborhood improvement	44.4	22.8	37.9	46.8	53.0	24.9	49.5	55.7	12.1	32.6
COMSERVE	Volunteer: service to the church	44.4	22.8	37.9	46.8	53.0	24.9	49.5	55.7	12.1	32.6
COMSERVF	Volunteer: tutoring/education-related	44.4	22.8	37.9	46.8	53.0	24.9	49.5	55.7	12.1	32.6
COMSERVG	Volunteer: other work with kids	44.4	22.8	37.9	46.8	53.0	24.9	49.5	55.7	12.1	32.6
COMSERVX	Volunteer: other	44.4	22.8	37.9	46.8	53.0	24.9	49.5	55.7	12.1	32.6
CONSIDRA	Consider campus safety	63.3	52.3	62.4	65.8	67.5	47.9	64.2	66.5	40.4	60.0
CONSIDRB	Consider graduation rate	63.3	52.3	62.4	65.8	67.5	47.9	64.2	66.5	40.4	60.0
CONSIDRC	Consider job rate	39.4	51.2	†	†	†	24.4	†	†	40.2	†
CRBALDUE	Balance due on all credit cards	29.0	10.2	27.5	32.0	33.5	13.8	27.9	25.1	12.5	22.6
DEGEARN	Earned prior degree/certificates	69.8	61.5	68.9	71.4	73.0	55.9	70.0	73.1	47.1	65.3
DEGEARNA	Already earned bachelor's degree	41.7	32.2	35.8	43.3	47.6	22.1	42.5	55.5	15.7	41.1
DEGEARNB	Already earned associate's degree	41.7	32.2	35.8	43.3	47.6	22.1	42.5	55.5	15.7	41.1
DEGEARNC	Already earned undergraduate certificate/diploma	41.7	32.2	35.8	43.3	47.6	22.1	42.5	55.5	15.7	41.1
DEGEARND	Already earned post-BA certificate	41.7	32.2	35.8	43.3	47.6	22.1	42.5	55.5	15.7	41.1
DEGEARNE	Already earned master's degree	41.7	32.2	35.8	43.3	47.6	22.1	42.5	55.5	15.7	41.1
DEGEARNF	Already earned post-MA certificate	41.7	32.2	35.8	43.3	47.6	22.1	42.5	55.5	15.7	41.1
DEGEARNG	Already earned first professional degree	41.7	32.2	35.8	43.3	47.6	22.1	42.5	55.5	15.7	41.1
DEGEARNH	Already earned doctoral degree	41.7	32.2	35.8	43.3	47.6	22.1	42.5	55.5	15.7	41.1
DEGFIRST	Degree program	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
DELIVE	Distance education: live	22.4	7.2	24.8	23.6	21.0	7.1	22.8	18.0	2.3	25.9
DEPANY	Dependents - has dependents	86.0	72.5	82.2	86.7	87.1	91.4	89.8	88.3	89.1	95.6
DEPCARE	Have dependent children in daycare	64.2	55.4	66.0	65.1	69.9	48.1	61.2	64.7	43.0	60.6
DEPCHILD	Dependents - has dependent children	83.8	69.6	79.7	85.3	86.5	84.6	87.7	87.5	77.3	88.8
DEPCLAIM	Claimed as a dependent	68.4	50.7	67.2	69.9	70.4	51.8	70.2	71.2	43.9	57.9
DEPCOST	Monthly daycare costs	38.2	27.6	38.8	40.6	47.1	22.3	35.1	39.9	17.6	37.3
DEPEND	Dependency status	94.1	93.4	92.6	94.2	93.2	96.2	97.0	96.1	96.7	99.4
DEPINC	Dependent parent income derived	83.9	63.7	77.1	87.1	86.1	88.7	91.7	88.2	81.6	94.7
DEPNUMCH	Dependents - number of dependent children	81.1	65.6	77.3	83.6	85.2	77.1	83.5	86.1	69.6	80.1
DEPOLD	Dependent children - age of oldest	80.4	63.0	76.3	83.1	84.9	74.9	82.5	85.7	68.2	79.2
DEPOTHER	Dependents - has dependent other than children	83.8	69.6	79.7	85.2	86.5	84.6	87.7	87.5	77.3	88.8
DEPYNG	Dependent children - age of youngest	80.4	63.0	76.3	83.1	84.9	74.9	82.5	85.7	68.2	79.2
DERECR	Distance education: pre-recorded	22.4	7.2	24.8	23.6	21.0	7.1	22.8	18.0	2.3	25.9
DEWWW	Distance education: Internet	22.4	7.2	24.8	23.6	21.0	7.1	22.8	18.0	2.3	25.9

See notes at end of table.

Table 57. Summary of item response rates for all students, by type of institution: 2004—Continued

Variable	Variable label	Weighted response rates ¹									
		All students	Public less-than-2-year	Public 2-year	Public 4-year non-doctorate	Public 4-year doctorate	Private not-for-profit less-than-4-year	Private not-for-profit 4-year non-doctorate	Private not-for-profit 4-year doctorate	Private for-profit less-than-2-year	Private for-profit 2-year or more
DISABLE	Disability Flag	65.9	55.5	64.7	67.5	69.7	51.9	65.5	69.7	43.7	62.0
DISMOBIL	Condition that limits physical activities	66.0	55.7	64.8	67.6	69.8	52.0	65.6	69.8	43.8	62.2
DISOTHER	Other condition lasting six months or more	66.0	55.5	64.8	67.7	69.9	52.0	65.6	69.8	43.8	62.1
DISOTHRA	Difficulty: dressing, bathing, etc	10.4	8.2	11.2	10.7	10.9	6.7	9.4	9.3	4.5	9.2
DISOTHRB	Difficulty: getting to school to attend class	10.3	8.1	11.2	10.7	10.9	6.7	9.4	9.2	4.4	9.1
DISOTHRC	Difficulty: learning, remembering	10.4	8.2	11.2	10.7	10.9	6.7	9.4	9.3	4.5	9.2
DISOTHRD	Difficulty: working at a job	10.4	8.2	11.2	10.7	10.9	6.7	9.4	9.3	4.5	9.2
DISSENSR	Have a long-lasting sensory condition	66.1	55.7	64.8	67.7	69.9	52.0	65.6	69.9	43.8	62.3
DISTALL	Distance education: entire program	23.2	7.5	25.5	24.3	22.2	7.5	23.6	18.9	2.5	26.4
DISTEDUC	Distance education: took courses	65.8	54.9	64.8	67.6	70.0	49.5	64.5	69.2	42.3	62.0
DISTLOC	Distance education: location of course(s)	23.1	7.9	25.4	24.3	22.2	7.5	23.4	18.8	2.4	26.4
DISTNUM	Distance education: number of courses	22.3	7.2	24.7	23.4	21.2	7.2	22.4	18.3	2.3	25.7
DISTSATF	Distance education: satisfaction	22.9	7.9	25.1	24.2	22.1	7.4	23.4	18.7	2.4	26.2
DISTYPES	Main limiting condition	16.1	16.3	17.7	16.5	15.3	11.6	15.6	14.2	8.5	16.4
DSTUINC	Dependent student earnings derived	56.6	32.2	42.6	62.5	58.4	77.0	77.3	65.4	72.3	88.4
EMPLWAIV	Tuition waivers for faculty/staff	94.4	96.9	94.1	96.6	94.9	73.4	95.0	96.5	88.0	89.5
EMPLYAM1	Employer tuition aid (excl staff)	98.2	99.2	98.1	99.5	98.5	86.9	98.6	99.2	93.9	95.9
EMPLYAM2	Employer (parents) tuition aid	69.1	59.8	68.4	70.5	72.2	55.2	69.1	71.9	47.7	64.3
ENR01	Monthly enrollment status 2003/07	99.0	99.7	98.6	99.6	99.4	98.6	99.7	99.8	97.3	97.2
ENR02	Monthly enrollment status 2003/08	99.0	99.7	98.6	99.6	99.4	98.6	99.7	99.8	97.3	97.2
ENR03	Monthly enrollment status 2003/09	99.0	99.7	98.6	99.6	99.4	98.6	99.7	99.8	97.3	97.2
ENR04	Monthly enrollment status 2003/10	99.0	99.7	98.6	99.6	99.4	98.6	99.7	99.8	97.3	97.2
ENR05	Monthly enrollment status 2003/11	99.0	99.7	98.6	99.6	99.4	98.6	99.7	99.8	97.3	97.2
ENR06	Monthly enrollment status 2003/12	99.0	99.7	98.6	99.6	99.4	98.6	99.7	99.8	97.3	97.2
ENR07	Monthly enrollment status 2004/01	99.0	99.7	98.6	99.6	99.4	98.6	99.7	99.8	97.3	97.2
ENR08	Monthly enrollment status 2004/02	99.0	99.7	98.6	99.6	99.4	98.6	99.7	99.8	97.3	97.2
ENR09	Monthly enrollment status 2004/03	99.0	99.7	98.6	99.6	99.4	98.6	99.7	99.8	97.3	97.2
ENR10	Monthly enrollment status 2004/04	99.0	99.7	98.6	99.6	99.4	98.6	99.7	99.8	97.3	97.2
ENR11	Monthly enrollment status 2004/05	99.0	99.7	98.6	99.6	99.4	98.6	99.7	99.8	97.3	97.2
ENR12	Monthly enrollment status 2004/06	99.0	99.7	98.6	99.6	99.4	98.6	99.7	99.8	97.3	97.2
EVER2PUB	Ever attended community college	67.6	53.2	100.0	68.2	70.6	49.8	65.5	70.9	43.0	62.9
EVER4YR	Ever attended 4-year school	64.9	58.0	66.6	†	†	53.6	100.0	100.0	45.0	59.8
FEDAPP	Applied for federal aid	96.2	96.8	94.0	95.3	97.8	96.2	98.8	97.3	99.0	99.0
FORESCH	Ever attended elementary or secondary school outside of the U.S.	65.2	53.6	64.5	67.2	68.2	54.0	67.5	69.3	43.8	60.8
FPOFFER	Offered first-professional degree	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

See notes at end of table.

Table 57. Summary of item response rates for all students, by type of institution: 2004—Continued

Variable	Variable label	Weighted response rates ¹									
		All students	Public less-than-2-year	Public 2-year	Public 4-year non-doctorate	Public 4-year doctorate	Private not-for-profit less-than-4-year	Private not-for-profit 4-year non-doctorate	Private not-for-profit 4-year doctorate	Private for-profit less-than-2-year	Private for-profit 2-year or more
GAINSUR	Health insurance with assistantship	77.7	†	†	57.2	80.3	†	47.2	78.9	†	†
GENDER	Gender	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
GPA	Grad point average	89.6	57.9	86.1	95.4	94.7	75.8	92.3	94.2	80.0	86.8
GRADLVL	Graduate class level	95.2	†	100.0	93.3	95.8	†	90.2	96.7	†	100.0
GRADPYR	Year began graduate degree	70.5	†	†	69.7	75.8	†	55.0	70.9	†	67.7
GRADTAA	TA duties: student email	76.2	†	†	59.0	78.1	†	43.3	81.9	†	†
GRADTAB	TA duties: grading	76.2	†	†	59.0	78.1	†	43.3	81.9	†	†
GRADTAC	TA duties: teaching	76.2	†	†	59.0	78.1	†	43.3	81.9	†	†
GRADTAD	TA duties: office hours	76.2	†	†	59.0	78.1	†	43.3	81.9	†	†
GRADTAE	TA duties: discussion	76.2	†	†	59.0	78.1	†	43.3	81.9	†	†
GRADTAF	TA duties: lab	76.2	†	†	59.0	78.1	†	43.3	81.9	†	†
GRASTUIT	Tuition paid by assistantship	73.8	†	†	53.3	76.4	†	46.6	77.7	†	†
GRENRS	Graduate enrollment status (all years)	73.2	†	†	71.5	78.4	†	61.3	72.6	†	70.8
GRFELAMT	Graduate fellowships/grants/traineeships	99.9	100.0	100.0	99.9	99.8	100.0	99.9	99.5	100.0	100.0
GRGRDAMT	Graduate other assistantship amount	99.9	100.0	100.0	99.9	99.8	100.0	99.9	99.5	100.0	100.0
GRINFEL	Institutional graduate fellowships	99.9	100.0	100.0	99.9	99.8	100.0	99.9	99.5	100.0	100.0
GRRESAMT	Research assistantship amount	99.9	100.0	100.0	99.9	99.8	100.0	99.9	99.5	100.0	100.0
GRTEAAMT	Teaching assistantship amount	99.9	100.0	100.0	99.9	99.8	100.0	99.9	99.5	100.0	100.0
GRTRNAMT	Federal traineeships	99.9	100.0	100.0	99.9	99.8	100.0	99.9	99.5	100.0	100.0
HBCU	Historical Black college indicator	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
HIGLVEX	Highest level of education ever expected	65.7	54.6	64.1	68.2	70.1	49.2	65.5	69.8	41.0	61.6
HISPANIC	Race-ethnicity: Hispanic or Latino origin	92.7	92.6	92.0	92.2	93.7	85.4	93.7	94.6	86.7	92.3
HISPTYPE	Race-ethnicity: Type of Hispanic origin	89.4	84.8	88.4	89.9	92.0	77.0	90.4	91.6	73.7	88.0
HLOFFER	Highest level of offering at NPSAS institution	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
HOMEDIST	Distance from NPSAS school to home	63.0	53.1	62.4	64.6	67.6	45.9	60.7	66.1	38.0	56.3
HOMEPAR	Parents own home	66.1	46.6	63.9	68.1	68.9	50.1	68.2	69.8	41.0	55.7
HOMESTUD	Own home	56.3	50.8	56.0	58.7	60.5	40.7	55.1	59.2	29.8	53.5
HSDEG	High school degree type	90.6	89.3	91.9	89.8	90.5	83.9	89.1	87.9	91.2	86.6
HSGRADYY	High school graduation year	87.4	80.3	89.1	88.1	88.2	81.0	85.6	83.7	80.7	80.3
HSTYPE	Type of high school attended	66.9	54.4	66.2	68.5	70.1	53.2	67.8	69.5	44.6	63.1
INATHAMT	Athletic scholarship	94.9	96.9	94.1	97.0	95.8	73.4	95.9	98.5	88.0	89.5
INDEPINC	Independent student & spouse income derived	81.5	69.0	77.2	81.0	82.8	90.1	84.3	83.9	87.2	94.5
INLNAMT	Institutional loan	94.4	96.9	94.1	96.6	95.1	73.4	95.0	96.5	88.0	89.5
INNSLDS	Positive value in NSLDS 2003-2004 data	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
INPELL	Positive value in Pell data	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
INSMERIT	Institutional merit grants	94.9	96.9	94.1	97.0	95.9	73.4	95.9	98.5	88.0	89.5

See notes at end of table.

Table 57. Summary of item response rates for all students, by type of institution: 2004—Continued

Variable	Variable label	Weighted response rates ¹									
		All students	Public less-than-2-year	Public 2-year	Public 4-year non-doctorate	Public 4-year doctorate	Private not-for-profit less-than-4-year	Private not-for-profit 4-year non-doctorate	Private not-for-profit 4-year doctorate	Private for-profit less-than-2-year	Private for-profit 2-year or more
INSTNEED	Institutional need-based grant	94.9	96.9	94.1	97.0	95.9	73.4	95.9	98.5	88.0	89.5
INSTWRK	Institutional work-study	98.3	99.3	98.1	99.5	98.6	87.0	98.6	99.2	93.8	95.9
INSWAIV	Institutional tuition and fee waivers	94.4	96.9	94.1	96.6	95.1	73.4	95.0	96.5	88.0	89.5
JOBFFOR	Afford school without working	48.1	29.5	46.5	53.9	55.5	33.6	43.6	48.2	20.9	34.7
JOBCLASS	Job related to coursework	56.9	72.2	61.9	53.2	45.5	31.7	49.0	39.9	46.9	45.3
JOBEARN	Total amount earned during the school year	54.1	42.9	54.1	56.6	56.8	38.5	53.7	53.4	29.6	52.4
JOBEFFA	Job helped with career preparation	48.2	29.5	46.7	54.2	55.6	33.6	43.7	48.3	21.1	34.8
JOBEFFB	Job helped with coursework	48.2	29.5	46.7	54.2	55.6	33.6	43.7	48.3	21.1	34.8
JOBEFFC	Job restricted class choice	48.2	29.5	46.7	54.2	55.6	33.6	43.7	48.3	21.1	34.8
JOBEFFD	Job limited class schedule	48.2	29.5	46.7	54.2	55.6	33.6	43.7	48.3	21.1	34.8
JOBEFFE	Job limited facility access	48.2	29.5	46.7	54.2	55.6	33.6	43.7	48.3	21.1	34.8
JOBEFFF	Job limited number of classes	48.2	29.5	46.7	54.2	55.6	33.6	43.7	48.3	21.1	34.8
JOBEFFGR	Effect of job on grades	66.3	50.5	64.4	69.3	70.3	54.5	65.9	68.4	40.0	59.9
JOBEMPL	Type of employer	58.5	44.9	58.9	60.8	61.3	40.8	57.5	58.1	30.3	56.7
JOBEXPT	Parents expect you to have a job	51.5	31.2	49.4	56.8	58.0	33.7	50.7	52.5	21.2	37.6
JOBHOUR	Hours worked weekly during the school year	59.9	48.4	61.0	61.8	61.5	43.7	59.3	58.1	32.6	58.6
JOBMAIN	Main reason for working	48.2	29.3	46.8	54.2	55.5	33.6	43.7	48.3	21.1	34.6
JOBMAJOR	Job related to major	53.4	26.4	45.7	60.0	61.7	37.2	57.2	58.8	20.6	55.8
JOBNUM	Number of jobs during NPSAS year	68.7	60.7	68.0	70.1	71.9	54.8	68.5	71.5	46.3	64.3
JOBONOFF	Job on or off campus	59.8	46.5	60.6	62.1	62.3	42.7	58.5	58.9	31.7	58.4
JOBPRIOR	Had job prior to enrollment at NPSAS	59.8	46.6	60.5	62.0	62.2	42.6	58.5	58.7	31.6	58.4
JOBROLE	Working student/employee taking classes	61.0	49.5	61.8	63.4	62.8	44.2	61.0	59.6	33.2	59.4
JOBSAVE	Amount saved from summer earnings	55.2	39.4	51.9	59.8	60.7	35.7	58.7	60.1	26.4	45.4
JOBSCHA	Combine school and work: class outside work	36.4	32.2	40.2	32.2	28.7	19.3	39.9	33.3	16.5	46.7
JOBSCHB	Combine school and work: distance ed	36.4	32.2	40.2	32.2	28.7	19.3	39.9	33.3	16.5	46.7
JOBSCHC	Combine school and work: modify schedule	36.4	32.2	40.2	32.2	28.7	19.3	39.9	33.3	16.5	46.7
JOBSUMMR	Work during summer 2003	64.4	51.7	62.6	67.0	68.6	47.9	65.8	68.2	40.5	58.3
JOBWEEK	Weeks worked while enrolled	59.7	46.9	60.5	62.0	62.1	42.8	58.5	58.8	32.2	58.2
LOCALRES	Housing	82.7	66.1	75.0	84.3	86.6	75.0	90.0	92.2	81.5	92.5
MAJORS	Field of study/major (detailed)	90.6	84.5	82.9	95.0	95.4	82.1	96.1	97.3	82.1	94.3
MILTYPE	Military service type	84.7	68.9	80.6	85.6	86.1	90.6	88.2	87.3	86.9	95.4
NPFIRST	NPSAS was first school attended after high school	67.8	58.8	67.2	70.2	71.1	54.1	69.6	70.9	45.4	63.9
NUMCRED	Number of credit cards in own name	66.3	46.6	64.1	68.4	69.0	50.3	68.2	69.9	41.3	55.6
ORPHAN	Orphan or ward of court	93.2	90.7	91.6	93.1	92.5	95.2	96.2	95.2	94.3	98.9
OTHFDRGT	Other federal grants	94.4	96.9	94.1	96.6	95.1	73.4	95.0	96.5	88.0	89.5
OWNINVST	Own investments, business or farm over \$10,000	56.5	50.4	56.1	58.3	60.4	40.8	55.2	59.1	32.5	56.1

See notes at end of table.

Table 57. Summary of item response rates for all students, by type of institution: 2004—Continued

Variable	Variable label	Weighted response rates ¹									
		All students	Public less-than-2-year	Public 2-year	Public 4-year non-doctorate	Public 4-year doctorate	Private not-for-profit less-than-4-year	Private not-for-profit 4-year non-doctorate	Private not-for-profit 4-year doctorate	Private for-profit less-than-2-year	Private for-profit 2-year or more
PARALLOW	Monthly allowance amount from parents	75.9	70.4	75.3	76.2	76.6	63.9	75.7	78.5	63.2	79.9
PARBORN	Student's parents were born in the United States	65.3	54.4	64.1	67.0	69.4	49.1	64.2	68.8	41.9	61.6
PARCOLL	Parents taking college courses in 2003-2004	65.8	46.3	63.4	68.0	68.7	49.5	68.1	69.7	40.6	55.6
PARESTA	Parents own other real estate	65.1	45.4	62.9	67.3	67.7	49.5	67.0	68.7	40.3	55.0
PARHELPA	Help from parents: housing	68.4	52.0	67.2	69.9	70.5	51.7	70.1	71.4	44.1	57.9
PARHELPC	Help from parents: other educational expenses	68.4	52.0	67.2	69.9	70.5	51.7	70.1	71.4	44.1	57.9
PARHELPC	Help from parents: other living expenses	68.4	52.0	67.2	69.9	70.5	51.7	70.1	71.4	44.1	57.9
PARHELPCD	Help from parents: tuition and fees	68.4	52.0	67.2	69.9	70.5	51.7	70.1	71.4	44.1	57.9
PARLIVE	Lived with parents while not enrolled	69.0	30.4	62.3	70.8	70.9	46.4	74.2	73.2	40.8	56.0
PARPAYCR	Parents help pay credit bills	51.9	22.2	46.7	55.5	57.8	31.5	52.8	57.7	22.6	38.1
PAYOFBAL	Payoff or carry credit balance	51.9	22.2	46.7	55.4	57.8	31.6	52.7	57.8	22.5	38.0
PAYTUIT	Use credit to pay for tuition	52.0	22.4	46.9	55.6	57.8	31.6	53.0	58.0	22.6	38.2
PDADED	Father's highest education level	84.1	70.2	80.3	85.6	86.1	85.3	88.0	86.6	78.8	92.5
PELLAMT	Pell grant amount	99.7	99.8	99.5	99.6	100.0	99.6	99.9	99.9	100.0	99.8
PERKAMT	Perkins loan amount	98.0	98.4	97.0	97.7	98.8	97.6	99.2	98.6	99.7	99.3
PFAMNUM	Dependent student's parent's family size	93.1	91.9	91.1	93.5	92.5	95.6	96.3	95.4	94.8	98.9
PINCOL	Parent's children in college	92.9	91.8	91.0	93.3	92.3	95.6	96.1	95.3	94.7	98.9
PLUSAMT	PLUS loan amount	99.5	99.8	99.2	99.1	100.0	98.5	99.8	99.7	100.0	99.4
PMARITAL	Parent's marital status	93.3	92.1	91.4	93.7	92.6	95.8	96.5	95.5	94.9	99.1
PMOMED	Mothers highest education level	84.2	70.4	80.4	85.4	86.2	85.1	88.2	86.7	78.8	92.3
PRIMLANG	English as primary language	65.7	54.7	64.6	67.4	69.9	49.2	64.4	69.2	41.9	61.6
PRIVLOAN	Private sources (alternative) loans	98.2	99.0	98.1	99.5	98.5	86.7	98.6	99.2	93.6	95.7
PSECTYR	Year first enrolled in postsecondary education	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
RAASIAN	Race--Asian	92.3	94.6	91.9	93.3	94.1	83.0	93.6	93.7	82.2	85.8
RABLACK	Race--Black or African-American	92.3	94.6	91.9	93.3	94.1	83.0	93.6	93.7	82.2	85.8
RAINDIAN	Race--American Indian or Alaska Native	92.3	94.6	91.9	93.3	94.1	83.0	93.6	93.7	82.2	85.8
RAINDTRB	State/federally recognized tribe	63.3	54.1	62.3	62.0	66.4	38.9	62.2	76.8	57.1	61.7
RAISLAND	Race--Native Hawaiian/other Pacific Islander	92.3	94.6	91.9	93.3	94.1	83.0	93.6	93.7	82.2	85.8
RAOTHER	Race--Other	92.3	94.6	91.9	93.3	94.1	83.0	93.6	93.7	82.2	85.8
RAWHITE	Race--White	92.3	94.6	91.9	93.3	94.1	83.0	93.6	93.7	82.2	85.8
REMEDIA	Took remedial course: English	21.4	7.4	24.2	24.4	20.8	12.6	20.1	18.7	2.2	12.7
REMEDIB	Took remedial course: math	21.4	7.4	24.2	24.4	20.8	12.6	20.1	18.7	2.2	12.7
REMEDIC	Took remedial course: reading	21.4	7.4	24.2	24.4	20.8	12.6	20.1	18.7	2.2	12.7
REMEDID	Took remedial course: study skills	21.4	7.4	24.2	24.4	20.8	12.6	20.1	18.7	2.2	12.7
REMEDIE	Took remedial course: writing	21.4	7.4	24.2	24.4	20.8	12.6	20.1	18.7	2.2	12.7
REMETOOK	Took remedial courses this school year	35.3	18.9	39.1	37.7	33.7	21.5	32.7	29.3	8.9	25.8

See notes at end of table.

Table 57. Summary of item response rates for all students, by type of institution: 2004—Continued

Variable	Variable label	Weighted response rates ¹									
		All students	Public less-than-2-year	Public 2-year	Public 4-year non-doctorate	Public 4-year doctorate	Private not-for-profit less-than-4-year	Private not-for-profit 4-year non-doctorate	Private not-for-profit 4-year doctorate	Private for-profit less-than-2-year	Private for-profit 2-year or more
REMEVER	Ever taken remedial courses	66.0	57.1	65.4	68.4	69.3	52.7	67.5	68.8	44.1	62.3
SECTOR1	Institution sector	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
SEOGAMT	FSEOG amount	94.9	96.9	94.1	97.0	95.8	73.4	95.9	98.5	88.0	89.5
SERNEEDA	Adaptive equipment and technology	15.8	16.1	17.3	16.1	15.2	10.8	15.3	13.5	8.0	16.1
SERNEEDB	Alternative exam formats or additional time	15.8	16.1	17.3	16.1	15.2	10.8	15.3	13.5	8.0	16.1
SERNEEDC	Course substitution or waiver	15.8	16.1	17.3	16.1	15.2	10.8	15.3	13.5	8.0	16.1
SERNEEDD	Readers, note takers, or scribes	15.8	16.1	17.3	16.1	15.2	10.8	15.3	13.5	8.0	16.1
SERNEEDE	Registration assistance or priority class registration	15.8	16.1	17.3	16.1	15.2	10.8	15.3	13.5	8.0	16.1
SERNEEDF	Sign language or oral interpreters	15.6	16.1	17.2	15.9	15.0	10.8	15.0	13.3	7.9	15.6
SERNEEDG	Tutors to assist with homework	15.8	16.1	17.3	16.1	15.2	10.8	15.3	13.5	8.0	16.1
SERNEEDX	Needs: other	15.8	16.1	17.3	16.1	15.2	10.8	15.3	13.5	8.0	16.1
SERRECVA	Service: adaptive equipment and technology	16.1	16.0	17.6	16.6	15.2	11.1	15.3	14.0	8.2	16.4
SERRECVB	Service: alternative exam formats/additional time	16.1	16.0	17.6	16.6	15.2	11.1	15.3	14.0	8.2	16.4
SERRECVC	Service: course substitution or waiver	16.1	16.0	17.6	16.6	15.2	11.1	15.3	14.0	8.2	16.4
SERRECVD	Service: readers, note takers, or scribes	16.1	16.0	17.6	16.6	15.2	11.1	15.3	14.0	8.2	16.4
SERRECVE	Service: registration priority or assistance	16.1	16.0	17.6	16.6	15.2	11.1	15.3	14.0	8.2	16.4
SERRECVF	Service: sign language or oral interpreters	16.1	16.0	17.6	16.6	15.2	11.1	15.3	14.0	8.2	16.4
SERRECVG	Service: tutors to assist with homework	16.1	16.0	17.6	16.6	15.2	11.1	15.3	14.0	8.2	16.4
SERRECVX	Service: other	16.1	16.0	17.6	16.6	15.2	11.1	15.3	14.0	8.2	16.4
SIBCOLB4	Siblings in college before respondent	65.9	46.4	63.5	68.1	68.7	49.6	68.2	69.8	40.8	55.4
SINCOL	Number in college (independent students)	84.6	68.4	80.2	85.7	86.3	90.1	87.9	87.6	88.1	95.2
SJCOMSER	Work-study: community service	67.1	75.7	66.6	71.5	65.8	62.3	69.2	62.7	50.2	73.1
SJHOURS	Work study: hours worked per week	78.7	86.1	78.6	77.6	78.4	62.8	81.7	77.2	57.4	80.0
SJMAJOR	Work study: related to major	67.1	55.7	69.6	70.3	64.0	61.4	69.6	61.8	52.7	76.0
SJONOFF	Work study: on/off campus	66.7	73.4	69.0	70.0	63.4	63.5	68.7	61.3	57.8	76.3
SJSCHOOL	Work study: for school	66.6	71.8	68.6	70.3	63.5	62.9	68.8	61.4	58.4	76.3
SJTUTOR	Work study: tutoring	67.2	76.5	66.7	71.7	66.4	62.3	69.2	62.8	49.7	70.6
SMARITAL	Student's marital status	91.7	87.7	89.1	90.9	92.2	99.4	96.2	93.9	96.5	96.7
SPINCOL	Spouse in college	68.0	53.9	67.7	70.9	73.1	54.3	64.0	72.1	43.1	64.6
SPSINC	Spouse of student earnings derived	30.2	25.4	21.5	29.5	27.0	71.5	43.9	34.3	58.7	70.8
SSISSDI	Receive SSI/SSDI	16.2	16.5	17.8	16.6	15.4	11.1	15.4	14.2	8.3	16.3
STAFSUB	Stafford loan subsidized amount	99.5	99.8	99.2	99.0	100.0	98.5	99.8	99.4	100.0	99.4
STAFUNSB	Stafford loan unsubsidized amount	99.5	99.8	99.2	99.0	100.0	98.5	99.8	99.4	100.0	99.4
STATNEED	State need-based grants	94.4	96.9	94.1	96.6	95.1	73.4	95.0	96.5	88.0	89.5
STLNAMT	State loan total	94.4	96.9	94.1	96.6	95.1	73.4	95.0	96.5	88.0	89.5
STMERIT	State merit only grants	94.4	96.9	94.1	96.6	95.1	73.4	95.0	96.5	88.0	89.5
STNOND1	State non-need grants	94.4	96.9	94.1	96.6	95.1	73.4	95.0	96.5	88.0	89.5

See notes at end of table.

Table 57. Summary of item response rates for all students, by type of institution: 2004—Continued

Variable	Variable label	Weighted response rates ¹									
		All students	Public less-than-2-year	Public 2-year	Public 4-year non-doctorate	Public 4-year doctorate	Private not-for-profit less-than-4-year	Private not-for-profit 4-year non-doctorate	Private not-for-profit 4-year doctorate	Private for-profit less-than-2-year	Private for-profit 2-year or more
STUDMULT	Number of institutions attended	83.6	69.5	78.8	85.0	85.8	87.0	87.9	86.7	84.9	94.6
STWKAMT	State work-study total	97.8	99.2	98.0	99.2	97.9	86.7	97.6	97.6	93.5	95.7
TAXHOPE	Claim Federal Hope scholarship	63.0	54.8	62.9	64.5	66.3	48.9	61.3	64.6	42.1	58.4
TAXLEARN	Claim lifetime learning tax credit	63.5	54.7	63.0	65.2	67.3	48.6	61.9	65.8	42.0	58.5
TAXTUIT	Claim tuition tax deduction	64.4	55.3	63.8	65.9	68.0	49.3	63.3	66.9	42.3	60.4
TFEDWRK	Total federal work-study	97.8	99.2	98.0	99.2	97.9	86.7	97.6	97.6	93.5	95.7
TRANSCRD	Transferred credits to NPSAS	30.5	7.7	21.5	44.3	45.9	29.5	44.9	39.8	18.6	32.0
TRANSFR	Transferred from NPSAS	40.6	31.7	43.7	42.2	34.0	47.4	34.4	34.4	36.5	39.7
TRANSPLN	Plan to transfer from NPSAS	51.3	28.7	48.7	55.6	57.7	30.9	55.8	57.9	19.1	46.6
TRANSTO	Transferred to NPSAS	57.2	34.1	54.0	62.5	63.7	61.8	67.8	57.6	45.8	54.0
UGDEGAA	Associate's degree types	96.7	100.0	96.6	89.4	93.7	97.5	100.0	98.0	99.4	99.5
UNTAXBF	Received untaxed benefits in 2003	65.4	57.3	64.7	66.5	70.8	51.6	62.5	69.5	44.0	63.7
UNTAXBFA	Received child support	30.1	25.2	32.0	30.6	31.0	22.5	28.7	25.3	22.1	28.9
UNTAXBFB	Received disability payments	20.1	21.6	23.8	19.5	15.3	16.1	17.9	11.8	16.1	21.6
UNTAXBFC	Received food stamps	20.1	21.6	23.8	19.5	15.3	16.1	17.9	11.8	16.1	21.6
UNTAXBFD	Received social security benefits	20.0	21.4	23.7	19.3	15.2	16.1	17.7	11.6	16.0	21.3
UNTAXBFE	Received TANF	30.1	25.2	32.0	30.6	31.0	22.5	28.7	25.3	22.1	28.9
UNTAXBFF	Received worker's compensation	20.1	21.6	23.8	19.5	15.3	16.1	17.9	11.8	16.1	21.6
USBORN	Respondent born in the U.S.	65.7	54.8	64.4	67.5	69.5	51.8	64.7	69.4	43.3	62.5
VADODAMT	Federal veteran's and military aid	100.0	100.0	99.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0
VETBEN	Federal veteran's benefits	100.0	100.0	99.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0
VETERAN	Veteran status	95.4	86.6	94.8	95.3	95.9	97.7	94.6	95.4	96.8	99.2
VOCAPPLY	Ever applied for Voc Rehab services	13.9	11.4	15.0	14.0	13.7	9.0	13.4	13.1	7.1	14.1
VOCHELP	State voc rehab and job training (WIA)	94.4	96.9	94.1	96.6	95.1	73.4	95.0	96.5	88.0	89.5
VOCRECV	Ever received Voc Rehab services	16.2	16.5	17.8	16.7	15.4	11.1	15.4	14.3	8.3	16.4
VOTEEVER	Ever vote	65.5	55.1	64.2	67.3	69.3	51.7	64.5	69.2	43.1	62.5
VOTEREG	Registered to vote	65.5	55.1	64.2	67.3	69.2	51.6	64.6	69.1	43.1	62.5
YEARGRAD	Year began graduate school	73.0	†	†	71.4	78.1	†	60.6	72.5	†	70.8

† Not applicable.

NOTE: Nonresponse bias analysis was conducted only for each item with a weighted response rate less than 85 percent. Nonresponse bias analysis was based on the student-level variables known for both respondents and nonrespondents (described in the assessing student nonresponse bias section above). Note that while values for many variables are derived from multiple sources, including the student interview, student record data, and extant data sources, some variables are obtained from only one source. Given that the weighted response rate to the student interview was about 70 percent, items obtained solely from the student interview have 30 percent nonresponse even when all student interview respondents provided an answer. This issue is compounded for nested items following gate questions. Response rates for items that follow a gate item include nonresponse resulting both from nonresponse to the item in question, and also to missing data for previously unanswered gate items. Consequently, item response rates to the follow-up items are deflated because the item is not applicable for an unknown proportion of the nonrespondents to the gate item.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Therefore, a nonresponse bias analysis was conducted for all items with a weighted response rate less than 85 percent for all students or for students in a particular sector. The possibility of estimating the degree of bias depends on having some variables that reflect key characteristics of respondents and for which there is little or no missing data. The variables listed above in the student-level bias analysis section were used to compare the item respondents and nonrespondents. Additionally, gender and age group were used because they were known for all study respondents. Also, institution strata were used in analyses of items for all students. These variables are important to the study and are related to many of the items being analyzed for low item response rates. For these items, the nonresponse bias prior to imputation was estimated as described in the beginning of chapter 6 for each of these variables known for most respondents and nonrespondents and tested (adjusting for multiple comparisons) to determine if the bias was significant at the 5 percent level.

Appendix K contains a table (table K-23) using one variable (DEPCHILD) to illustrate the estimated bias before imputation for all students. Similar computations were done for about 200 additional variables with item response rates less than 85 percent for all students or for students in at least one sector. Table K-24 in appendix K summarizes these computations. This table also shows a large range for the percent of variable categories with significant bias across all items analyzed prior to imputation. A byproduct of the imputation (described in section 5.5) is the reduction or elimination of item-level nonresponse bias. Imputation reduces or eliminates nonresponse bias by replacing missing data with statistically plausible values. Missing data and the associated nonresponse bias for variables are usually not ignorable (i.e., the respondents' distribution patterns differ from those in the full population). Therefore, replacing missing data with reasonable values produces imputed sample distributions that resemble full population distributions, thus reducing if not eliminating nonresponse bias. The use of carefully constructed imputation classes, donor-imputee matching criteria, and random hot-deck searches within imputation cells are all designed to ensure that imputed data are in fact plausible and that the nonresponse bias is ignorable within the imputation classes.

To evaluate how well the imputation worked in reducing bias for items with a weighted response rate less than 85 percent for all students, the bias was estimated after imputation. For continuous variables, the estimated bias equals the mean before imputation minus the mean after imputation. For categorical variables, the estimated bias was computed for each category as the percentage of students in that category before imputation minus the percentage of students in that category after imputation. The estimated bias was then tested (adjusting for multiple comparisons) to determine if the bias was significant at the 5 percent level. A categorical variable was deemed to be significantly biased if any of the categories was significantly biased. As shown in tables K-25 and K-26 in appendix K, about 25 percent of the variables analyzed still had significant bias after imputation. The relative bias is greater than 10 percent for about 22 percent of the items with remaining significant bias. Analysts should use caution when using the significantly biased items.

6.4 Variance Estimation

For probability-based sample surveys, most estimates are nonlinear statistics. For example, a mean or proportion, which is expressed as $\Sigma wy / \Sigma w$, is nonlinear because the denominator is a survey estimate of the (unknown) population total. In this situation, the variances of the estimates cannot be expressed in closed form. Two procedures for estimating

variances of survey statistics are the Taylor series linearization procedure and the bootstrap replication procedure, which are both available on the NPSAS data files. The analysis strata and replicates created for the Taylor series procedure are discussed in section 6.4.1, and section 6.4.2 discusses the replicate weights created for the bootstrap procedure. Section 6.4.3 discusses the computation and use of design effects to measure the effects that complex sample design features had on the variances of survey estimates.

6.4.1 Taylor Series

The Taylor series variance estimation procedure is a well-known technique used to estimate the variances of nonlinear statistics. The procedure takes the first-order Taylor series approximation of the nonlinear statistic and then substitutes the linear representation into the appropriate variance formula based on the sample design. Woodruff (1971) presented the mathematical formulation of this procedure.

For stratified multistage surveys, the Taylor series procedure requires analysis strata and analysis primary sampling units (PSUs), also called replicates, defined from the sampling strata and PSUs used in the first stage of sampling. For NPSAS:04, analysis strata and analysis PSUs were defined separately for all students combined and can be used for analyses of any domain.

The first step was to identify the PSUs used at the first stage of sample selection. As discussed in chapter 2, the PSUs included the 860 noncertainty institutions. For the 810 certainty institutions, however, the students represent the first stage of sampling. To obtain appropriate degrees of freedom for variance estimation, the students selected from each certainty institution were partitioned into two, three, or four pseudo-PSUs by random assignment of sample students into approximately equal-sized groups. The number of pseudo-PSUs formed was based on the institution's measure of size for first-stage sampling.

The next step was to sort the PSUs and pseudo-PSUs by the 58 institution strata, then by certainty versus noncertainty, and then by the selection order for the noncertainty institutions and by IPEDS ID for the certainty institutions. From this sorted list, the analysis PSUs were then defined by collapsing the PSUs and pseudo-PSUs as required so each analysis PSU contained at least four respondents. This sample size requirement ensured stable variance estimates. Analysis PSUs were then paired to form analysis strata. Certainty institutions that included three or four pseudo-PSUs were made a single analysis stratum. This process resulted in 1,005 analysis strata. The names of the analysis strata and analysis PSU variables are ANALSTR and ANALPSU, respectively.

The procedure described above may overestimate the variance because it does not always account for the finite population correction (FPC) at the institution stage of sampling. Alternatively, the Taylor series procedure can account for the FPC if the secondary sampling units (SSUs) and PSU counts are considered in addition to the analysis strata and analysis PSUs. These variable names are FANALSTR, FANALPSU, FANALSSU, and PSUCOUNT for the analysis strata, PSUs, and SSUs and the PSU counts, respectively. FANALSTR and FANALPSU differ from ANALSTR and ANALPSU in that for certainty institutions FANALSTR equals the institutional sampling stratum and FANALPSU equals ANALSTR. Also, FANALSSU equals ANALPSU for certainty institutions. For noncertainty institutions, FANALSTR equals ANALSTR and FANALPSU equals ANALPSU. Also, FANALSSU was created by randomly

dividing ANALPSU into two parts for noncertainty institutions. There are 658 analysis strata when taking the FPC into account.

6.4.2 Bootstrap Replicate Weights

The variance estimation strategy was chosen for NPSAS:04 to satisfy the following requirements:

1. recognition of variance reduction due to stratification at all stages of sampling;
2. recognition of effects of unequal weighting;
3. recognition of possible increased variance due to sample clustering;
4. recognition of effects of weight adjustments for nonresponse and for poststratification of selected total estimates to known external totals;
5. satisfactory properties for estimating variances of nonlinear statistics and quantiles as well as for linear statistics;
6. ability to apply finite population corrections at the institution stage of sampling and reflect the reduction in variance due to the high sampling rates in some first-stage sampling strata; and
7. ability to test hypotheses about students based on normal distribution theory by ignoring the finite population corrections at the student level of sampling.

Commonly applied bootstrap variance estimation techniques satisfy requirements 1 through 5. To meet requirements 6 and 7 as well, a methodology and computer software developed by Kaufman (2004) were applied. This methodology allows for finite population correction factors at two stages of sampling. The application of the method incorporated the finite population correction factor at the first stage only where sampling fractions were generally high. At the second stage, where the sampling fractions were generally low, the finite population correction factor was set to 1.00.

The Kaufman methodology was used to develop a vector of bootstrap sample weights which was added to the analysis file. These weights are zero for units not selected in a particular bootstrap sample; weights for other units are inflated for the bootstrap subsampling. The initial analytic weights for the complete sample are also included for the purposes of computing the desired estimates. The vector of replicate weights allows for computing additional estimates for the sole purpose of estimating a variance. Assuming B sets of replicate weights, the variance of any estimate, $\hat{\theta}$, can be estimated by replicating the estimation procedure for each replicate and computing a simple variance of the replicate estimates, as follows:

$$\text{var}(\hat{\theta}) = \frac{\sum_{b=1}^B (\hat{\theta}_b^* - \hat{\theta})^2}{B},$$

where $\hat{\theta}_b^*$ is the estimate based on the b -th replicate weight (where $b=1$ to the number of replicates) and B is the total number of sets of replicate weights. See appendix L for more details of this variance estimation procedure. Once the replicate weights are provided, this estimate can be produced by most survey software packages (e.g., SUDAAN [RTI International 2004])

computes this estimate by invoking the DESIGN=BRR option). See appendix M for an example of SUDAAN code.

The number of replicate weights was set at 64 based on an empirical investigation of the behavior of variance estimates as the number of replicates increased. This investigation showed that the stability of variance estimates improved with increasing numbers of replicates and became fairly stable for most estimates when between 50 and 55 replicate weights were used. For the 64 replicate weights included on the analysis file (BOOTWT01 – BOOTWT64), the poststratification process was repeated so that replicate weight variation did not include components that would be controlled by replication of the entire process in conjunction with the same poststratification process. For several of the replicates, one or two of the control totals could not be met due to model convergence problems (i.e., there was no solution to satisfy all model equations simultaneously).

6.4.3 Variance Approximation

The survey design effect for a statistic is defined as the ratio of the design-based variance estimate over the variance estimate that would have been obtained from a simple random sample of the same size (if that were practical). It is often used to measure the effects that sample design features have on the precision of survey estimates. For example, stratification tends to decrease the variance, but multistage sampling and unequal sampling rates usually increase the variance. Also, weight adjustments for nonresponse (performed to reduce nonresponse bias) and poststratification increase the variance by increasing the weight variation. Because of these effects, most complex multistage sampling designs, like NPSAS:04, result in design effects greater than one. That is, the design-based variance is larger than the simple random sample variance.

Specifically, the survey design effect for a given estimate, $\hat{\theta}$, is defined as

$$Deff(\hat{\theta}) = \frac{Var_{design}(\hat{\theta})}{Var_{srs}(\hat{\theta})}.$$

Also, the square root of the design effect is another measure, which can also be expressed as the ratio of the standard errors, or

$$Deft(\hat{\theta}) = \frac{SE_{design}(\hat{\theta})}{SE_{srs}(\hat{\theta})}.$$

In appendix N, design effect estimates are presented for important survey domains and estimates among undergraduate students, graduate students, and first-professional students to summarize the effects of stratification, multistage sampling, unequal probabilities of selection, and the weight adjustments. These design effects were estimated using SUDAAN and the bootstrap variance estimation procedure described in section 6.4.2 and appendix L. If one must perform a quick analysis of NPSAS:04 data without using one of the software packages for analysis of complex survey data, the design effect tables in appendix N can be used to make approximate adjustments to the standard errors of survey statistics computed using the standard software packages that assume simple random sampling designs. However, one cannot be confident regarding the actual design-based standard errors without performing the analysis

using one of the software packages specifically designed for analysis of data from complex sample surveys. See appendix M for more details concerning the use of such software packages.

Large design effects imply large standard errors and relatively poor precision. Small design effects imply small standard errors and good precision. In general terms, a design effect under 2.0 is low, 2.0 to 3.0 is moderate, and above 3.0 is high. Moderate and high design effects often occur in complex surveys such as NPSAS, and the design effects in appendix N are consistent with those in past NPSAS studies. Unequal weighting causes large design effects and is often due to nonresponse and poststratification adjustments. However, in NPSAS, the unequal weighting is also due to the sample design and different sampling rates between institution strata and also different sampling rates between student strata.

References

- Ault, K., Black, S., Chromy, J., Fahimi, M., Siegel, P., Trofimovich, L., Whitmore, R., and Berkner, L. (2003). *Imputation Methodology for the National Postsecondary Student Aid Study: 2004* (NCES 2003–20). U.S. Department of Education. Washington, DC: National Center for Education Statistics.
- Chromy, J.R. (1979). Sequential Sample Selection Methods. *Proceedings of the American Statistical Association Section on Survey Research Methods of the American Statistical Association*, 401–406.
- Chromy, J.R. (1981). Variance Estimators for a Sequential Sample Selection Procedure. In D. Krewski, R. Platek, and J.N.K. Rao (Eds.), *Current Top IMS in Survey Sampling* (pp. 329–347). New York: Academic Press.
- Cohen, S.B. (1997). An Evaluation of Alternative PC-Based Software Packages Developed for the Analysis of Complex Survey Data. *The American Statistician*, 57(13): 285–292.
- Cox, B. (1980). The Weighted Sequential Hot Deck Imputation Procedure. *Proceedings of the American Statistical Association, Section on Survey Research Methods*, 721–726.
- Deville, J.C., and Särndal, C.E. (1992). Calibration Estimating in Survey Sampling. *Journal of the American Statistical Association*, 87:376–382.
- Education Sciences Reform Act of 2002*. (2002). Public Law 107-279, Title I, Section 153. Available: http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=107_cong_public_laws&docid=f:publ279.107.pdf.
- Hanley, J.A., and McNeil, B.J. (1982). The Meaning and Use of the Area under a Receiver Operating Characteristic Curve. *Diagnostic Radiology*, 143: 29–36.
- Heuer, R., Kuhr, B., Fahimi, M., Curtin, T.R., Hinsdale, M., Carley-Baxter, L., and Green, P. (forthcoming). *National Study of Postsecondary Faculty (NSOPF:04) Methodology Report* (NCES 2005–xxx). U.S. Department of Education. Washington, DC: National Center for Education Statistics.
- Iannacchione, V. (1982). *Weighted Sequential Hot Deck Imputation Macros*. Presented at the Seventh Annual SAS User’s Group International Conference, San Francisco, February.
- Iannacchione, V. (2003). Sequential weight adjustments for location and cooperation propensity for the 1995 National Survey of Family Growth. *Journal of Official Statistics*, 16:31–43.
- Kass, G.V. (1980). An Exploratory Technique for Investigating Large Quantities of Categorical Data. *Applied Statistics*, 29: 119–127.

- Kaufman, S. (2004). Using the Bootstrap in a Two-Stage Design when Some Second-Stage Strata have only One Unit Allocated. *Proceedings of the American Statistical Association, Section on Survey Research Methods*.
- Folsom, R.E., and Singh, A.C. (2000). The Generalized Exponential Model for Sampling Weight Calibration for Extreme Values, Nonresponse, and Poststratification. *Proceedings of the Section on Survey Research Methods of the American Statistical Association*, 598–603.
- Riccobono, J.A., Whitmore, R.W., Gabel, T.J., Traccarella, M.A., Pratt, D.J., and Berkner, L.K. (1997). *National Postsecondary Student Aid Study, 1995–96 (NPSAS:96), Methodology Report* (NCES 98–073). U.S. Department of Education. Washington, DC: National Center for Education Statistics.
- RTI International (RTI). (2004). *SUDAAN User's Manual, Release 9.0*. Research Triangle Park, NC: RTI International.
- U.S. Department of Education. (1999). *NCES Restricted-Use Data Procedures Manual*. Washington, DC: National Center for Education Statistics.
- U.S. Department of Education. (2003). *NCES Statistical Standards* (NCES 2003–601). Washington, DC: National Center for Education Statistics.
- Woodruff, R.S. (1971). A Simple Method for Approximating the Variance of a Complicated Estimate. *Journal of the American Statistical Association*, 66: 411–414.

Appendix A

Technical Review Panel

**National Postsecondary Student Aid Study (NPSAS:2004)
Staff Contact List**

Gary Andeen
Executive Director
Oregon Independent Colleges Association
7150 Southwest Hampton Street
Suite 101
Portland, OR 97223
Telephone: (503) 639-4541
Fax: (503) 639-4851
E-mail: andeen@oicanet.org

Frank Balz
Vice President for Research & Policy Analysis
National Association of Independent Colleges &
Universities
1025 Connecticut Avenue NW
Suite 700
Washington, DC 20036
Telephone: (202) 785-8866
Fax: (202) 835-0003
E-mail: frank@naicu.edu

Nancy Broff
General Counsel
Career College Association
10 G Street NE
Suite 750
Washington, DC 20002-4213
Telephone: (202) 336-6755
Fax: (202) 336-6828
E-mail: nancyb@career.org

May Chen
Assistant Vice Chancellor
Community College of Baltimore County
800 South Rolling Road
Baltimore, MD 21228-5317
Telephone: (410) 869-1135
Fax: (410) 869-1265
E-mail: mchen@ccbcmd.edu

George Chin
University Director
Student Financial Assistance
City University of New York
1114 Avenue of the Americas
15th Floor
New York, NY 10036
Telephone: (212) 290-5693
Fax: (212) 290-5685
E-mail: gchin@uapc.cuny.edu

Melanie Corrigan
Assistant Director
Center for Policy Analysis
American Council on Education
One Dupont Circle NW
Washington, DC 20036
Telephone: (202) 939-9554
Fax: (202) 785-2990
E-mail: Melanie_Corrigan@ace.nche.edu

Alisa Cunningham
Director of Research
The Institute for Higher Education Policy
1320 19th Street NW
Suite 400
Washington, DC 20036
Telephone: (202) 861-8223
Fax: (202) 861-9307
E-mail: alisa@ihep.org

John Curtice
Assistant Vice Chancellor for Financial Aid and
Enrollment Policy
State University of New York
State University Plaza
Albany, NY 12246
Telephone: (518) 443-5474
Fax: (518) 443-5225
E-mail: curticjo@sysadm.suny.edu

Jerry Davis
15 Montego Court
Dillsburg, PA 17019
Telephone: (317) 502-9748
Fax: None listed
E-mail: KarunaToo@aol.com

Tricia Grimes
Research Analyst
Minnesota Higher Education Services Office
1450 Energy Park Drive
Suite 350
St. Paul, MN 55108
Telephone: (651) 642-0589
Fax: (651) 642-0675
E-mail: grimes@heso.state.mn.us

Albert Hermsen
Associate Director, Financial Aid
University of Michigan
Office of Financial Aid
2011 SAB
Ann Arbor, MI 48109
Telephone: (734) 763-4119
Fax: (734) 615-2641
E-mail: ahermsen@umich.edu

Jacqueline King
Director, Center for Policy Analysis
American Council on Education
One Dupont Circle NW
Suite 800
Washington, DC 20036
Telephone: (202) 939-9559
Fax: (202) 785-2990
E-mail: jacqueline_king@ace.nche.edu

John Lee
President
JBL Associates
6900 Wisconsin Avenue
Suite 606
Bethesda, MD 20814
Telephone: (301) 654-5154
Fax: (301) 654-6242
E-mail: jbl@jblassoc.com

Jamie Merisotis
President
The Institute for Higher Education Policy
1320 19th Street NW
Suite 400
Washington, DC 20036
Telephone: (202) 861-8223
Fax: (202) 861-9307
E-mail: jamie@ihep.com

Elise Miller
Research & Policy Analyst
National Association of Independent Colleges &
Universities
1025 Connecticut Avenue NW
Suite 700
Washington, DC 20036
Telephone: (202) 785-8866
Fax: (202) 835-0003
E-mail: elise@naicu.edu

James Palmer
Professor
Illinois State University
5900 Educational Administration and
Foundations
Normal, IL 61790-5900
Telephone: (309) 438-2041
Fax: (309) 438-8683
E-mail: jcpalmer@ilstu.edu

Kent Phillippe
Senior Research Associate
American Association of Community Colleges
One Dupont Circle NW
Suite 410
Washington, DC 20036
Telephone: (202) 728-0200
Fax: (202) 833-2467
E-mail: kphillippe@aacc.nche.edu

Travis Reindl
American Association of State Colleges and
Universities (AASCU)
1307 New York Avenue NW
Washington, DC 20005
Telephone: (202) 293-7070
Fax: (202) 296-5819
E-mail: reindlt@aaascu.org

Watson Scott Swail
President & CEO
Educational Policy Institute
25 Ludwell Lane
Stafford, VA 22554
Telephone: (540) 288-2322
Fax: None Listed
E-mail: wswail@educationalpolicy.org

Peter Syverson
Vice President for Research
Council of Graduate Schools
One Dupont Circle NW
Suite 430
Washington, DC 20036
Telephone: (202) 223-3791
Fax: (202) 331-7157
E-mail: psyverson@cgs.nche.edu

Dawn Terkla
Executive Director
Tufts University
Institutional Research
28 Sawyer Avenue
Medford, MA 02155
Telephone: (617) 627-3274
Fax: (617) 627-3993
E-mail: dawn.terkla@tufts.edu

Vincent Tinto
Distinguished Professor
Syracuse University
School of Education
353 Huntington Hall
Syracuse, NY 13244-2340
Telephone: (315) 443-3343
Fax: (315) 443-9218
E-mail: vtinto@syr.edu

U.S. Government

Clifford Adelman
U.S. Department of Education, Institute of
Education Sciences (IES)
550 12th Street SW
Potomac Center Plaza -Room 11110
Washington, DC 20065
Telephone: (202) 245-7805
Fax: (202) 501-3005
E-mail: clifford.adelman@ed.gov

Nabeel Alsalam
Congressional Budget Office
Ford House Office Building
Room 423A
Washington, DC 20515
Telephone: (202) 225-2639
Fax: (202) 225-3149
E-mail: nabeel@cbo.gov

David Bergeron
Chief
Budget and Policy Development
U.S. Department of Education, OPE
1990 K Street NW
Washington, DC 20006-8540
Telephone: (202) 502-7815
Fax: (202) 708-9107
E-mail: david.bergeron@ed.gov

Susan Broyles
Program Director
Integrated Postsecondary Education Data
System (IPEDS)
Postsecondary Studies Division
U.S. Department of Education, NCES
1990 K Street NW
Room 8113A
Washington, DC 20006-5652
Telephone: (202) 502-7318
Fax: (202) 502-7460
E-mail: susan.broyles@ed.gov

C. Dennis Carroll
Associate Commissioner
Postsecondary Studies Division
U.S. Department of Education, NCES
1990 K Street NW
Room 8107
Washington, DC 20006-5652
Telephone: (202) 502-7323
Fax: (202) 502-7460
E-mail: dennis.carroll@ed.gov

Daniel Goldenberg
U.S. Department of Education, Office of the
Undersecretary
400 Maryland Avenue
Room 6W118
Washington, DC 20202
Telephone: (202) 401-3562
Fax: (202) 401-6139
E-mail: daniel.goldenberg@ed.gov

James Griffith
Program Director
Postsecondary Longitudinal and Sample Survey
Studies
Postsecondary Studies Division
U.S. Department of Education, NCES
1990 K Street NW
Room 8103
Washington, DC 20006
Telephone: (202) 502-7387
Fax: (202) 502-7460
E-mail: James.Griffith@ed.gov

Brian Harris-Kojetin
Office of Management and Budget
725 17th Street NW
Room 10201
Washington, DC 20503
Telephone: (202) 395-7314
Fax: (202) 395-7245
E-mail: bharrisk@omb.eop.gov

Lisa Hudson
Education Statistician
U.S. Department of Education, NCES
1990 K Street NW
Suite 900
Washington, DC 20006
Telephone: (202) 502-7358
Fax: (202) 502-7490
E-mail: lisa.hudson@ed.gov

Tracy Hunt-White
Project Officer
2004-06 Beginning Postsecondary Student
Longitudinal Study (BPS:04/06)
Postsecondary Studies Division
U.S. Department of Education, NCES
1990 K Street NW
Room 8121
Washington, DC 20006
Telephone: (202) 502-7438
Fax: (202) 502-7460
E-mail: tracy.hunt-white@ed.gov

Paula Knepper
Senior Technical Advisor
Postsecondary Studies Division
U.S. Department of Education, NCES
1990 K Street NW
Room 8104
Washington, DC 20006-5652
Telephone: (202) 502-7367
Fax: (202) 502-7372
E-mail: paula.knepper@ed.gov

Daniel Madzellan
Management Analysis Officer
U.S. Department of Education
1990 K Street NW
Room 8036
Washington, DC 20006-8073
Telephone: (202) 502-7816
Fax: (202) 502-7873
E-mail: dan.madzellan@ed.gov

Edith McArthur
Demographer
U.S. Department of Education, NCES
1990 K Street NW
Room 9081
Washington, DC 20006-5652
Telephone: (202) 502-7393
Fax: (202) 502-7490
E-mail: edith.mcarthur@ed.gov

Jay Noell
Program Analyst
U.S. Department of Education
Office of the Deputy Secretary
400 Maryland Avenue SW
Room 6W116
Washington, DC 20202-8036
Telephone: (202) 401-1026
Fax: None Listed
E-mail: jay.noell@ed.gov

Kristin Perry
Project Officer
2003 Baccalaureate and Beyond (B&B:03)
Postsecondary Studies Division
U.S. Department of Education, NCES
1990 K Street NW
Room 8113B
Washington, DC 20006
Telephone: (202) 502-7428
Fax: None Listed
E-mail: kristin.perry@ed.gov

Adam Stoll
Social Science Analyst
Domestic Social Policy Division
Congressional Research Service -LM-323
Library of Congress
101 Independence Avenue SE
Washington, DC 20540-7440
Telephone: (202) 707-4375
Fax: (202) 707-7338
E-mail: astoll@crs.loc.gov

John Wirt
Statistician
Annual Reports Program-ECICSD
U.S. Department of Education, NCES
1990 K Street NW
Room 9028
Washington, DC 20006
Telephone: (202) 502-7478
Fax: None Listed
E-mail: john.wirt@ed.gov

Linda Zimbler
Project Officer
National Study of Postsecondary Faculty
(NSOPF:04)
Postsecondary Studies Division
U.S. Department of Education, NCES
1990 K Street NW
Room 8123
Washington, DC 20006-5652
Telephone: (202) 502-7481
Fax: (202) 502-7450
E-mail: linda.zimbler@ed.gov

MPR Associates, Inc.

Lutz Berkner
Senior Research Associate
MPR Associates
2150 Shattuck Avenue
Suite 800
Berkeley, CA 94704-0794
Telephone: (510) 849-4942
Fax: (510) 849-0794
E-mail: lberkner@mprinc.com

Susan Choy
Vice President
MPR Associates, Inc.
2150 Shattuck Avenue
Suite 800
Berkeley, CA 94704-0794
Telephone: (510) 849-4942
Fax: (510) 849-0794
E-mail: schoy@mprinc.com

Laura Horn
Director
Statistical Analysis and Data Design
MPR Associates
2150 Shattuck Avenue
Suite 800
Berkeley, CA 94704-0794
Telephone: (510) 849-4942
Fax: (510) 849-0794
E-mail: lhorn@mprinc.com

**National Association of Student Financial Aid
Administrators**

Mary Ann O'Connor
Project Director
National Association of Student Financial Aid
Administrators (NASFAA)
1129 20th Street NW
Suite 400
Washington, DC 20036
Telephone: (202) 785-0453
Fax: (202) 785-1487
E-mail: oconnorm@nasfaa.org

Kenneth Redd
Director of Research and Policy Analysis
National Association of Student Financial Aid
Administrators (NASFAA)
1129 20th Street NW
Suite 400
Washington, DC 20036-3453
Telephone: (202) 785-0453
Fax: (202) 785-1487
E-mail: reddk@nasfaa.org

Pinkerton Computer Consultants, Inc.

Daniel Heffron
Statistician
Pinkerton Computer Consultants, Inc.
1900 North Beauregard Street
Suite 112
Alexandria, VA 22311-1722
Telephone: (703) 245-7350
Fax: (703) 245-7560
E-mail: heffrond@pcci.com

RTI International

Janet Austin
Technical Staff Assistant
RTI International
P.O. Box 12194
3040 Cornwallis Road
RTP, NC 27709
Telephone: (919) 541-7101
Fax: (919) 541-7014
E-mail: jra@rti.org

Melissa Cominole
Research Education Scientist
RTI International
P.O. Box 12194
3040 Cornwallis Road
RTP, NC 27709
Telephone: (919) 990-8456
Fax: (919) 541-7014
E-mail: mcominole@rti.org

Mansour Fahimi
Statistical Task Leader
NSOPF:2004
RTI International
6110 Executive Boulevard
Suite 420
Rockville, MD 20852-3907
Telephone: (301) 230-4675
Fax: (301) 230-4647
E-mail: fahimi@rti.org

Tim Gabel
Vice President
Survey and Computing Sciences
RTI International
PO Box 12194
RTP, NC 27709
Telephone: (919) 541-7415
Fax: (919) 541-6178
E-mail: tjg@rti.org

Patricia Green
Research Education Scientist
RTI International
203 North Wabash Avenue
Suite 1900
Chicago, IL 60601
Telephone: (312) 456-5260
Fax: (312)-456-5250
E-mail: pgreen@rti.org

Brian Kuhr
Education Analyst
NSoFaS
RTI International
203 North Wabash Avenue
Suite 1900
Chicago, IL 60601
Telephone: (312) 456-5263
Fax: (312) 456-5250
E-mail: bdk@rti.org

John Riccobono
Director
Education Surveys Division
RTI International
P.O. Box 12194
3040 Cornwallis Road
RTP, NC 27709
Telephone: (919) 541-7006
Fax: (919) 541-7014
E-mail: jar@rti.org

Peter Siegel
Research Statistician
RTI International
PO Box 12194
RTP, NC 27709
Telephone: (919) 541-6348
Fax: (919) 541-6416
E-mail: siegel@rti.org

Jennifer Wine
Research Psychologist
RTI International
P.O. Box 12194
3040 Cornwallis Road
RTP, NC 27709
Telephone: (919) 541-6870
Fax: (919) 541-7014
E-mail: jennifer@rti.org

Appendix B

Sampling Details

B.1 Target Population and Sample Design Overview

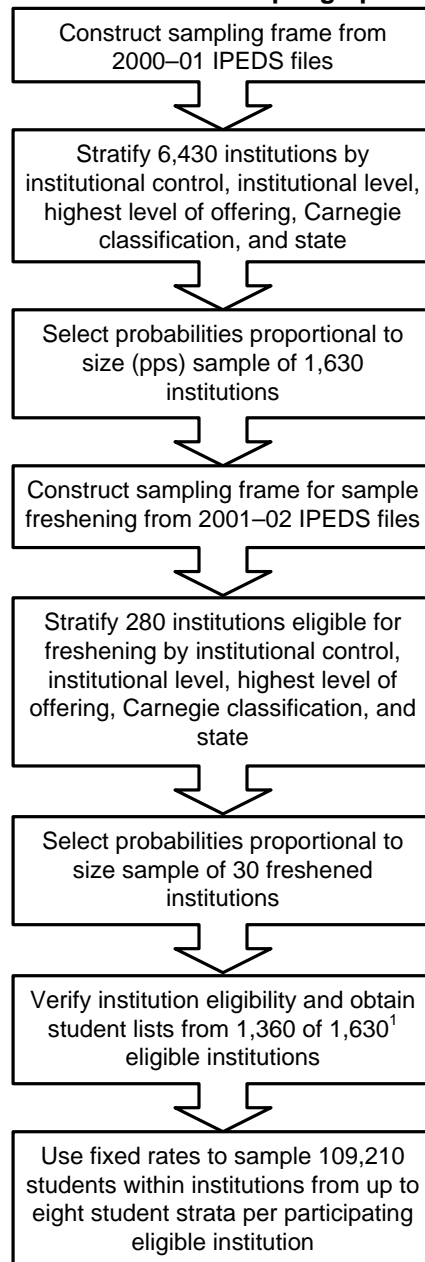
The 2004 National Postsecondary Student Aid Study (NPSAS:04) target population consists of all eligible students enrolled at any time between July 1, 2003, and June 30, 2004, in postsecondary institutions in the United States or Puerto Rico which had signed Title IV participation agreements with the U.S. Department of Education making them eligible for the federal student aid programs (Title IV institutions). To be eligible for NPSAS, students had to be enrolled in either an academic program with at least one course for credit that could be applied toward fulfilling the requirements for an academic degree or enrolled in an occupational or vocational program that requires at least 3 months or 300 clock hours of instruction to receive a degree, certificate, or other formal award. Eligible students could not be concurrently enrolled in high school and could not be enrolled solely in a general equivalency diploma (GED) or other high school completion program. The target population is the population about which inferences will be made. The survey population is the population actually covered by the sampling frame. Nearly all members of the target population also are members of the survey population; however, the adopted definition of the survey population allowed the student lists needed for sample selection to be obtained before June. More specific definitions of the institution and student populations are provided later in this appendix.

There have been three changes in the design of NPSAS over time. For NPSAS:2000, the survey was restricted for the first time to institutions participating in Title IV student aid programs. Another design change was made beginning with NPSAS:90 to improve full-year estimates. NPSAS:87 sampled students enrolled in the fall (October). However, NPSAS:90 sampled students who were enrolled at four discrete points in time: summer (August), fall (October), winter (February), and spring (June). Since implementation of NPSAS in 1993, institutions have been asked to provide one list that represented students enrolled at any time during the respective financial aid award year. In NPSAS:87 and NPSAS:90, those students who were initially sampled in the fall could have been enrolled for the full academic year. Another difference to note is that Puerto Rico was not part of the sample in NPSAS:87.

An overview of the sequential statistical sampling process for NPSAS:04 is provided in figure B-1. The goal of all sampling activities was to attain the numbers of eligible sample postsecondary students (within specified student and institution types) required by the National Center for Education Statistics (NCES). Since it was necessary to select the student samples on a flow basis as sample institutions provided their enrollment lists (to meet the data collection schedule), the students were sampled at fixed rates.¹ Under this approach, the actual numbers of students sampled are random variables; however, the sampling rates were set to meet or exceed, in expectation, the sample sizes shown in table B-1 and B-2.

¹ The target population includes students enrolled at any time between July 1, 2003 and June 30, 2004. The Integrated Postsecondary Education Data System (IPEDS) data used for the initial sampling frame were collected in 2001, and the IPEDS data used for sample freshening (described in section 2.1.2) were collected in 2002. Thus, any institutions that came into existence or became eligible between the IPEDS data collections in 2002 and June 30, 2004 were not included.

Figure B-1. Schematic of sequential NPSAS:04 sampling operations



¹ The 1,630 eligible institutions include the 1,630 originally selected, minus 30 ineligible institutions, plus 30 institutions from the freshened sample.

NOTE: IPEDS = Integrated Postsecondary Education Data System.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table B-1. Target numbers of sample students, by institutional characteristics and type of student: 2004

Institutional stratum	All students	Undergraduates			Graduate students	First-professionals
		All undergraduates	FTBs	Other undergraduates		
All institutions	121,680	110,560	56,070	54,490	9,340	1,780
Public less than 2-year	4,990	4,990	4,540	440	†	†
Public 2-year	45,060	45,060	20,280	24,780	†	†
Public 4-year non-doctorate-granting	11,270	10,480	3,380	7,110	790	†
Public 4-year doctorate-granting	21,130	15,060	4,570	10,490	5,210	860
Private not-for-profit less-than-4-year	3,310	3,310	2,740	570	†	†
Private not-for-profit 4-year non-doctorate-granting	10,250	9,650	4,320	5,340	600	†
Private not-for-profit 4-year doctorate-granting	10,220	6,620	2,750	3,870	2,680	920
Private for-profit less-than-2-year	9,040	9,040	8,830	210	†	†
Private for-profit 2-year or more	6,430	6,340	4,670	1,680	80	†

† Not applicable.

NOTE: Detail may not sum to totals because of rounding. First-time beginner (FTB) and other undergraduate counts are based on the status known at the time of sampling.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table B-2. Target numbers of sample students in the 12 state representative samples, by institutional stratum and type of student: 2004

Institutional stratum	All undergraduates	FTBs	Other undergraduates
California	11,510	1,910	9,590
Public 2-year	8,620	1,120	7,500
Public 4-year	2,070	490	1,570
Private not-for-profit 4-year	820	310	520
Connecticut	1,510	660	850
Public 2-year	590	250	340
Public 4-year	500	210	290
Private not-for-profit 4-year	420	210	210
Delaware	1,770	800	970
Public 2-year	720	290	440
Public 4-year	640	320	320
Private not-for-profit 4-year	410	200	210
Georgia	2,340	1,200	1,140
Public 2-year	1,160	750	410
Public 4-year	800	280	530
Private not-for-profit 4-year	380	180	200
Illinois	4,170	1,680	2,490
Public 2-year	2,560	1,120	1,440
Public 4-year	790	230	560
Private not-for-profit 4-year	810	330	480
Indiana	1,970	910	1,060
Public 2-year	470	250	220
Public 4-year	1,010	420	600
Private not-for-profit 4-year	490	240	250
Minnesota	2,390	1,320	1,070
Public 2-year	1,360	910	440
Public 4-year	640	220	420
Private not-for-profit 4-year	390	190	200
Nebraska	1,400	650	750
Public 2-year	530	270	260
Public 4-year	580	250	330
Private not-for-profit 4-year	290	130	160
New York	5,140	2,230	2,910
Public 2-year	1,900	1,030	870
Public 4-year	1,380	410	970
Private not-for-profit 4-year	1,860	790	1,070
Oregon	1,970	860	1,110
Public 2-year	1,090	490	600
Public 4-year	590	230	360
Private not-for-profit 4-year	290	140	150
Tennessee	1,810	800	1,010
Public 2-year	750	370	380
Public 4-year	660	230	430
Private not-for-profit 4-year	400	200	200
Texas	6,260	2,970	3,290
Public 2-year	4,030	2,280	1,740
Public 4-year	1,640	450	1,190
Private not-for-profit 4-year	600	240	360

NOTE: Detail may not sum to totals because of rounding. First-time beginner (FTB) and other undergraduate counts are based on the status known at the time of sampling.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

The NPSAS:04 sample also was designed to achieve at least four student respondents from each sample institution that had at least that many eligible students enrolled during the NPSAS year. This was to have sufficient yield for variance estimation. Consequently, institution sample sizes were determined to achieve at least 10 sample students per institution. NPSAS also included state-representative undergraduate student samples for three types of institution (public 4-year, public 2-year, and private not-for-profit 4-year) in 12 states.²

Given the student sample size goals, the desired number of participating institutions was determined to be approximately 1,450. Based on projected institutional participation rates obtained in prior NPSAS rounds and the NPSAS:04 field test, an initial sample of about 1,600 institutions was initially selected. Approximately 30 additional sample institutions were added during a freshening process at a later date.

B.2 The Institutional Sample

The target population for NPSAS:04 included nearly all Title IV participating postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico.³ To be eligible for NPSAS:04, an institution was required, during the 2003–04 academic year, to

- offer an educational program designed for persons who had completed secondary education;
- offer at least one academic, occupational, or vocational program of study lasting at least 3 months or 300 clock hours;
- offer courses that were open to more than the employees or members of the company or group (e.g., union) that administered the institution;
- be located in the 50 states, the District of Columbia, or Puerto Rico;
- be other than a U.S. Service Academy;⁴ and
- have a signed Title IV participation agreement with the U.S. Department of Education.

As indicated above, institutions providing only avocational, recreational, or remedial courses or only in-house courses for their own employees were excluded. The listed eligibility requirements are consistent with those used in previous NPSAS rounds, with two exceptions: the last requirement was new for NPSAS:2000, and offering more than just correspondence courses was no longer a requirement beginning with NPSAS:04.

B.2.1 Sample Frame Construction

The institution sampling frame for NPSAS:04 was constructed from the 2000–01 Integrated Postsecondary Education Data System (IPEDS) Institutional Characteristics (IC) and

² These 12 states were selected by NCES from those expressing interest. The 12 states were categorized into three groups based on population size: four small states (Connecticut, Delaware, Nebraska, Oregon), four medium-size states (Georgia, Indiana, Minnesota, Tennessee), and four large states (California, Illinois, New York, Texas).

³ Title IV participating institutions excluded from the target population were the five U.S. service academies.

⁴ These academies were not eligible for this financial aid study because of their unique funding/tuition base.

header files. The IPEDS files provided nearly complete coverage⁵ of the institutions in the target population. Listings include (a) all institutions whose primary purpose is the provision of postsecondary education; (b) all branches of colleges, universities, and other institutions, as long as the branch offers a full program of study (not just courses); (c) free-standing medical schools, as well as schools of nursing, schools of radiology, etc., within hospitals; and (d) schools offering occupational and vocational training with the intent of preparing students for work (e.g., a modeling school training for professional modeling—not just a charm school). The IPEDS files do not include (a) schools not open to the general public (i.e., training sites at prisons, military installations, corporations); (b) hospitals offering internships or residency programs only; or hospitals that only offer training as part of a medical school program at an institution of higher education; (c) organizational entities providing only noncredit continuing education (CEUs); (d) schools whose only purpose is to prepare students to take a particular test, (e.g., CPA examination or Bar exams); or (e) branch campuses of U.S. institutions in foreign countries. Institutions in the file that were not eligible (e.g., institutions located outside the United States and Puerto Rico, central offices, military academies) were deleted from the population file.

The IPEDS file exclusions, themselves, eliminate some categories of ineligible institutions; however, additional deletion from this file was required. Starting with the 9,000 “institutions” on this database, records were deleted to yield a sampling frame containing 6,430 institutions *appearing* to be eligible for NPSAS:04 based on their 2000–01 IPEDS data. Deletions included (1) administrative units; (2) U.S. service academies; (3) schools outside of the United States and Puerto Rico; (4) institutions offering no programs of at least 300 content hours, six semesters/trimesters, or 12 quarter hours and for which the highest level of offering was a certificate or diploma of less than one academic year; (5) institutions offering only correspondence courses; and (6) institutions not eligible for Title IV funding.

Because enrollment data were needed to compute measures of size for sample selection, the 2000 IPEDS Fall Enrollment Survey data were edited and/or imputed to eliminate missing data. IPEDS unduplicated counts could not be used because at the time they did not go through the IPEDS imputation procedure. Missing undergraduate, graduate, and first-professional enrollments were set to zero for institutions that did not offer that level of instruction, and missing first-time student counts were set to zero for graduate institutions. Sets of records were identified for which the enrollment data either (a) were reported with another institution’s, or (b) contained combined data. In such cases, the combined enrollment data were allocated equally to all institutions in the set, with the exception that if a “parent” institution was identified, that institution was assigned double the enrollment of the “children” institutions. For institutions with any missing enrollments, enrollment was imputed using the IPEDS methodology.

The eligible institutions on the sampling frame were partitioned into 58 institutional strata based on institutional control, level, highest level of offering, Carnegie classification, and state. The 58 institutional strata are listed below:

⁵ The target population includes students enrolled at any time between July 1, 2003 and June 30, 2004. The IPEDS data used for the initial sampling frame were collected in 2001, and the IPEDS data used for sample freshening (to be described in section 2.1.2) were collected in 2002. Thus, any institutions that came into existence or became eligible between the IPEDS data collections in 2002 and June 30, 2004 were not included.

1. Public less than 2-year
2. Public 2-year, associate's Carnegie classification
3. Public 2-year, other Carnegie classification—degree-granting
4. Public 2-year, other Carnegie classification—NPSAS only
5. Public 4-year non-doctorate-granting, master's Carnegie classification
6. Public 4-year non-doctorate-granting, bachelor's Carnegie classification
7. Public 4-year non-doctorate-granting, other Carnegie classification
8. Public 4-year doctorate-granting, doctor's Carnegie classification
9. Public 4-year doctorate-granting, other Carnegie classification
10. Public 4-year NPSAS only
11. Private not-for-profit less-than-4-year, associate's Carnegie classification
12. Private not-for-profit less-than-4-year, other Carnegie classification—degree-granting
13. Private not-for-profit less-than-4-year, other Carnegie classification—NPSAS only
14. Private not-for-profit 4-year non-doctorate-granting, master's Carnegie classification
15. Private not-for-profit 4-year non-doctorate-granting, bachelor's Carnegie classification
16. Private not-for-profit 4-year non-doctoral, other Carnegie classification
17. Private not-for-profit 4-year doctorate-granting, doctoral Carnegie classification
18. Private not-for-profit 4-year doctorate-granting, master's Carnegie classification
19. Private not-for-profit 4-year doctorate-granting, other Carnegie classification
20. Private not-for-profit 4-year—NPSAS only
21. Private for-profit less-than-2-year
22. Private for-profit 2-year or more
23. California public 2-year
24. California public 4-year
25. California private not-for-profit 4-year
26. Connecticut public 2-year
27. Connecticut public 4-year
28. Connecticut private not-for-profit 4-year
29. Delaware public 2-year
30. Delaware public 4-year
31. Delaware private not-for-profit 4-year
32. Georgia public 2-year
33. Georgia public 4-year
34. Georgia private not-for-profit 4-year
35. Illinois public 2-year
36. Illinois public 4-year
37. Illinois private not-for-profit 4-year
38. Indiana public 2-year
39. Indiana public 4-year
40. Indiana private not-for-profit 4-year
41. Minnesota public 2-year
42. Minnesota public 4-year
43. Minnesota private not-for-profit 4-year
44. Nebraska public 2-year
45. Nebraska public 4-year
46. Nebraska private not-for-profit 4-year
47. New York public 2-year
48. New York public 4-year
49. New York private not-for-profit 4-year
50. Oregon public 2-year
51. Oregon public 4-year
52. Oregon private not-for-profit 4-year
53. Tennessee public 2-year
54. Tennessee public 4-year
55. Tennessee private not-for-profit 4-year
56. Texas public 2-year
57. Texas public 4-year
58. Texas private not-for-profit 4-year

A stratified sample of about 1,600 institutions was then selected with probabilities proportional to size (pps); some of these institutions subsequently proved to be ineligible and others failed to participate.

The sample of institutions was initially selected in September 2002 to allow the field test sample institutions to be selected from the complement of the full-scale sample. In July 2003, a freshened sample of institutions was selected from a frame of institutions that were not on the original sampling frame because they were new institutions, newly eligible institutions, or mistakenly ineligible due to IPEDS classification errors. Freshening was done to ensure the representativeness of the sample because the initial sample was selected a year earlier. The measures of size for the supplemental sampling frame from which the freshened sample was selected were based on the 2002 IPEDS Fall Enrollment Survey counts.

B.2.2 Selecting Sample Institutions

It was necessary to allocate the student sample to the separate applicable institutional (defined above) and student sampling strata. There were eight student sampling strata as follows:

1. in-state first-time beginner students;
2. out-of-state first-time beginner students;
3. in-state other undergraduate students;
4. out-of-state other undergraduate students;
5. master's students;
6. doctoral students;
7. other graduate students; and
8. first-professional students.

First-time beginner students (FTBs) were stratified separately from other undergraduate students because they were oversampled to allow for sufficient numbers to be surveyed in the 2006 follow-up study, the Beginning Postsecondary Students Longitudinal Study (BPS:04/06). FTBs and other undergraduate students were each divided into in-state and out-of-state strata because undergraduate in-state students were oversampled in the 12 states with state-representative samples. These in-state and out-of-state strata were used for all institutions to allow for sampling ease and consistency; however, in states that did not have state-representative samples, in-state students were sampled at the same rate as out-of-state students.

The NSOPF:04 institution sample was a subset of the NPSAS:04 sample. Therefore, when the institutions were selected, students as well as faculty were considered. The discussion below focuses on the students; however, there were six faculty strata that factored into some of the computations. When both student and faculty strata were used, the term person strata is used.

In determining the allocation, the following notation is used:

- (1) $r = 1, 2, \dots, 58$ indexes the previously defined institutional strata;
- (2) $s = 1, 2, 3, \dots, 14$ indexes the previously defined initial person strata;
- (3) $j = 1, 2, \dots, J(r)$ indexes the institutions within stratum “ r ”;
- (4) $M_{rs}(j)$ = number of students enrolled or faculty employed during the NPSAS year who belong to person stratum “ s ” at the j -th institution in institutional stratum “ r ”;

- (5) m_{rs} = number of persons to be selected from person stratum “s” within the r-th institutional stratum (referred to henceforth as person stratum “rs”); and
- (6) $\pi_r(j)$ = probability of selecting the j-th institution in institutional stratum “r.”

The overall population sampling rate (f_{rs}) for person stratum “rs” is given by

$$f_{rs} = m_{rs} / M_{rs}(+)$$

where

$$M_{rs}(+) = \sum_{j=1}^{J(r)} M_{rs}(j).$$

The student sample was allocated to the separate applicable institutional and student sampling strata, defined above. Student sampling rates, which were used to compute institution-level composite measures of size, were based on the 2000 IPEDS Fall Enrollment Survey counts and the required sample sizes (see tables B-1 and B-2). The initially computed stratum-level student sampling rates, f_{rs} (used to define institution measures of size) are shown in tables B-3 and B-4. Table B-3 presents the sampling rates for FTBs and other undergraduate students for each of the 22 national strata and the 36 state strata. The institutions included in the national sample were selected from all 58 strata, while the institutions included in the state samples were only selected from the 36 state strata. Table B-4 presents sampling rates for masters, doctoral, other graduate, and first-professional students. The IPEDS files do not provide separate counts for masters, doctoral, and other graduate students; hence, the partitioning of total graduate enrollment into these three categories was based on NPSAS:2000 data.

Appendix B. Sampling Details
Table B-3. Student sampling rates used in determining measures of size by institutional stratum and type of student (undergraduate students): 2004

Institutional stratum ¹	Undergraduate students					
	FTBs			Other undergraduates		
	Size of universe ²	Sampling rate	Sample size	Size of universe ²	Sampling rate	Sample size
Total	1,898,677	0.010	18,600	6,200,814	0.003	16,490
Public less than 2-year	72,141	0.028	2,010	24,472	0.020	490
Public 2-year associate's	497,349	0.003	1,610	2,218,074	0.001	3,150
Public 2-year other—degree-granting	14,443	0.005	70	39,718	0.006	230
Public 2-year other—NPSAS only	25,552	0.018	470	13,557	0.015	200
Public 4-year non-doctorate-granting master's	114,348	0.004	450	523,223	0.002	1,230
Public 4-year non-doctorate-granting bachelor's	36,811	0.004	160	172,824	0.003	490
Public 4-year non-doctorate-granting other	17,793	0.005	80	65,711	0.001	50
Public 4-year doctorate-granting doctor's	300,138	0.004	1,190	1,394,886	0.002	2,810
Public 4-year doctorate-granting other	61,807	0.004	220	298,610	0.002	690
Public 4-year NPSAS only	13,220	0.002	30	49,839	0.001	40
Private not-for-profit less-than-4-year, associate	17,767	0.029	520	24,744	0.028	680
Private not-for-profit less-than-4-year, other—degree-granting	2,412	#	#	4,454	#	#
Private not-for-profit less-than-4-year, other—NPSAS	28,714	0.029	820	6,355	0.025	160
Private not-for-profit 4-year non-doctorate-granting, master's	44,061	0.015	640	221,327	0.004	930
Private not-for-profit 4-year non-doctorate-granting, bachelor's	93,989	0.015	1,460	304,509	0.003	870
Private not-for-profit 4-year non-doctorate-granting, other	27,060	0.016	420	100,735	0.008	810
Private not-for-profit 4-year doctorate-granting, doctor's	58,368	0.011	660	221,636	0.005	1,110
Private not-for-profit 4-year doctorate-granting, master's	34,040	0.011	360	137,685	0.002	330
Private not-for-profit 4-year doctorate-granting, other	8,344	0.017	140	28,132	0.001	40
Private not-for-profit 4-year NPSAS only	17,119	0.014	230	67,576	0.001	50
Private for-profit less-than-2-year	202,939	0.027	5,400	16,927	0.027	460
Private for-profit 2-year or more	210,262	0.008	1,660	265,820	0.006	1,680
California						
Public 2-year	131,839	0.008	1,040	1,268,189	0.004	5,020
Public 4-year	65,657	0.005	340	367,345	0.003	1,030
Private not-for-profit 4-year	22,108	0.013	290	100,256	0.005	470
Connecticut						
Public 2-year	6,506	0.135	880	34,371	0.071	2,460
Public 4-year	8,099	0.079	640	37,368	0.033	1,230
Private not-for-profit 4-year	9,122	0.046	420	30,374	0.016	480
Delaware						
Public 2-year	1,810	0.448	810	10,209	0.235	2,400
Public 4-year	4,296	0.187	810	14,669	0.083	1,220
Private not-for-profit 4-year	1,463	0.148	220	5,333	0.053	280
Georgia						
Public 2-year	29,516	0.046	1,350	75,904	0.025	1,930
Public 4-year	24,047	0.035	850	112,323	0.014	1,590
Private not-for-profit 4-year	10,128	0.032	320	34,083	0.009	320
Illinois						
Public 2-year	55,763	0.024	1,360	284,609	0.013	3,620
Public 4-year	23,768	0.011	260	121,846	0.006	670
Private not-for-profit 4-year	22,208	0.018	400	94,850	0.006	540
Indiana						
Public 2-year	10,451	0.084	880	42,150	0.044	1,840
Public 4-year	32,007	0.041	1,310	126,254	0.019	2,340
Private not-for-profit 4-year	13,073	0.037	490	43,692	0.014	600

See notes at end of table.

Table B-3. Student sampling rates used in determining measures of size by institutional stratum and type of student (undergraduate students): 2004—Continued

Institutional stratum ¹	Undergraduate students					
	FTBs			Other undergraduates		
	Size of universe ²	Sampling rate	Sample size	Size of universe ²	Sampling rate	Sample size
Minnesota						
Public 2-year	31,381	0.048	1,490	70,764	0.026	1,830
Public 4-year	17,494	0.032	560	79,641	0.014	1,100
Private not-for-profit 4-year	9,566	0.030	290	34,263	0.008	280
Nebraska						
Public 2-year	6,423	0.159	1,020	29,258	0.088	2,580
Public 4-year	7,745	0.086	670	33,846	0.040	1,370
Private not-for-profit 4-year	3,384	0.079	270	13,814	0.027	370
New York						
Public 2-year	47,991	0.020	940	187,756	0.011	2,030
Public 4-year	44,911	0.015	670	224,965	0.006	1,350
Private not-for-profit 4-year	58,988	0.016	920	223,251	0.005	1,170
Oregon						
Public 2-year	13,052	0.089	1,160	70,536	0.047	3,350
Public 4-year	8,860	0.041	360	47,902	0.017	830
Private not-for-profit 4-year	3,854	0.055	210	13,731	0.016	230
Tennessee						
Public 2-year	13,023	0.085	1,100	62,971	0.049	3,060
Public 4-year	15,976	0.040	650	78,992	0.019	1,480
Private not-for-profit 4-year	10,024	0.044	450	33,193	0.013	450
Texas						
Public 2-year	101,563	0.016	1,650	358,510	0.008	3,030
Public 4-year	53,496	0.008	430	287,690	0.004	1,130
Private not-for-profit 4-year	16,944	0.014	240	69,535	0.005	350

Rounds to zero.

¹ Stratum reflects institutional categorization as determined from the 2000–01 and 2002–03 Integrated Postsecondary Education Data System (IPEDS) files; some errors in this classification were uncovered when institutions were contacted.

² The size of the universe is based on counts from the 2000 and 2002 IPEDS Fall Enrollment Surveys.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table B-4. Student sampling rates used in determining measures of size by institutional stratum and type of student (graduate students and first-professional students): 2004

Institutional stratum ¹	Graduate students											
	Master's students			Doctor's students			Other graduate students			First-professional students		
	Size of universe ²	Sampling rate	Sample size	Size of universe ²	Sampling rate	Sample size	Size of universe ²	Sampling rate	Sample size	Size of universe ²	Sampling rate	Sample size
Total	1,633,015	0.003	5,008	162,228	0.024	3,943	73,816	0.006	414	310,249	0.005	1,502
Public less than 2-year	†	†	†	†	†	†	†	†	†	†	†	†
Public 2-year associate's	†	†	†	†	†	†	327	#	#	†	†	†
Public 2-year other—degree-granting	†	†	†	†	†	†	†	†	†	†	†	†
Public 2-year other—NPSAS only	†	†	†	†	†	†	†	†	†	†	†	†
Public 4-year non-doctorate-granting master's	101,289	0.001	120	13	#	#	3,248	0.002	10	†	†	†
Public 4-year non-doctorate-granting bachelor's	3,899	0.003	10	†	†	†	624	0.003	#	†	†	†
Public 4-year non-doctorate-granting other	6,524	#	#	†	†	†	1,699	#	#	†	†	†
Public 4-year doctorate-granting doctor's	401,988	0.003	1,130	60,343	0.021	1,250	9,575	0.007	60	74,447	0.007	520
Public 4-year doctorate-granting other	64,391	0.002	130	1,035	0.025	30	2,137	0.002	10	5,808	0.005	30
Public 4-year NPSAS only	4,136	#	#	747	0.009	10	143	#	#	1,206	#	#
Private not-for-profit less-than-4-year, associate's	†	†	†	†	†	†	†	†	†	†	†	†
Private not-for-profit less-than-4-year, other—degree-granting	†	†	†	†	†	†	†	†	†	†	†	†
Private not-for-profit less-than-4-year, other—NPSAS	†	†	†	†	†	†	†	†	†	†	†	†
Private not-for-profit 4-year non-doctorate-granting, master's	69,872	0.001	70	7	#	#	2,154	0.001	#	†	†	†
Private not-for-profit 4-year non-doctorate-granting, bachelor's	11,473	0.001	10	†	†	†	1,143	0.003	#	†	†	†
Private not-for-profit 4-year non-doctorate-granting, other	19,485	#	10	†	†	†	2,450	0.001	#	†	†	†
Private not-for-profit 4-year doctorate-granting	132,740	0.004	560	18,977	0.034	640	5,830	0.015	90	46,339	0.003	160
Private not-for-profit 4-year doctorate-granting, master's	76,154	0.004	280	1,276	0.034	40	1,684	0.003	10	15,701	#	#
Private not-for-profit 4-year doctorate-granting, other	14,716	0.004	70	3,980	0.033	130	1,033	#	#	28,721	0.007	210
Private not-for-profit 4-year NPSAS only	8,229	#	#	574	0.023	10	1,993	#	#	2,217	0.002	10
Private for-profit less-than-2-year	†	†	†	†	†	†	†	†	†	†	†	†
Private for-profit 2-year or more	46,151	0.001	30	3,433	#	#	1,851	#	#	1,068	#	#
California												
Public 2-year	†	†	†	†	†	†	†	†	†	†	†	†
Public 4-year	99,569	0.002	230	10,134	0.020	210	2,486	0.009	20	7,605	0.004	30
Private not-for-profit 4-year	69,851	0.003	210	10,744	0.033	360	10,347	0.002	20	23,992	0.005	120
Connecticut												
Public 2-year	†	†	†	†	†	†	†	†	†	†	†	†
Public 4-year	10,541	0.003	30	1,741	0.021	40	1,448	0.003	10	1,115	0.004	#
Private not-for-profit 4-year	14,083	0.005	70	1,017	0.032	30	1,294	0.011	10	2,302	0.002	#

See notes at end of table.

Table B-4. Student sampling rates used in determining measures of size by institutional stratum and type of student (graduate students and first-professional students): 2004—Continued

Institutional stratum ¹	Graduate students											
	Master's students			Doctor's students			Other graduate students			First-professional students		
	Size of universe ²	Sampling rate	Sample size	Size of universe ²	Sampling rate	Sample size	Size of universe ²	Sampling rate	Sample size	Size of universe ²	Sampling rate	Sample size
Delaware												
Public 2-year	†	†	†	†	†	†	†	†	†	†	†	†
Public 4-year	2,670	0.004	10	540	0.020	10	†	†	†	†	†	†
Private not-for-profit 4-year	1,609	0.005	10	59	0.017	#	26	#	#	1,063	0.005	10
Georgia												
Public 2-year	†	†	†	†	†	†	†	†	†	†	†	†
Public 4-year	23,951	0.004	110	2,500	0.020	50	1,761	0.007	10	2,902	0.004	10
Private not-for-profit 4-year	8,527	0.006	50	1,127	0.032	40	208	0.010	#	6,495	0.004	30
Illinois												
Public 2-year	†	†	†	†	†	†	†	†	†	†	†	†
Public 4-year	39,623	0.002	80	3,867	0.021	80	320	0.003	#	4,359	0.007	30
Private not-for-profit 4-year	48,999	0.006	310	4,879	0.033	160	836	0.011	10	12,189	0.004	40
Indiana												
Public 2-year	†	†	†	†	†	†	†	†	†	†	†	†
Public 4-year	23,097	0.005	120	3,493	0.020	70	728	0.010	10	4,137	0.004	20
Private not-for-profit 4-year	7,135	0.005	40	506	0.032	20	35	#	#	1,895	0.003	10
Minnesota												
Public 2-year	†	†	†	†	†	†	†	†	†	†	†	†
Public 4-year	13,757	0.004	60	2,347	0.020	50	526	0.004	#	2,733	0.004	10
Private not-for-profit 4-year	12,390	0.006	80	519	0.033	20	1,102	0.013	10	3,378	0.004	20
Nebraska												
Public 2-year	†	†	†	†	†	†	†	†	†	†	†	†
Public 4-year	8,720	0.004	40	1,007	0.021	20	236	0.008	#	1,296	0.004	10
Private not-for-profit 4-year	1,893	0.002	#	143	0.028	#	75	#	#	1,987	#	#
New York												
Public 2-year	†	†	†	†	†	†	†	†	†	†	†	†
Public 4-year	50,905	0.003	150	5,424	0.021	110	5,002	0.008	40	4,793	0.004	20
Private not-for-profit 4-year	101,355	0.006	610	7,609	0.032	240	5,113	0.011	60	23,008	0.003	70
Oregon												
Public 2-year	†	†	†	†	†	†	†	†	†	†	†	†
Public 4-year	9,030	0.003	20	1,126	0.020	20	3,761	0.006	20	1,402	0.006	10
Private not-for-profit 4-year	2,915	0.005	20	207	0.034	10	595	#	#	2,720	0.004	10
Tennessee												
Public 2-year	†	†	†	†	†	†	†	†	†	†	†	†
Public 4-year	16,573	0.002	40	1,485	0.021	30	708	0.004	#	2,754	0.007	20
Private not-for-profit 4-year	7,523	0.005	40	883	0.033	30	724	0.003	#	2,884	0.004	10

See notes at end of table.

Table B-4. Student sampling rates used in determining measures of size by institutional stratum and type of student (graduate students and first-professional students): 2004—Continued

Institutional stratum ¹	Graduate students											
	Master's students			Doctor's students			Other graduate students			First-professional students		
	Size of universe ²	Sampling rate	Sample size	Size of universe ²	Sampling rate	Sample size	Size of universe ²	Sampling rate	Sample size	Size of universe ²	Sampling rate	Sample size
Texas												
Public 2-year	†	†	†	†	†	†	†	†	†	†	†	†
Public 4-year	75,495	0.002	170	8,797	0.021	180	139	#	#	11,001	0.007	80
Private not-for-profit 4-year	21,757	0.006	140	1,689	0.033	60	455	0.011	10	8,732	0.004	30

† Not applicable.

Rounds to zero.

¹ Stratum reflects institutional categorization as determined from the 2000–01 and 2002–03 Integrated Postsecondary Education Data System (IPEDS) file; some errors in this classification were uncovered when institutions were contacted.

² The size of the universe is based on counts from the 2000 and 2002 IPEDS Fall Enrollment Surveys and the distribution of graduate student type is based on NPSAS:2002.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

The composite measure of size for the j -th institution in stratum “ r ” was then defined to be

$$S_r(j) = \sum_{s=1}^7 f_{rs} M_{rs}(j),$$

which is the number of persons that would be selected from the j -th institution if all institutions on the frame were to be sampled.

Institutions were selected using Chromy’s sequential probability minimum replacement (pmr) sampling algorithm (Chromy 1979), which is similar to systematic sampling, to select institutions with probabilities proportional to a composite measure of size based on expected enrollment. A sample of 1,630 institutions was selected in Fall 2002 so that these institutions could be notified early of their selection and to allow a separate sample to be selected for the field test from the remaining institutions on the sampling frame. In Summer 2003, an additional sample of about 30 institutions was selected from a frame of institutions not included on the initial sampling frame. Of the sample institutions selected for the full-scale study, about 810 were selected with certainty. The certainty institutions were either in strata in which all institutions were selected or had expected frequencies of selection greater than unity (1.00). About 1,630 of the sampled institutions were found to be NPSAS eligible, and about 1,360 of these eligible institutions provided student enrollment lists for use as the second stage (i.e., student) sampling frame.

An independent sample of institutions was selected for each institutional stratum using Chromy’s sequential probability minimum replacement (pmr) sampling algorithm (Chromy 1979) to select institutions with probabilities proportional to their computed measures of size. However, rather than multiple selections of sample institutions being allowed,⁶ those with expected frequencies of selection greater than unity (1.00) were selected with certainty. Also, institutions were selected with certainty if they were in strata where all institutions were selected. The remainder of the institutional sample was selected from the remaining institutions within each stratum. The sampling algorithm was implemented with a random start for each institutional stratum to ensure the positive pairwise probabilities of selection that were needed for proper variance estimation (Chromy 1981).

Therefore, the probability of selection for the j -th institution in institutional stratum “ r ” is given by

$$\pi_r(i) = \begin{cases} \frac{n_r S_r(i)}{S_r(+)} & \text{for noncertainty selections} \\ 1 & \text{for certainty selections.} \end{cases}$$

where

$$S_r(+) = \sum_{j=1}^{J(r)} S_r(j),$$

and n_r^* is the number of noncertainty selections from stratum “ r .”

⁶ Precluding institutions with multiple selections at the first stage of sampling made it unnecessary to select multiple second-stage samples of students.

Appendix B. Sampling Details

Table B-5 shows the institution sampling rates and the numbers of certainty and noncertainty institutions selected for each of the 22 national strata and the 36 state strata, respectively. Within each institutional stratum, additional implicit stratification was accomplished by sorting the stratum sampling frame by the following classifications: (1) historically black colleges and universities (HBCU) indicator; (2) Carnegie classifications of postsecondary institutions; (3) the Office of Business Economics (OBE) Region from the IPEDS header file (Bureau of Economic Analysis of the U.S. Department of Commerce Region);⁷ and (4) the institution measure of size. The objective of this implicit stratification was to approximate proportional representation of institutions on these measures.

Table B-5. Institutional sampling rates and number of certainty and noncertainty institutions sampled, by institutional stratum: 2004

Institutional stratum ¹	Size of universe ²	Sampling rate	Number of sample institutions		
			Total	Certainty	Noncertainty
Total	6,706	0.25	1,670	810	860
Public less than 2-year	317	0.21	70	20	50
Public 2-year associate	623	0.12	70	#	70
Public 2-year other—degree-granting	36	0.14	10	#	#
Public 2-year other—NPSAS only ³	69	0.45	30	10	20
Public 4-year non-doctorate-granting, master's	118	0.17	20	#	20
Public 4-year non-doctorate-granting, bachelor's	65	0.17	10	#	10
Public 4-year non-doctorate-granting, other	47	0.06	#	#	#
Public 4-year doctorate-granting, doctor's	126	1.00	130	130	#
Public 4-year doctorate-granting, other	49	0.20	10	#	10
Public 4-year NPSAS only ³	16	0.13	#	#	#
Private not-for-profit less-than-4-year, associate	108	0.31	30	#	30
Private not-for-profit less-than-4-year, other—degree-granting	24	0.08	#	#	#
Private not-for-profit less-than-4-year, other—NPSAS only ³	240	0.16	40	10	30
Private not-for-profit 4-year non-doctorate-granting, master's	132	0.09	10	#	10
Private not-for-profit 4-year non-doctorate-granting, bachelor's	293	0.12	30	#	30
Private not-for-profit 4-year non-doctorate-granting, other	202	0.16	30	#	30
Private not-for-profit 4-year doctorate-granting, doctor's	52	1.00	50	50	#
Private not-for-profit 4-year doctorate-granting, master's	61	0.18	10	#	10
Private not-for-profit 4-year doctorate-granting, other	143	0.09	10	#	10
Private not-for-profit 4-year—NPSAS only ³	51	0.06	#	#	#
Private for-profit less-than-2-year	1,445	0.12	170	10	170
Private for-profit 2-year or more	1,149	0.10	110	10	110
California	298	0.38	110	50	60
Public 2-year	114	0.33	40	#	40
Public 4-year	33	1.00	30	30	#
Private not-for-profit 4-year	151	0.27	40	20	20
Connecticut	45	1.00	50	50	#
Public 2-year	15	1.00	20	20	#
Public 4-year	10	1.00	10	10	#
Private not-for-profit 4-year	20	1.00	20	20	#
Delaware	9	1.00	10	10	#
Public 2-year	3	1.00	#	#	#
Public 4-year	2	1.00	#	#	#
Private not-for-profit 4-year	4	1.00	#	#	#

See notes at end of table.

⁷ For sorting purposes, Alaska and Hawaii were combined with Puerto Rico in the Outlying Areas region rather than in the Far West region.

Table B-5. Institutional sampling rates and number of certainty and noncertainty institutions sampled, by institutional stratum: 2004—Continued

Institutional stratum ¹	Size of universe ²	Sampling rate	Number of sample institutions		
			Total	Certainty	Noncertainty
Georgia	108	0.79	90	60	30
Public 2-year	53	0.57	30	10	30
Public 4-year	21	1.00	20	20	#
Private not-for-profit 4-year	34	1.00	30	30	#
Illinois	148	0.49	70	40	40
Public 2-year	48	0.63	30	10	20
Public 4-year	12	1.00	10	10	#
Private not-for-profit 4-year	88	0.34	30	10	20
Indiana	71	0.85	60	50	10
Public 2-year	16	1.00	20	20	#
Public 4-year	14	1.00	10	10	#
Private not-for-profit 4-year	41	0.73	30	20	10
Minnesota	90	0.86	80	70	10
Public 2-year	43	0.70	30	20	10
Public 4-year	11	1.00	10	10	#
Private not-for-profit 4-year	36	1.00	40	40	#
Nebraska	29	1.00	30	30	#
Public 2-year	7	1.00	10	10	#
Public 4-year	7	1.00	10	10	#
Private not-for-profit 4-year	15	1.00	20	20	#
New York	249	0.43	110	70	30
Public 2-year	37	1.00	40	40	#
Public 4-year	45	0.67	30	20	10
Private not-for-profit 4-year	167	0.24	40	20	20
Oregon	52	1.00	50	50	#
Public 2-year	17	1.00	20	20	#
Public 4-year	10	1.00	10	10	#
Private not-for-profit 4-year	25	1.00	30	30	#
Tennessee	75	0.81	60	50	10
Public 2-year	21	1.00	20	20	#
Public 4-year	10	1.00	10	10	#
Private not-for-profit 4-year	44	0.68	30	20	10
Texas	166	0.54	90	50	40
Public 2-year	68	0.44	30	10	20
Public 4-year	43	0.70	30	20	10
Private not-for-profit 4-year	55	0.55	30	20	10

Rounds to zero.

¹ Stratum reflects institutional categorization as determined from the 2000–01 Integrated Postsecondary Education Data System (IPEDS) file; some errors in this classification were uncovered when institutions were contacted.² Based on the 2000–01 and 2002–03 IPEDS file.

NOTE: Detail may not sum to total because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

B.3 The Student Samples

The initial student sample was selected from lists provided by about 1,360 of the 1,630 institutions (from the original sample) that proved to be eligible. The postsecondary students eligible for NPSAS:04 were those who attended a NPSAS-eligible institution during the 2003–04 academic year and who were

- enrolled in *either* (1) an academic program; (2) at least one course for credit that could be applied toward fulfilling the requirements for an academic degree; *or* (3) an occupational or vocational program that required at least 3 months or 300 clock hours of instruction to receive a degree, certificate, or other formal award;
- not concurrently enrolled in high school; and
- not enrolled *solely* in a GED or other high school completion program.

B.3.1 Construction of Sampling Frames

The sampling frames provided by sample institutions included paper and electronic lists of students enrolled in terms or courses of instruction during the previously defined NPSAS year.

Each sampled institution that was verified as NPSAS-eligible was asked to provide a list of all its students who satisfied all the NPSAS eligibility conditions, preferably an “unduplicated” electronic list (i.e., one in which each student’s name appeared only once), together with identifying, classifying, and locating information (see section 2.3.2 in the main report). Although electronic files were preferred, student lists were accepted in a variety of formats, as long as they were complete.

Several checks on quality and completeness of student lists were implemented before the sample students were selected. Institutions providing lists that failed these checks were contacted to resolve the detected problems. Enrollment lists failed quality control checks under the following conditions:

- FTBs were not identified (unless the institution only enrolled graduate/first-professional students or explicitly indicated that no FTBs existed in the school); and/or
- student level—undergraduate, master’s, doctoral, other graduate, or first professional—was not clearly identified.

Quality checks on student counts were performed separately for FTBs and all other students. The “unduplicated” FTB counts were checked against the fall enrollment counts from the IPEDS Fall Enrollment Survey because IPEDS does not have “unduplicated” annual FTB counts. The check failed if the count for any “unduplicated” list was at least 50 percent less than the IPEDS count. The list counts were expected to almost always be more than the IPEDS counts because the IPEDS counts were not annual counts. This check identified institutional enrollment lists that under-reported FTBs. The “unduplicated” counts of other undergraduates, graduates, and first-professionals were checked against the “unduplicated” annual enrollment counts from the IPEDS Fall Enrollment Survey. The check failed if the count for any “unduplicated” list differed by at least 50 percent from the IPEDS count.⁸

B.3.2 Student Sample Selection

As student lists were received from institutions, students were sampled using predetermined sampling rates that varied by student stratum. Stratified systematic sampling was used to ensure comparable sampling procedures for both paper and electronic lists.

⁸ If provided paper lists were not “unduplicated,” an “unduplicated” total was estimated by applying an empirically determined multiplicity factor (0.50) to the count over provided lists.

For each institution, the student sampling rates, rather than the student sample sizes, were set to fixed values:

- to facilitate sampling students on a flow basis as student lists were received;
- to facilitate the procedures used to “unduplicate” the samples selected from (duplicated) hard-copy lists; and
- because sampling at a fixed rate based on the overall stratum sampling rates and the institutional probabilities of selection results in approximately equal overall probabilities of selection within the ultimate institution-by-student strata.

Some institutional systems sent in lists for multiple institutions or campuses. If the lists were separate for each institution or campus, then the samples were selected separately and independently. If the lists were combined into one list with no identifier mapping students to institution or campus, then one student sample was selected that represented all of the institutions or campuses included on the list. In such cases, sampling rates were adjusted, and a weight adjustment was made (see section 6.1.1 in the main report).

For paper lists, samples were selected manually, and then the list of sample students was entered into an electronic file. When students from different strata (e.g., FTBs and other undergraduates) were combined on a paper list, the sampling rate from the stratum with the higher rate was used. Then after the sample was entered into an electronic file, the students from the other stratum (or strata) were subsampled to match the sampling rates for that stratum.⁹

After the sample of students had been selected for an institution, Social Security numbers (SSNs) of those sampled were compared to those of students who had already been selected from other institutions to eliminate cross-institution duplication. Multiplicity adjustments in the sample weighting (described in more detail in section 6.2.1 in the main report) accounted for the fact that any students who attended more than one institution during the NPSAS year had more than one chance of selection.

The development of student sampling rates within student stratum “rs” (i.e., the r-th institutional stratum and the s-th student stratum within institutional stratum) were previously discussed in section B.2.2, and the notation used in that development will be used here, except that person strata one through eight are used for student sampling and are referred to as student strata below.

For the unconditional probability of selection to be a constant for all eligible students in stratum “rs,” the overall probability of selection should be the overall student sampling fraction, f_{rs} ; i.e., it must be required that

$$\frac{m_{rs}(j)}{M_{rs}(j)} \pi_r(j) = f_{rs},$$

or equivalently,

$$m_{rs}(j) = f_{rs} \frac{M_{rs}(j)}{\pi_r(j)}.$$

⁹ The issue of combined strata was not a problem for electronic lists since the file could be sorted by stratum prior to sampling.

Thus, the conditional sampling rate for stratum “rs,” given selection of the j-th institution, becomes

$$f_{rs|j} = f_{rs} / \pi_r(j).$$

It should be noted that, in this case, the desired overall student sample size, m_s , is achieved only *in expectation* over all possible samples.

Achieving the desired sample sizes with equal probabilities within strata in the particular sample that has been selected and simultaneously adjusting for institutional nonresponse and ineligibility requires that

$$\sum_{j \in R} m_{rs}(j) = m_{rs},$$

where “R” denotes the set of eligible, *responding* institutions. Letting the conditional student sampling rate for stratum “rs” in the j-th institution be

$$\hat{f}_{rs|j} = \hat{f}_{rs} / \pi_r(j),$$

then requires

$$\sum_{i \in R} \hat{f}_{rs} \frac{M_{rs}(j)}{\pi_r(j)} = m_{rs},$$

or equivalently,

$$\hat{f}_{rs} = m_{rs} / \hat{M}_{rs}$$

where

$$\hat{M}_{rs} = \frac{\sum_{j \in R} M_{rs}(j)}{\pi_r(j)}.$$

Since it was necessary to set student sampling rates before complete information on institutional eligibility and response status was available, \hat{M}_{rs} was calculated as follows:

$$\hat{M}_{rs} = \sum_{j \in S} \frac{M_{rs}(j)}{\pi_r(j)} * E_r * R_r * E_{rs},$$

where “S” denotes the set of all sample institutions,

- E_r = the institutional eligibility factor for institutional stratum “r”;
- R_r = the institutional response factor for institutional stratum “r”; and
- E_{rs} = the student eligibility factor for student stratum “rs”.

These factors were the proportions of institutions or students, respectively, expected to be

eligible or responding within the defined strata. Since this determination was made after eligibility status had already been determined for some institutions, values of 0 (known not eligible) or 1 (known eligible) were used, if known at that time.

These sampling rates were sometimes modified as follows:

- Student sampling rates were increased, as needed, so that the sample size achieved at each sample institution would be at least 10 sample students, where possible, to ensure sufficient yield for variance estimation.
- Student sampling rates were decreased if the sample size was more than 50 greater than the institution had been told to expect, which was based on the sampling rate applied to the enrollment count on the sampling frame.¹⁰
- Sample yield was monitored throughout enrollment list collection and student sampling rates were adjusted periodically for institutions for which sample selection had not yet been performed to ensure that the desired student sample sizes were achieved.

These adjustments to the initial sampling rates resulted in some additional variability in the student sampling rates and, hence, in some increase in survey design effects (variance inflation—see section 6.4.3 in the main report).

The sampling procedures resulted in the selection of 109,210 students. The planned and achieved sample sizes by student stratum and level of offering are shown in table B-6. The initial classification of the student sample overall and by institution type and student stratum are shown in table B-7. The achieved sample yield was less than what was planned (109,210 students as compared to the target of 121,680). Institutional participation rates were somewhat lower than expected, and sampling rates were not adjusted high enough and early enough for the participating institutions to compensate for the loss of sample yield from the nonparticipating institutions. Overall, there were more doctoral and other graduate students in the sample than planned, and there were fewer FTBs, other undergraduate students, and master's students than planned.

The sample size for NPSAS:04 is larger than past NPSAS studies. The first reason for the increased sample size was to ensure sufficient yield for analytic purposes. The sample size was designed so that respondent yield would be sufficient for analyses even if actual response rates were lower than the targeted rates. Second, NCES desired one weight to make the data easier for analysts to use. Also, as mentioned above, NPSAS:04 includes state-representative undergraduate student samples for three types of institutions (public 2-year, public 4-year, and private not-for-profit 4-year) in 12 states. A larger overall sample size was necessary to achieve state-representative samples in addition to the nationally-representative sample.

¹⁰ This was to ensure minimal burden for the institutions participating in computer-assisted data entry (CADE) data abstraction.

Table B-6. Planned and achieved NPSAS:04 student samples, by student stratum and level of offering

Student stratum ¹	Institutional level ²	Students sampled		
		Number expected ³	Number achieved ⁴	Percent ⁵
Total	All institutions	121,680	109,210	89.8
FTB	Subtotal	56,070	49,410	88.1
	Less-than-2-year	14,080	11,370	80.8
	2- to 3-year	24,530	22,250	90.7
	4-year	42,700	15,790	37.0
Other undergraduate	Subtotal	54,490	47,680	87.5
	Less-than-2-year	800	920	115.1
	2- to 3-year	25,990	19,660	75.6
	4-year	27,690	27,100	97.9
Master's	4-year	5,310	3,720	70.1
Doctor's	4-year	3,630	4,950	136.1
Other graduate	4-year	400	1,660	416.3
First-professional	4-year	1,780	1,790	100.7

¹ As expected the sampling frames misclassified some individual students with respect to first-time beginner (FTB), undergraduate, graduate, and first-professional status; statistics presented in this table are based on the sampling frame classification. The two FTB strata (in-state and out-of-state) have been combined, and the two other undergraduate strata (in-state and out-of-state) have been combined.

² Institutional level is based on level confirmed by institution during school contacting.

³ Based on sample allocation and 2000–01 and 2002–03 Integrated Postsecondary Education Data System (IPEDS) file enrollment counts.

⁴ The student sample was drawn from 1,360 eligible institutions that provided enrollment lists.

⁵ Percent reported reflects the ratio of “achieved” to “expected.”

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table B-7. Initial classification of NPSAS:04 student sample, by institutional characteristics and student stratum

Institutional characteristics	Total sample ¹		Student sampling stratum ²							
	Number	Percent	FTB sample ³		Other undergraduate sample		Graduate sample ³		First-professional sample	
			Number	Percent	Number	Percent	Number	Percent	Number	Percent
All institutions	109,210	100.0	49,410	100.0	47,680	100.0	10,330	100.0	1,790	100.0
Institutional level										
Less-than-2-year	12,310	11.3	11,370	23.0	920	1.9	20	0.1	#	0.2
2-year	41,960	38.5	22,250	45.0	19,660	41.2	40	0.4	10	0.5
4-year non-doctorate-granting	21,550	19.8	8,220	16.6	12,130	25.4	1,180	11.5	20	0.9
4-year doctorate-granting	33,400	30.6	7,570	15.3	14,970	31.4	9,100	88.3	1,770	98.1
Institutional control										
Public	71,030	65.2	27,820	56.3	35,720	74.9	6,570	63.8	920	51.2
Private not-for-profit	22,730	20.9	8,770	17.8	9,450	19.8	3,640	35.3	870	48.3
Private for-profit	15,460	14.2	12,820	26.0	2,510	5.3	120	1.2	#	0.2
Type of institution										
Public less-than-2-year	2,780	2.5	2,330	4.7	440	0.9	#	#	#	#
Public 2-year	36,340	33.3	17,780	36.0	18,520	38.8	30	0.3	10	0.5
Public 4-year non-doctorate-granting	9,210	8.5	2,680	5.4	5,970	12.5	550	5.4	10	0.4
Public 4-year doctorate-granting	22,700	20.8	5,030	10.2	10,790	22.6	5,980	58.1	900	50.2
Private not-for-profit 2-year or less	3,020	2.8	2,350	4.8	670	1.4	10	#	#	#
Private not-for-profit 4-year non-doctorate-granting	9,310	8.5	3,920	7.9	4,840	10.1	540	5.3	10	0.4
Private not-for-profit 4-year doctorate-granting	10,400	9.5	2,510	5.1	3,940	8.3	3,090	30.0	860	47.8
Private for-profit less-than-2-year	8,750	8.0	8,280	16.8	460	1.0	10	0.1	#	0.2
Private for-profit 2-year or more	6,710	6.2	4,540	9.2	2,050	4.3	110	1.1	#	0.1

Rounds to zero.

¹ The student sample was drawn from 1,360 eligible institutions that provided enrollment lists.

² As expected, the sampling frames misclassified some individual students as to first-time beginner (FTB), undergraduate, graduate, and first-professional status; statistics presented in this table are based on the sampling frame classification. This explains why some graduate/first-professional students were sampled from institutions that do not have such students.

³ The two FTB strata (in-state and out-of-state) have been combined, the two other undergraduate strata (in-state and out-of-state) have been combined, and the master's, doctorate, and other graduate strata have been combined.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

B.4 Determining NSoFaS Sample Sizes and Sampling Rates

Institution, student, and faculty sample sizes and sampling rates were determined for the 2004 National Study of Faculty and Students (NSoFaS:04) using cost/variance optimization procedures to determine the allocation that would maximize the inferences supported by the design while minimizing data collection costs. The sample allocation was first determined as if all sample institutions eligible for both the student and faculty components of NSoFaS would participate in both components. Because smaller sample sizes were sufficient to support the National Study of Postsecondary Faculty (NSOPF) inference requirements, institutions for the NSOPF sample then were selected as a subsample of the NPSAS sample institutions. The process below focuses on NPSAS.

The cost/variance sample optimization process consisted of the following steps:

1. Precision requirements were established for key estimates.
2. Institution-level and person-level sampling strata were developed to support the key estimates.
3. A cost model was developed.
4. A relative variance model was developed.
5. The optimum sample allocation was determined.

Each of these steps of the cost/variance optimization process is discussed below.

B.4.1 Precision Requirements for Key Estimates

The precision goal for NPSAS:04 was to achieve precision comparable to or better than NPSAS:2000 for national-level estimates for the overall student population and to achieve precision comparable to NPSAS:96 for national estimates for the population of beginning postsecondary students. The population of institutions for which these precision goals were established consisted of the institutions in the United States and Puerto Rico that were participating in Title IV federal student financial aid programs in the 2003–04 academic year.

The *NPSAS:2000 E.D. Tab* (NCES 2001–209) was used to identify 162 key national-level estimates for the overall student population. Likewise, *Descriptive Summary of 1995–96 Beginning Postsecondary Students* (NCES 1999–030) was reviewed to identify 102 key national-level estimates for the population of beginning postsecondary students. Hence, a total of 264 precision constraints were developed for national-level student estimates. These student estimates (outcomes) by domain are shown in table B-8. For each estimate, the objective was to achieve a level of precision that was at least as good as that obtained in the prior study.

Precision requirements also were established for 174 key estimates regarding the in-state student populations in each of the following 12 states: California, Connecticut, Delaware, Georgia, Illinois, Indiana, Minnesota, Nebraska, New York, Oregon, Tennessee, and Texas. The 174 key estimates for each state were a subset of the 264 national-level constraints for in-state¹¹

¹¹ In the first NSoFaS Technical Review Panel meeting, representatives of the 12 states indicated that they were primarily interested in inferences regarding their in-state students.

undergraduate students enrolled in 2003–04 in the following types of institutions participating in Title IV federal student financial aid programs:

1. Public, 2-year institutions.
2. Public, 4-year institutions.
3. Private, not-for-profit, 4-year institutions.

The 174 key state-level estimates are presented in table B-9. For each estimate, the goal was to achieve a relative standard error of 10 percent or less. As is usually the case with survey optimization problems, it was necessary to constrain the sample sizes not to exceed those budgeted for the study: about 81,000 responding students.

B.4.2 Institution-Level and Person-Level Sampling Strata

Twenty-four institution-level NSoFaS sampling strata were defined for the NSoFaS national-level sample by crossing:

- The nine strata traditionally used for the NPSAS (based on institution level, control, and highest level of offering) (called NPSASSTR).
- The 10 strata traditionally used for the NSOPF (based on Carnegie classification) and control (called NSOPFSTR).
- An indicator of 2-year and 4-year institutions that were eligible only for NPSAS (i.e., institutions located in PR and non-degree-granting institutions).

Because of small stratum sizes, two pairs of strata (doctorate-granting and non-doctorate-granting) were collapsed for institutions that were eligible only for NPSAS to form the following two strata:

- Public 4-year, NPSAS-only institutions.
- Private not-for-profit 4-year, NPSAS-only institutions.

The result was a 22-level institutional stratum variable (called STRAT22) defined for the national NSoFaS sample.

Eighteen of the original 24 institution strata defined for the national sample were applicable for the analysis domains defined for the 12 states that had separate precision requirements. Hence, these 18 strata were replicated for each of the 12 states, forming 216 state strata and a total of 240 institution-level strata.^{12,13}

For the sample optimization process, it was necessary to use the 240-level institution stratum variable so that the sample sizes could be accurately mapped to the analysis domains (per tables B-8 and B-9) for which precision requirements had been established. However, since many of these strata contained few institutions, the sample was selected using 58 collapsed strata (called STRAT58) defined by using the 22 national-level institution strata discussed above (STRAT22) and by collapsing the 18 strata for each of the 12 states into the following three strata that represent the domains for which state-specific inferences were required:

¹² Some of the state strata did not actually contain any institutions, so some of the 240 strata had no institutions.

¹³ The state strata included graduate institutions. Only institutions offering undergraduate programs should have been placed in the state strata because state precision requirements are only for undergraduate students.

- Public 2-year institutions.
- Public 4-year institutions.
- Private not-for-profit 4-year institutions.

The number of institutions on the initial sampling frame in each of these 58 sampling strata is provided in tables B-4 and B-5.

Table B-8. Domains and outcomes for NPSAS:04 national sample optimization:

Institution domain	Student level	Dependency/income status	Attendance status	Outcome
All	Undergraduate	All	All	Percent receiving any aid
Public less-than-2-year or private not-for-profit less-than-4-year	Undergraduate	All	All	Percent receiving any aid
Public 2-year	Undergraduate	All	All	Percent receiving any aid
Public 4-year non-doctorate-granting	Undergraduate	All	All	Percent receiving any aid
Public 4-year doctorate-granting	Undergraduate	All	All	Percent receiving any aid
Private not-for-profit 4-year non-doctorate-granting	Undergraduate	All	All	Percent receiving any aid
Private not-for-profit 4-year doctorate-granting	Undergraduate	All	All	Percent receiving any aid
Private for-profit less-than-2-year	Undergraduate	All	All	Percent receiving any aid
Private for-profit 2-year or more	Undergraduate	All	All	Percent receiving any aid
All	Undergraduate	All	All	Percent receiving a Stafford Loan
Public less-than-2-year or private not-for-profit less-than-4-year	Undergraduate	All	All	Percent receiving a Stafford Loan
Public 2-year	Undergraduate	All	All	Percent receiving a Stafford Loan
Public 4-year non-doctorate-granting	Undergraduate	All	All	Percent receiving a Stafford Loan
Public 4-year doctorate-granting	Undergraduate	All	All	Percent receiving a Stafford Loan
Private not-for-profit 4-year non-doctorate-granting	Undergraduate	All	All	Percent receiving a Stafford Loan
Private not-for-profit 4-year doctorate-granting	Undergraduate	All	All	Percent receiving a Stafford Loan
Private for-profit less-than-2-year	Undergraduate	All	All	Percent receiving a Stafford Loan
Private for-profit 2-year or more	Undergraduate	All	All	Percent receiving a Stafford Loan
All	Undergraduate	All	All	Percent receiving a Pell Grant
Public less-than-2-year or private not-for-profit less-than-4-year	Undergraduate	All	All	Percent receiving a Pell Grant
Public 2-year	Undergraduate	All	All	Percent receiving a Pell Grant
Public 4-year non-doctorate-granting	Undergraduate	All	All	Percent receiving a Pell Grant
Public 4-year doctorate-granting	Undergraduate	All	All	Percent receiving a Pell Grant
Private not-for-profit 4-year non-doctorate-granting	Undergraduate	All	All	Percent receiving a Pell Grant
Private not-for-profit 4-year doctorate-granting	Undergraduate	All	All	Percent receiving a Pell Grant
Private for-profit less-than-2-year	Undergraduate	All	All	Percent receiving a Pell Grant
Private for-profit 2-year or more	Undergraduate	All	All	Percent receiving a Pell Grant
All	Undergraduate	All	All	Average amount of aid received
Public less-than-2-year or private not-for-profit less-than-4-year	Undergraduate	All	All	Average amount of aid received
Public 2-year	Undergraduate	All	All	Average amount of aid received
Public 4-year non-doctorate-granting	Undergraduate	All	All	Average amount of aid received
Public 4-year doctorate-granting	Undergraduate	All	All	Average amount of aid received

See notes at end of table.

Table B-8. Domains and outcomes for NPSAS:04 national sample optimization: 2004—Continued

Institution domain	Student level	Dependency/income status	Attendance status	Outcome
Private not-for-profit 4-year non-doctorate-granting	Undergraduate	All	All	Average amount of aid received
Private not-for-profit 4-year doctorate-granting	Undergraduate	All	All	Average amount of aid received
Private for-profit less-than-2-year	Undergraduate	All	All	Average amount of aid received
Private for-profit 2-year or more	Undergraduate	All	All	Average amount of aid received
All	Undergraduate	All	All	Average amount of Stafford Loan received
Public less-than-2-year or private not-for-profit less-than-4-year	Undergraduate	All	All	Average amount of Stafford Loan received
Public 2-year	Undergraduate	All	All	Average amount of Stafford Loan received
Public 4-year non-doctorate-granting	Undergraduate	All	All	Average amount of Stafford Loan received
Public 4-year doctorate-granting	Undergraduate	All	All	Average amount of Stafford Loan received
Private not-for-profit 4-year non-doctorate-granting	Undergraduate	All	All	Average amount of Stafford Loan received
Private not-for-profit 4-year doctorate-granting	Undergraduate	All	All	Average amount of Stafford Loan received
Private for-profit less-than-2-year	Undergraduate	All	All	Average amount of Stafford Loan received
Private for-profit 2-year or more	Undergraduate	All	All	Average amount of Stafford Loan received
All	Undergraduate	All	All	Average amount of Pell Grant received
Public less-than-2-year or private not-for-profit less-than-4-year	Undergraduate	All	All	Average amount of Pell Grant received
Public 2-year	Undergraduate	All	All	Average amount of Pell Grant received
Public 4-year non-doctorate-granting	Undergraduate	All	All	Average amount of Pell Grant received
Public 4-year doctorate-granting	Undergraduate	All	All	Average amount of Pell Grant received
Private not-for-profit 4-year non-doctorate-granting	Undergraduate	All	All	Average amount of Pell Grant received
Private not-for-profit 4-year doctorate-granting	Undergraduate	All	All	Average amount of Pell Grant received
Private for-profit less-than-2-year	Undergraduate	All	All	Average amount of Pell Grant received
Private for-profit 2-year or more	Undergraduate	All	All	Average amount of Pell Grant received
All	Undergraduate	Dependent less than \$40,000	All	Percent receiving any aid
All	Undergraduate	Dependent \$40,000-79,999	All	Percent receiving any aid
All	Undergraduate	Dependent \$80,000 or more	All	Percent receiving any aid
All	Undergraduate	Independent less than \$20,000	All	Percent receiving any aid
All	Undergraduate	Independent \$20,000-29,999	All	Percent receiving any aid
All	Undergraduate	Independent \$30,000 or more	All	Percent receiving any aid
All	Undergraduate	Dependent less than \$40,000	All	Percent receiving a Stafford Loan
All	Undergraduate	Dependent \$40,000 or more	All	Percent receiving a Stafford Loan
All	Undergraduate	Independent less than \$20,000	All	Percent receiving a Stafford Loan
All	Undergraduate	Independent \$20,000 or more	All	Percent receiving a Stafford Loan

See notes at end of table.

Table B-8. Domains and outcomes for NPSAS:04 national sample optimization: 2004—Continued

Institution domain	Student level	Dependency/income status	Attendance status	Outcome
All	Undergraduate	Dependent less than \$40,000	All	Percent receiving a Pell Grant
All	Undergraduate	Independent less than \$20,000	All	Percent receiving a Pell Grant
All	Undergraduate	Dependent less than \$40,000	All	Average amount of aid received
All	Undergraduate	Dependent \$40,000-79,999	All	Average amount of aid received
All	Undergraduate	Dependent \$80,000 or more	All	Average amount of aid received
All	Undergraduate	Independent less than \$20,000	All	Average amount of aid received
All	Undergraduate	Independent \$20,000-29,999	All	Average amount of aid received
All	Undergraduate	Independent \$30,000 or more	All	Average amount of aid received
All	Undergraduate	Dependent less than \$40,000	All	Average amount of Stafford Loan received
All	Undergraduate	Dependent \$40,000 or more	All	Average amount of Stafford Loan received
All	Undergraduate	Independent less than \$20,000	All	Average amount of Stafford Loan received
All	Undergraduate	Independent \$20,000 or more	All	Average amount of Stafford Loan received
All	Undergraduate	Dependent less than \$40,000	All	Average amount of Pell Grant received
All	Undergraduate	Independent less than \$20,000	All	Average amount of Pell Grant received
Public 4-year	Undergraduate	All	Full-time	Percent receiving any aid
Public 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Percent receiving any aid
Public 4-year	Undergraduate	Dependent \$40,000-79,999	Full-time	Percent receiving any aid
Public 4-year	Undergraduate	Dependent \$80,000 or more	Full-time	Percent receiving any aid
Public 4-year	Undergraduate	Independent less than \$20,000	Full-time	Percent receiving any aid
Public 4-year	Undergraduate	Independent \$20,000-29,999	Full-time	Percent receiving any aid
Public 4-year	Undergraduate	Independent \$30,000 or more	Full-time	Percent receiving any aid
Public 4-year	Undergraduate	All	Full-time	Percent receiving a Stafford Loan
Public 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Percent receiving a Stafford Loan
Public 4-year	Undergraduate	Dependent \$40,000 or more	Full-time	Percent receiving a Stafford Loan
Public 4-year	Undergraduate	Independent less than \$20,000	Full-time	Percent receiving a Stafford Loan
Public 4-year	Undergraduate	Independent \$20,000 or more	Full-time	Percent receiving a Stafford Loan
Public 4-year	Undergraduate	All	Full-time	Percent receiving a Pell Grant
Public 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Percent receiving a Pell Grant
Public 4-year	Undergraduate	Independent less than \$20,000	Full-time	Percent receiving a Pell Grant
Public 4-year	Undergraduate	All	Full-time	Average amount of aid received
Public 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Average amount of aid received
Public 4-year	Undergraduate	Dependent \$40,000-79,999	Full-time	Average amount of aid received
Public 4-year	Undergraduate	Dependent \$80,000 or more	Full-time	Average amount of aid received
Public 4-year	Undergraduate	Independent less than \$20,000	Full-time	Average amount of aid received
Public 4-year	Undergraduate	Independent \$20,000-29,999	Full-time	Average amount of aid received

See notes at end of table.

Table B-8. Domains and outcomes for NPSAS:04 national sample optimization—Continued

Institution domain	Student level	Dependency/income status	Attendance status	Outcome
Public 4-year	Undergraduate	Independent \$30,000 or more	Full-time	Average amount of aid received
Public 4-year	Undergraduate	All	Full-time	Average amount of Stafford Loan received
Public 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Average amount of Stafford Loan received
Public 4-year	Undergraduate	Dependent \$40,000 or more	Full-time	Average amount of Stafford Loan received
Public 4-year	Undergraduate	Independent less than \$20,000	Full-time	Average amount of Stafford Loan received
Public 4-year	Undergraduate	Independent \$20,000 or more	Full-time	Average amount of Stafford Loan received
Public 4-year	Undergraduate	All	Full-time	Average amount of Pell Grant received
Public 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Average amount of Pell Grant received
Public 4-year	Undergraduate	Independent less than \$20,000	Full-time	Average amount of Pell Grant received
Private not-for-profit 4-year	Undergraduate	All	Full-time	Percent receiving any aid
Private not-for-profit 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Percent receiving any aid
Private not-for-profit 4-year	Undergraduate	Dependent \$40,000-79,999	Full-time	Percent receiving any aid
Private not-for-profit 4-year	Undergraduate	Dependent \$80,000 or more	Full-time	Percent receiving any aid
Private not-for-profit 4-year	Undergraduate	Independent less than \$20,000	Full-time	Percent receiving any aid
Private not-for-profit 4-year	Undergraduate	Independent \$20,000-29,999	Full-time	Percent receiving any aid
Private not-for-profit 4-year	Undergraduate	Independent \$30,000 or more	Full-time	Percent receiving any aid
Private not-for-profit 4-year	Undergraduate	All	Full-time	Percent receiving a Stafford Loan
Private not-for-profit 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Percent receiving a Stafford Loan
Private not-for-profit 4-year	Undergraduate	Dependent \$40,000 or more	Full-time	Percent receiving a Stafford Loan
Private not-for-profit 4-year	Undergraduate	Independent less than \$20,000	Full-time	Percent receiving a Stafford Loan
Private not-for-profit 4-year	Undergraduate	Independent \$20,000 or more	Full-time	Percent receiving a Stafford Loan
Private not-for-profit 4-year	Undergraduate	All	Full-time	Percent receiving a Pell Grant
Private not-for-profit 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Percent receiving a Pell Grant
Private not-for-profit 4-year	Undergraduate	Independent less than \$20,000	Full-time	Percent receiving a Pell Grant
Private not-for-profit 4-year	Undergraduate	All	Full-time	Average amount of aid received
Private not-for-profit 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Average amount of aid received
Private not-for-profit 4-year	Undergraduate	Dependent \$40,000-79,999	Full-time	Average amount of aid received
Private not-for-profit 4-year	Undergraduate	Dependent \$80,000 or more	Full-time	Average amount of aid received
Private not-for-profit 4-year	Undergraduate	Independent less than \$20,000	Full-time	Average amount of aid received
Private not-for-profit 4-year	Undergraduate	Independent \$20,000-29,999	Full-time	Average amount of aid received
Private not-for-profit 4-year	Undergraduate	Independent \$30,000 or more	Full-time	Average amount of aid received
Private not-for-profit 4-year	Undergraduate	All	Full-time	Average amount of Stafford Loan received
Private not-for-profit 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Average amount of Stafford Loan received
Private not-for-profit 4-year	Undergraduate	Dependent \$40,000 or more	Full-time	Average amount of Stafford Loan received

See notes at end of table.

Table B-8. Domains and outcomes for NPSAS:04 national sample optimization—Continued

Institution domain	Student level	Dependency/income status	Attendance status	Outcome
Private not-for-profit 4-year	Undergraduate	Independent less than \$20,000	Full-time	Average amount of Stafford Loan received
Private not-for-profit 4-year	Undergraduate	Independent \$20,000 or more	Full-time	Average amount of Stafford Loan received
Private not-for-profit 4-year	Undergraduate	All	Full-time	Average amount of Pell Grant received
Private not-for-profit 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Average amount of Pell Grant received
Private not-for-profit 4-year	Undergraduate	Independent less than \$20,000	Full-time	Average amount of Pell Grant received
All	Beginning postsecondary students	All	All	Percent receiving any aid
All	Beginning postsecondary students	Dependent less than \$40,000	All	Percent receiving any aid
All	Beginning postsecondary students	Dependent \$40,000-79,999	All	Percent receiving any aid
All	Beginning postsecondary students	Dependent \$80,000 or more	All	Percent receiving any aid
All	Beginning postsecondary students	Independent less than \$20,000	All	Percent receiving any aid
All	Beginning postsecondary students	Independent \$20,000-29,999	All	Percent receiving any aid
All	Beginning postsecondary students	Independent \$30,000 or more	All	Percent receiving any aid
All	Beginning postsecondary students	All	All	Percent receiving a Stafford Loan
All	Beginning postsecondary students	Dependent less than \$40,000	All	Percent receiving a Stafford Loan
All	Beginning postsecondary students	Dependent \$40,000 or more	All	Percent receiving a Stafford Loan
All	Beginning postsecondary students	Independent less than \$20,000	All	Percent receiving a Stafford Loan
All	Beginning postsecondary students	Independent \$20,000 or more	All	Percent receiving a Stafford Loan
All	Beginning postsecondary students	All	All	Percent receiving a Pell Grant
All	Beginning postsecondary students	Dependent less than \$40,000	All	Percent receiving a Pell Grant
All	Beginning postsecondary students	Independent less than \$20,000	All	Percent receiving a Pell Grant
All	Beginning postsecondary students	All	All	Average amount of aid received
All	Beginning postsecondary students	Dependent less than \$40,000	All	Average amount of aid received
All	Beginning postsecondary students	Dependent \$40,000-79,999	All	Average amount of aid received
All	Beginning postsecondary students	Dependent \$80,000 or more	All	Average amount of aid received
All	Beginning postsecondary students	Independent less than \$20,000	All	Average amount of aid received
All	Beginning postsecondary students	Independent \$20,000-29,999	All	Average amount of aid received
All	Beginning postsecondary students	Independent \$30,000 or more	All	Average amount of aid received
All	Beginning postsecondary students	All	All	Average amount of Stafford Loan received
All	Beginning postsecondary students	Dependent less than \$40,000	All	Average amount of Stafford Loan received
All	Beginning postsecondary students	Dependent \$40,000 or more	All	Average amount of Stafford Loan received
All	Beginning postsecondary students	Independent less than \$20,000	All	Average amount of Stafford Loan received
All	Beginning postsecondary students	Independent \$20,000 or more	All	Average amount of Stafford Loan received
All	Beginning postsecondary students	All	All	Average amount of Pell Grant received
All	Beginning postsecondary students	Dependent less than \$40,000	All	Average amount of Pell Grant received
All	Beginning postsecondary students	Independent less than \$20,000	All	Average amount of Pell Grant received

See notes at end of table.

Table B-8. Domains and outcomes for NPSAS:04 national sample optimization—Continued

Institution domain	Student level	Dependency/income status	Attendance status	Outcome
Public 4-year	Beginning postsecondary students	All	All	Percent receiving any aid
Public 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Percent receiving any aid
Public 4-year	Beginning postsecondary students	Other	All	Percent receiving any aid
Private not-for-profit 4-year	Beginning postsecondary students	All	All	Percent receiving any aid
Private not-for-profit 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Percent receiving any aid
Private not-for-profit 4-year	Beginning postsecondary students	Other	All	Percent receiving any aid
For-profit	Beginning postsecondary students	All	All	Percent receiving any aid
For-profit	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Percent receiving any aid
For-profit	Beginning postsecondary students	Other	All	Percent receiving any aid
Public or private not-for-profit, less-than-4-year	Beginning postsecondary students	All	All	Percent receiving any aid
Public or private not-for-profit, less-than-4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Percent receiving any aid
Public or private not-for-profit, less-than-4-year	Beginning postsecondary students	Other	All	Percent receiving any aid
Public 4-year	Beginning postsecondary students	All	All	Percent receiving a Stafford Loan
Public 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Percent receiving a Stafford Loan
Public 4-year	Beginning postsecondary students	Other	All	Percent receiving a Stafford Loan
Private not-for-profit 4-year	Beginning postsecondary students	All	All	Percent receiving a Stafford Loan
Private not-for-profit 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Percent receiving a Stafford Loan
Private not-for-profit 4-year	Beginning postsecondary students	Other	All	Percent receiving a Stafford Loan
For-profit	Beginning postsecondary students	All	All	Percent receiving a Stafford Loan
For-profit	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Percent receiving a Stafford Loan
For-profit	Beginning postsecondary students	Other	All	Percent receiving a Stafford Loan
Public or private not-for-profit, less-than-4-year	Beginning postsecondary students	All	All	Percent receiving a Stafford Loan
Public or private not-for-profit, less-than-4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Percent receiving a Stafford Loan
Public or private not-for-profit, less-than-4-year	Beginning postsecondary students	Other	All	Percent receiving a Stafford Loan
Public 4-year	Beginning postsecondary students	All	All	Percent receiving a Pell Grant
Public 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Percent receiving a Pell Grant
Public 4-year	Beginning postsecondary students	Other	All	Percent receiving a Pell Grant
Private not-for-profit 4-year	Beginning postsecondary students	All	All	Percent receiving a Pell Grant
Private not-for-profit 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Percent receiving a Pell Grant

See notes at end of table.

Table B-8. Domains and outcomes for NPSAS:04 national sample optimization—Continued

Institution domain	Student level	Dependency/income status	Attendance status	Outcome
Private not-for-profit 4-year	Beginning postsecondary students	Other	All	Percent receiving a Pell Grant
For-profit	Beginning postsecondary students	All	All	Percent receiving a Pell Grant
For-profit	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Percent receiving a Pell Grant
For-profit	Beginning postsecondary students	Other	All	Percent receiving a Pell Grant
Public or private not-for-profit, less-than-4-year	Beginning postsecondary students	All	All	Percent receiving a Pell Grant
Public or private not-for-profit, less-than-4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Percent receiving a Pell Grant
Public or private not-for-profit, less-than-4-year	Beginning postsecondary students	Other	All	Percent receiving a Pell Grant
Public 4-year	Beginning postsecondary students	All	All	Average amount of aid received
Public 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Average amount of aid received
Public 4-year	Beginning postsecondary students	Other	All	Average amount of aid received
Private not-for-profit 4-year	Beginning postsecondary students	All	All	Average amount of aid received
Private not-for-profit 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Average amount of aid received
Private not-for-profit 4-year	Beginning postsecondary students	Other	All	Average amount of aid received
For-profit	Beginning postsecondary students	All	All	Average amount of aid received
For-profit	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Average amount of aid received
For-profit	Beginning postsecondary students	Other	All	Average amount of aid received
Public or private not-for-profit, less-than-4-year	Beginning postsecondary students	All	All	Average amount of aid received
Public or private not-for-profit, less-than-4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Average amount of aid received
Public or private not-for-profit, less-than-4-year	Beginning postsecondary students	Other	All	Average amount of aid received
Public 4-year	Beginning postsecondary students	All	All	Average amount of Stafford Loan received
Public 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Average amount of Stafford Loan received
Public 4-year	Beginning postsecondary students	Other	All	Average amount of Stafford Loan received
Private not-for-profit 4-year	Beginning postsecondary students	All	All	Average amount of Stafford Loan received
Private not-for-profit 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Average amount of Stafford Loan received
Private not-for-profit 4-year	Beginning postsecondary students	Other	All	Average amount of Stafford Loan received
For-profit	Beginning postsecondary students	All	All	Average amount of Stafford Loan received
For-profit	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Average amount of Stafford Loan received
For-profit	Beginning postsecondary students	Other	All	Average amount of Stafford Loan received
Public or private not-for-profit, less-than-4-year	Beginning postsecondary students	All	All	Average amount of Stafford Loan received
Public or private not-for-profit, less-than-4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Average amount of Stafford Loan received

See notes at end of table.

Table B-8. Domains and outcomes for NPSAS:04 national sample optimization—Continued

Institution domain	Student level	Dependency/income status	Attendance status	Outcome
Public or private not-for-profit, less-than-4-year	Beginning postsecondary students	Other	All	Average amount of Stafford Loan received
Public 4-year	Beginning postsecondary students	All	All	Average amount of Pell Grant received
Public 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Average amount of Pell Grant received
Public 4-year	Beginning postsecondary students	Other	All	Average amount of Pell Grant received
Private not-for-profit 4-year	Beginning postsecondary students	All	All	Average amount of Pell Grant received
Private not-for-profit 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Average amount of Pell Grant received
Private not-for-profit 4-year	Beginning postsecondary students	Other	All	Average amount of Pell Grant received
For-profit	Beginning postsecondary students	All	All	Average amount of Pell Grant received
For-profit	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Average amount of Pell Grant received
For-profit	Beginning postsecondary students	Other	All	Average amount of Pell Grant received
Public or private not-for-profit, less-than-4-year	Beginning postsecondary students	All	All	Average amount of Pell Grant received
Public or private not-for-profit, less-than-4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Average amount of Pell Grant received
Public or private not-for-profit, less-than-4-year	Beginning postsecondary students	Other	All	Average amount of Pell Grant received
All 4-year	All graduate/first-professional students	All	All	Percent receiving any aid
All 4-year	Master's students	All	All	Percent receiving any aid
All 4-year, doctorate-granting	Doctoral students	All	All	Percent receiving any aid
All 4-year	Post-bachelor's certificate	All	All	Percent receiving any aid
All 4-year	Other graduate students	All	All	Percent receiving any aid
All 4-year, doctorate-granting	First-professional students	All	All	Percent receiving any aid
All 4-year	All graduate/first-professional students	All	All	Average amount of aid received
All 4-year	Master's students	All	All	Average amount of aid received
All 4-year, doctorate-granting	Doctoral students	All	All	Average amount of aid received
All 4-year	Post-bachelor's certificate	All	All	Average amount of aid received
All 4-year	Other graduate students	All	All	Average amount of aid received
All 4-year, doctorate-granting	First-professional students	All	All	Average amount of aid received
Public, 4-year, non-doctorate-granting	Master's students	All	All	Percent receiving any aid
Public, 4-year, doctorate-granting	Master's students	All	All	Percent receiving any aid
Private, 4-year, not-for-profit, non-doctorate-granting	Master's students	All	All	Percent receiving any aid
Private, 4-year, not-for-profit, doctorate-granting	Master's students	All	All	Percent receiving any aid
Public, 4-year, doctorate-granting	Doctoral students	All	All	Percent receiving any aid
Private, 4-year, not-for-profit, doctorate-granting	Doctoral students	All	All	Percent receiving any aid

See notes at end of table.

Table B-8. Domains and outcomes for NPSAS:04 national sample optimization—Continued

Institution domain	Student level	Dependency/income status	Attendance status	Outcome
Public, 4-year, non-doctorate-granting	Master's students	All	All	Average amount of aid received
Public, 4-year, doctorate-granting	Master's students	All	All	Average amount of aid received
Private, 4-year, not-for-profit, non-doctorate-granting	Master's students	All	All	Average amount of aid received
Private, 4-year, not-for-profit, doctorate-granting	Master's students	All	All	Average amount of aid received
Public, 4-year, doctorate-granting	Doctoral students	All	All	Average amount of aid received
Private, 4-year, not-for-profit, doctorate-granting	Doctoral students	All	All	Average amount of aid received

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table B-9. Domains and outcomes for NPSAS:04 state sample optimization

Institution domain	Student level	Dependency/income status	Attendance status	Outcome
All	Undergraduate	All	All	Percent receiving any aid
Public 2-year	Undergraduate	All	All	Percent receiving any aid
Public 4-year	Undergraduate	All	All	Percent receiving any aid
Private not-for-profit 4-year	Undergraduate	All	All	Percent receiving any aid
All	Undergraduate	All	All	Percent receiving a Stafford Loan
Public 2-year	Undergraduate	All	All	Percent receiving a Stafford Loan
Public 4-year	Undergraduate	All	All	Percent receiving a Stafford Loan
Private not-for-profit 4-year	Undergraduate	All	All	Percent receiving a Stafford Loan
All	Undergraduate	All	All	Percent receiving a Pell Grant
Public 2-year	Undergraduate	All	All	Percent receiving a Pell Grant
Public 4-year	Undergraduate	All	All	Percent receiving a Pell Grant
Private not-for-profit 4-year	Undergraduate	All	All	Percent receiving a Pell Grant
All	Undergraduate	All	All	Average amount of aid received
Public 2-year	Undergraduate	All	All	Average amount of aid received
Public 4-year	Undergraduate	All	All	Average amount of aid received
Private not-for-profit 4-year	Undergraduate	All	All	Average amount of aid received
All	Undergraduate	All	All	Average amount of Stafford Loan received
Public 2-year	Undergraduate	All	All	Average amount of Stafford Loan received
Public 4-year	Undergraduate	All	All	Average amount of Stafford Loan received
Private not-for-profit 4-year	Undergraduate	All	All	Average amount of Stafford Loan received
All	Undergraduate	All	All	Average amount of Pell Grant received
Public 2-year	Undergraduate	All	All	Average amount of Pell Grant received
Public 4-year	Undergraduate	All	All	Average amount of Pell Grant received
Private not-for-profit 4-year	Undergraduate	All	All	Average amount of Pell Grant received
All	Undergraduate	Dependent less than \$40,000	All	Percent receiving any aid
All	Undergraduate	Dependent \$40,000-79,999	All	Percent receiving any aid
All	Undergraduate	Dependent \$80,000 or more	All	Percent receiving any aid
All	Undergraduate	Independent less than \$20,000	All	Percent receiving any aid
All	Undergraduate	Independent \$20,000-29,999	All	Percent receiving any aid
All	Undergraduate	Independent \$30,000 or more	All	Percent receiving any aid
All	Undergraduate	Dependent less than \$40,000	All	Percent receiving a Stafford Loan
All	Undergraduate	Dependent \$40,000 or more	All	Percent receiving a Stafford Loan
All	Undergraduate	Independent less than \$20,000	All	Percent receiving a Stafford Loan
All	Undergraduate	Independent \$20,000 or more	All	Percent receiving a Stafford Loan

See notes at end of table.

Table B-9. Domains and outcomes for NPSAS:04 state sample optimization—Continued

Institution domain	Student level	Dependency/income status	Attendance status	Outcome
All	Undergraduate	Dependent less than \$40,000	All	Percent receiving a Pell Grant
All	Undergraduate	Independent less than \$20,000	All	Percent receiving a Pell Grant
All	Undergraduate	Dependent less than \$40,000	All	Average amount of aid received
All	Undergraduate	Dependent \$40,000-79,999	All	Average amount of aid received
All	Undergraduate	Dependent \$80,000 or more	All	Average amount of aid received
All	Undergraduate	Independent less than \$20,000	All	Average amount of aid received
All	Undergraduate	Independent \$20,000-29,999	All	Average amount of aid received
All	Undergraduate	Independent \$30,000 or more	All	Average amount of aid received
All	Undergraduate	Dependent less than \$40,000	All	Average amount of Stafford Loan received
All	Undergraduate	Dependent \$40,000 or more	All	Average amount of Stafford Loan received
All	Undergraduate	Independent less than \$20,000	All	Average amount of Stafford Loan received
All	Undergraduate	Independent \$20,000 or more	All	Average amount of Stafford Loan received
All	Undergraduate	Dependent less than \$40,000	All	Average amount of Pell Grant received
All	Undergraduate	Independent less than \$20,000	All	Average amount of Pell Grant received
Public 4-year	Undergraduate	All	Full-time	Percent receiving any aid
Public 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Percent receiving any aid
Public 4-year	Undergraduate	Dependent \$40,000-79,999	Full-time	Percent receiving any aid
Public 4-year	Undergraduate	Dependent \$80,000 or more	Full-time	Percent receiving any aid
Public 4-year	Undergraduate	Independent less than \$20,000	Full-time	Percent receiving any aid
Public 4-year	Undergraduate	Independent \$20,000-29,999	Full-time	Percent receiving any aid
Public 4-year	Undergraduate	Independent \$30,000 or more	Full-time	Percent receiving any aid
Public 4-year	Undergraduate	All	Full-time	Percent receiving a Stafford Loan
Public 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Percent receiving a Stafford Loan
Public 4-year	Undergraduate	Dependent \$40,000 or more	Full-time	Percent receiving a Stafford Loan
Public 4-year	Undergraduate	Independent less than \$20,000	Full-time	Percent receiving a Stafford Loan
Public 4-year	Undergraduate	Independent \$20,000 or more	Full-time	Percent receiving a Stafford Loan
Public 4-year	Undergraduate	All	Full-time	Percent receiving a Pell Grant
Public 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Percent receiving a Pell Grant
Public 4-year	Undergraduate	Independent less than \$20,000	Full-time	Percent receiving a Pell Grant
Public 4-year	Undergraduate	All	Full-time	Average amount of aid received
Public 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Average amount of aid received
Public 4-year	Undergraduate	Dependent \$40,000-79,999	Full-time	Average amount of aid received
Public 4-year	Undergraduate	Dependent \$80,000 or more	Full-time	Average amount of aid received
Public 4-year	Undergraduate	Independent less than \$20,000	Full-time	Average amount of aid received

See notes at end of table.

Table B-9. Domains and outcomes for NPSAS:04 state sample optimization—Continued

Institution domain	Student level	Dependency/income status	Attendance status	Outcome
Public 4-year	Undergraduate	Independent \$20,000-29,999	Full-time	Average amount of aid received
Public 4-year	Undergraduate	Independent \$30,000 or more	Full-time	Average amount of aid received
Public 4-year	Undergraduate	All	Full-time	Average amount of Stafford Loan received
Public 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Average amount of Stafford Loan received
Public 4-year	Undergraduate	Dependent \$40,000 or more	Full-time	Average amount of Stafford Loan received
Public 4-year	Undergraduate	Independent less than \$20,000	Full-time	Average amount of Stafford Loan received
Public 4-year	Undergraduate	Independent \$20,000 or more	Full-time	Average amount of Stafford Loan received
Public 4-year	Undergraduate	All	Full-time	Average amount of Pell Grant received
Public 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Average amount of Pell Grant received
Public 4-year	Undergraduate	Independent less than \$20,000	Full-time	Average amount of Pell Grant received
Private not-for-profit 4-year	Undergraduate	All	Full-time	Percent receiving any aid
Private not-for-profit 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Percent receiving any aid
Private not-for-profit 4-year	Undergraduate	Dependent \$40,000-79,999	Full-time	Percent receiving any aid
Private not-for-profit 4-year	Undergraduate	Dependent \$80,000 or more	Full-time	Percent receiving any aid
Private not-for-profit 4-year	Undergraduate	Independent less than \$20,000	Full-time	Percent receiving any aid
Private not-for-profit 4-year	Undergraduate	Independent \$20,000-29,999	Full-time	Percent receiving any aid
Private not-for-profit 4-year	Undergraduate	Independent \$30,000 or more	Full-time	Percent receiving any aid
Private not-for-profit 4-year	Undergraduate	All	Full-time	Percent receiving a Stafford Loan
Private not-for-profit 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Percent receiving a Stafford Loan
Private not-for-profit 4-year	Undergraduate	Dependent \$40,000 or more	Full-time	Percent receiving a Stafford Loan
Private not-for-profit 4-year	Undergraduate	Independent less than \$20,000	Full-time	Percent receiving a Stafford Loan
Private not-for-profit 4-year	Undergraduate	Independent \$20,000 or more	Full-time	Percent receiving a Stafford Loan
Private not-for-profit 4-year	Undergraduate	All	Full-time	Percent receiving a Pell Grant
Private not-for-profit 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Percent receiving a Pell Grant
Private not-for-profit 4-year	Undergraduate	Independent less than \$20,000	Full-time	Percent receiving a Pell Grant
Private not-for-profit 4-year	Undergraduate	All	Full-time	Average amount of aid received
Private not-for-profit 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Average amount of aid received
Private not-for-profit 4-year	Undergraduate	Dependent \$40,000-79,999	Full-time	Average amount of aid received
Private not-for-profit 4-year	Undergraduate	Dependent \$80,000 or more	Full-time	Average amount of aid received
Private not-for-profit 4-year	Undergraduate	Independent less than \$20,000	Full-time	Average amount of aid received
Private not-for-profit 4-year	Undergraduate	Independent \$20,000-29,999	Full-time	Average amount of aid received
Private not-for-profit 4-year	Undergraduate	Independent \$30,000 or more	Full-time	Average amount of aid received
Private not-for-profit 4-year	Undergraduate	All	Full-time	Average amount of Stafford Loan received
Private not-for-profit 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Average amount of Stafford Loan received
Private not-for-profit 4-year	Undergraduate	Dependent \$40,000 or more	Full-time	Average amount of Stafford Loan received

See notes at end of table.

Table B-9. Domains and outcomes for NPSAS:04 state sample optimization—Continued

Institution domain	Student level	Dependency/income status	Attendance status	Outcome
Private not-for-profit 4-year	Undergraduate	Independent less than \$20,000	Full-time	Average amount of Stafford Loan received
Private not-for-profit 4-year	Undergraduate	Independent \$20,000 or more	Full-time	Average amount of Stafford Loan received
Private not-for-profit 4-year	Undergraduate	All	Full-time	Average amount of Pell Grant received
Private not-for-profit 4-year	Undergraduate	Dependent less than \$40,000	Full-time	Average amount of Pell Grant received
Private not-for-profit 4-year	Undergraduate	Independent less than \$20,000	Full-time	Average amount of Pell Grant received
All	Beginning postsecondary students	All	All	Percent receiving any aid
All	Beginning postsecondary students	Dependent less than \$40,000	All	Percent receiving any aid
All	Beginning postsecondary students	Dependent \$40,000-79,999	All	Percent receiving any aid
All	Beginning postsecondary students	Dependent \$80,000 or more	All	Percent receiving any aid
All	Beginning postsecondary students	Independent less than \$20,000	All	Percent receiving any aid
All	Beginning postsecondary students	Independent \$20,000-29,999	All	Percent receiving any aid
All	Beginning postsecondary students	Independent \$30,000 or more	All	Percent receiving any aid
All	Beginning postsecondary students	All	All	Percent receiving a Stafford Loan
All	Beginning postsecondary students	Dependent less than \$40,000	All	Percent receiving a Stafford Loan
All	Beginning postsecondary students	Dependent \$40,000 or more	All	Percent receiving a Stafford Loan
All	Beginning postsecondary students	Independent less than \$20,000	All	Percent receiving a Stafford Loan
All	Beginning postsecondary students	Independent \$20,000 or more	All	Percent receiving a Stafford Loan
All	Beginning postsecondary students	All	All	Percent receiving a Pell Grant
All	Beginning postsecondary students	Dependent less than \$40,000	All	Percent receiving a Pell Grant
All	Beginning postsecondary students	Independent less than \$20,000	All	Percent receiving a Pell Grant
All	Beginning postsecondary students	All	All	Average amount of aid received
All	Beginning postsecondary students	Dependent less than \$40,000	All	Average amount of aid received
All	Beginning postsecondary students	Dependent \$40,000-79,999	All	Average amount of aid received
All	Beginning postsecondary students	Dependent \$80,000 or more	All	Average amount of aid received
All	Beginning postsecondary students	Independent less than \$20,000	All	Average amount of aid received
All	Beginning postsecondary students	Independent \$20,000-29,999	All	Average amount of aid received
All	Beginning postsecondary students	Independent \$30,000 or more	All	Average amount of aid received
All	Beginning postsecondary students	All	All	Average amount of Stafford Loan received
All	Beginning postsecondary students	Dependent less than \$40,000	All	Average amount of Stafford Loan received
All	Beginning postsecondary students	Dependent \$40,000 or more	All	Average amount of Stafford Loan received
All	Beginning postsecondary students	Independent less than \$20,000	All	Average amount of Stafford Loan received
All	Beginning postsecondary students	Independent \$20,000 or more	All	Average amount of Stafford Loan received
All	Beginning postsecondary students	All	All	Average amount of Pell Grant received
All	Beginning postsecondary students	Dependent less than \$40,000	All	Average amount of Pell Grant received

See notes at end of table.

Table B-9. Domains and outcomes for NPSAS:04 state sample optimization—Continued

Institution domain	Student level	Dependency/income status	Attendance status	Outcome
All	Beginning postsecondary students	Independent less than \$20,000	All	Average amount of Pell Grant received
Public 4-year	Beginning postsecondary students	All	All	Percent receiving any aid
Public 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Percent receiving any aid
Public 4-year	Beginning postsecondary students	Other	All	Percent receiving any aid
Private not-for-profit 4-year	Beginning postsecondary students	All	All	Percent receiving any aid
Private not-for-profit 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Percent receiving any aid
Private not-for-profit 4-year	Beginning postsecondary students	Other	All	Percent receiving any aid
Public 4-year	Beginning postsecondary students	All	All	Percent receiving a Stafford Loan
Public 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Percent receiving a Stafford Loan
Public 4-year	Beginning postsecondary students	Other	All	Percent receiving a Stafford Loan
Private not-for-profit 4-year	Beginning postsecondary students	All	All	Percent receiving a Stafford Loan
Private not-for-profit 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Percent receiving a Stafford Loan
Private not-for-profit 4-year	Beginning postsecondary students	Other	All	Percent receiving a Stafford Loan
Public 4-year	Beginning postsecondary students	All	All	Percent receiving a Pell Grant
Public 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Percent receiving a Pell Grant
Public 4-year	Beginning postsecondary students	Other	All	Percent receiving a Pell Grant
Private not-for-profit 4-year	Beginning postsecondary students	All	All	Percent receiving a Pell Grant
Private not-for-profit 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Percent receiving a Pell Grant
Private not-for-profit 4-year	Beginning postsecondary students	Other	All	Percent receiving a Pell Grant
Public 4-year	Beginning postsecondary students	All	All	Average amount of aid received
Public 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Average amount of aid received
Public 4-year	Beginning postsecondary students	Other	All	Average amount of aid received
Private not-for-profit 4-year	Beginning postsecondary students	All	All	Average amount of aid received
Private not-for-profit 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Average amount of aid received
Private not-for-profit 4-year	Beginning postsecondary students	Other	All	Average amount of aid received
Public 4-year	Beginning postsecondary students	All	All	Average amount of Stafford Loan received
Public 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Average amount of Stafford Loan received
Public 4-year	Beginning postsecondary students	Other	All	Average amount of Stafford Loan received

See notes at end of table.

Table B-9. Domains and outcomes for NPSAS:04 state sample optimization—Continued

Institution domain	Student level	Dependency/income status	Attendance status	Outcome
Private not-for-profit 4-year	Beginning postsecondary students	All	All	Average amount of Stafford Loan received
Private not-for-profit 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Average amount of Stafford Loan received
Private not-for-profit 4-year	Beginning postsecondary students	Other	All	Average amount of Stafford Loan received
Public 4-year	Beginning postsecondary students	All	All	Average amount of Pell Grant received
Public 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Average amount of Pell Grant received
Public 4-year	Beginning postsecondary students	Other	All	Average amount of Pell Grant received
Private not-for-profit 4-year	Beginning postsecondary students	All	All	Average amount of Pell Grant received
Private not-for-profit 4-year	Beginning postsecondary students	Dependent less than \$40,000 or Independent less than \$20,000	All	Average amount of Pell Grant received
Private not-for-profit 4-year	Beginning postsecondary students	Other	All	Average amount of Pell Grant received

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

B.4.3 Cost Model

The cost model necessary to support the cost/variance optimization process was the following:

$$C = C_0 + \sum_{h=1}^{240} n_h C_h + \sum_{h=1}^{240} \sum_{k=1}^{14} n_h n_{hk} C_{hk}$$

where C represents the total cost of the NSoFaS, C_0 represents the “fixed costs” that do not depend on the number of sample institutions, students, or faculty members, C_h represents the variable cost per participating institution in stratum h , C_{hk} represents the variable cost per responding person (student or faculty member) in stratum (h,k) , n_h represents the number of participating institutions selected from stratum h , and n_{hk} represents the number of responding persons selected from stratum (h,k) .¹⁴

Only the components of variable cost, C_h and C_{hk} , must be estimated to support the cost/variance optimization. They were estimated using the spreadsheet developed for the study budget. The cost per participating institution was estimated by holding the numbers of responding students and faculty members constant while varying the numbers of participating institutions. The resulting estimate of the variable cost per participating institution was:

$$C_h = \begin{cases} \$1,164.23 & \text{for institutions in stratum } h \text{ that are eligible for both NPSAS} \\ & \text{and NSOPF} \\ \$890.84 & \text{for institutions in stratum } h \text{ that are eligible only for NPSAS} \end{cases}$$

Likewise, the variable cost per participant was estimated by holding the number of participating institutions constant while varying the number of participating students and faculty members. The resulting estimate of the variable cost per participant was:

$$C_{hk} = \begin{cases} \$45.28 & \text{for students (k=1-8)} \\ \$32.91 & \text{for faculty members (k=9-14)} \end{cases}$$

B.4.4 Relative Variance Model

The following model was developed to represent the relative variance of the NSoFaS estimate g (e.g., percentage of student receiving any federal student aid) for students or faculty belonging to domain d (e.g., all students enrolled in public 2-year institutions):

$$\text{RelVar}_{gd} = \sum_h \left\{ \sum_k W_{dhk}^2 UWE_{hk} \right\} \left[\frac{\left[\sum_{2gd}^2 \right] [CV_{gd}^2]}{r_h} \right] \left[1 + CV_{md}^2 \right] \left[\frac{1}{n_h} - \frac{r_h}{N_h} \right] \\ + \sum_h \sum_k W_{dhk}^2 UWE_{hk} \left[\frac{\left[\sum_{4gd}^2 \right] [CV_{gd}^2]}{\alpha_{dhk}} \right] \left[\frac{1}{n_{hk}} \right]$$

¹⁴ $k = 1-8$ represents the eight student strata and $k = 9-14$ represents the six faculty strata.

where the parameters of this model are defined as follows:

1. $h = 1, 2, \dots, 240$ represents the institution sampling strata;
2. $k = 1, 2, \dots, 14$ represents the person sampling strata (1-8 for students and 9-14 for faculty);
3. W_{dhk} = proportion of domain d members who belong to stratum (h,k) ;
4. UWE_{hk} = unequal weighting effect within stratum (h,k) ;
5. σ_{1gd}^2 = the variance between institution strata;
6. σ_{2gd}^2 = the variance between institutions within strata;
7. σ_{3gd}^2 = the variance between student or faculty strata;
8. σ_{4gd}^2 = the variance between participants within person strata;
9. $\sigma_{Tgd}^2 = \sigma_{1gd}^2 + \sigma_{2gd}^2 + \sigma_{3gd}^2 + \sigma_{4gd}^2$ = total variance of NSoFaS observations;
10. $\sum_{2gd}^2 = \sigma_{2gd}^2 / \sigma_{Tgd}^2$ = proportion of variance between institutions within institution strata;
11. $\sum_{4gd}^2 = \sigma_{4gd}^2 / \sigma_{Tgd}^2$ = proportion of variance between participants with person strata;
12. $CV_{gd} = \sqrt{\sigma_{Tgd}^2} / \bar{y}_{gd}$ = coefficient of variation among NSoFaS observations;
13. r_h = stratum h institution response rate;
14. CV_{md} = coefficient of variation of cluster sizes (m) among domain d members; and
15. α_{dhk} = proportion of stratum (h,k) members who belong to domain d .

The proportion of domain d members who belong to stratum (h,k) , W_{dhk} , and the proportion of stratum (h,k) members who belong to domain d , α_{dh} , were estimated using NPSAS:96, NPSAS:2000, and NSOPF:99 data. Using the restricted use data file for each study, each sample member was first assigned to the appropriate NSoFaS institution and person strata. Then, the analysis domains to which each sample student belonged were also identified (per tables B-8 and B-9). The statistical analysis weights from the respective surveys were then used to estimate the size of the domain d population within each stratum (h, k) for each of the 22 NSoFaS national-level institution sampling strata (STRAT22). These domain sizes were used to compute the domain prevalences, W_{dhk} , and α_{dhk} , for the national sample. The national domain prevalences were then replicated for the corresponding domains in the 12 states because the sample sizes in the prior surveys were not sufficient to estimate the prevalences separately for each state.

The above estimates of domain prevalences did not distinguish between in-state and out-of-state NPSAS undergraduate students for two reasons. First, there was no need to distinguish them outside the 12 states. Second, the prior NPSAS data did not include a reliable indicator of in-state versus out-of-state students. Hence, the 2000 IPEDS Fall Enrollment Survey data were

used to estimate the proportion of in-state undergraduate students in each of the three state reporting domains in each of the 12 states.¹⁵ These proportions were used to partition the proportion of stratum (h,k) members who belong to domain d , α_{dhk} , into in-state and out-of-state proportions for each state.

The components of variance – σ_{1gd}^2 , σ_{2gd}^2 , σ_{3gd}^2 , and σ_{4gd}^2 – were computed using the method of moments procedures in SAS Proc Nested, which resulted in some negative estimates. When a between-stratum variance component was estimated to be negative, the variance component for that stratum was considered to be negligible, and the variance components were re-computed without including that stratum in the computation. In addition, unusually small and extremely large person-level components of variance were truncated so that the person-level component of variance was always between 40 percent and 95 percent of the total variance.

Unequal weighting effects, UWE_{hk} , were computed based on the NPSAS:2000 statistical analysis weights. However, their values were highly variable, and it was decided that they were not reliable predictions of the unequal weighting effects to be expected with the NSoFaS:04 design. Hence, all the UWE s were set to 1.05.

The coefficient of variation, CV_{md} , of cluster sizes (numbers of students and faculty per institution) was computed for the members of each analysis domain d using the NPSAS:96 and NPSAS:2000 data and the domains in tables B-8 and B-9.

B.4.5 Optimum Sample Allocation

The technique developed by Chromy (1987) was used to determine the sample allocation to the 240 institution strata and 14 person strata that satisfied the precision constraints and other study objectives discussed in section B.4.1 at minimum cost using the cost model and relative variance model discussed in sections B.4.3 and B.4.4, respectively.

The results of this initial sample optimization exercise were used as the basis for the initial sample of about 1,600 institutions, as discussed in section B.2. All institutions with a Carnegie classification as public doctoral or private not-for-profit doctoral institutions were selected with certainty for NSoFaS because they have always been certainty strata for NSOPF. Within each state stratum, institutions belong to the NSOPF certainty strata first were selected with certainty. The computed allocations to the 240 institution strata were summarized at the level of the 58 strata (STRAT58), and the remaining institutions then were selected with probabilities proportional to size, after selecting with certainty any institutions for which the expected frequency of selection exceeded unity (1.00), as discussed in section B.2. As also discussed in section B.2, about 30 institutions were added to the sample during a freshening process.

After selecting the sample institutions, further refinements were made to the manner in which the optimization program determined which binding constraints could be relaxed. As precision constraints were iteratively relaxed during the optimization process, the student sample size distributions were constrained to achieve approximately the desired institution- and student-level marginal distributions. Hence, the sample optimization was re-run conditional on the sample of institutions that had already been selected to determine the optimum allocation of the

¹⁵ The state of residence was used for the first-time, full-time degree/certificate-seeking students as the indicator of in-state enrollees.

student sample sizes to these institutions. The results of this conditional optimization were used to set the final student sample rates, as discussed in section 3.

B.5 Appendix B References

Chromy, J.R. (1979). Sequential Sample Selection Methods. *Proceedings of the American Statistical Association Section on Survey Research Methods of the American Statistical Association*, 401–406.

Chromy, J.R. (1981). Variance Estimators for a Sequential Sample Selection Procedure. In D. Krewski, R. Platek, and J.N.K. Rao (Eds.), *Current Top IMS in Survey Sampling* (pp. 329-347). New York: Academic Press.

Chromy, J.R. (1987). Design Optimization with Multiple Objectives. *Proceedings of the American Statistical Association Section on Social Statistics*, 194–199.

Williams, R.L., and Chromy, J.R. (1980). SAS Sample Selection MACROs. *Proceedings of the Fifth Annual SAS Users Group International Conference*, 392–396.

Appendix C

Data Collection Notification Materials

Institution Contacting Letters and Inserts	
Chief Administrator Letter	C-5
Institution Coordinator Early Contacting Letter	C-7
Institution Coordinator Binder Letter	C-9
Institution Refusal Conversion Letter	C-11
Coordinator Response Form.....	C-13
Student Enrollment List Specifications	C-20
Pamphlets	
NSoFaS Pamphlet.....	C-31
NSOPF Pamphlet.....	C-35
NPSAS Pamphlet.....	C-37
Student Contacting Letters and E-Mail	
Initial Letter	C-41
Initial Letter (Spanish Version)	C-42
Web Insert	C-43
Initial E-mail	C-44
Second E-mail.....	C-45
Third E-mail.....	C-46
Nonresponse Letter	C-47
Nonresponse Letter (Spanish Version)	C-48
Nonresponse E-mail.....	C-49
Refusal Letter.....	C-50
Refusal Letter (Spanish Version).....	C-51
Refusal E-mail	C-52
Will Complete Web E-mail Document.....	C-53
Postcard.....	C-54
Final Letter.....	C-55
Final Letter (Spanish Version).....	C-56
Final E-mail	C-57
Incentive Letter	C-58

Institution Contacting Letters and Inserts

CHIEF ADMINISTRATOR LETTER

<DATE>

**NSoFaS
Endorsed by**

American Association for
Higher Education

American Association of
Collegiate Registrars and
Admissions Officers

American Association of
Community Colleges

American Association of
State Colleges and
Universities

American Association of
University Professors

American Council on
Education

American Federation of
Teachers

Association for Institutional
Research

Association of American
Colleges and Universities

Association of Catholic
Colleges and Universities

Career College Association

The Carnegie Foundation for
the Advancement of Teaching

College and University
Professional Association for
Human Resources

The College Board

The College Fund/UNCF

Council of Graduate Schools

The Council of Independent
Colleges

Hispanic Association of
Colleges and Universities

National Accrediting
Commission of Cosmetology
Arts and Sciences

National Association of
College and University
Business Officers

National Association for
Equal Opportunity in Higher
Education

National Association of
Independent Colleges and
Universities

National Association of State
Universities and
Land-Grant Colleges

National Association of
Student Financial Aid
Administrators

National Education
Association

<CHIEF ADMIN NAME>

<ADDR 1>

<ADDR 2>

<CITY STATE ZIP>

Your IPEDS UNITID:

Your PASSWORD:

Dear <NAME>:

<INSTITUTION NAME> has been selected to participate in the 2004 National Study of Faculty and Students. The Higher Education Act (Sec. 131 (d), as amended in 1998) authorizes the U.S. Department of Education, National Center for Education Statistics (NCES) to periodically gather information from students, faculty, and instructional staff on two pivotal areas of national concern:

- How do students and their families finance education after high school?
- Who teaches in our colleges and universities, and how do they conduct their work?

In response to the continuing need for these data, information was collected from students in 1987, 1990, 1993, 1996, and 2000 as part of the National Postsecondary Student Aid Study (NPSAS). Data on full- and part-time faculty and instructional staff were collected for the National Study of Postsecondary Faculty (NSOPF) in 1988, 1993, and 1999. NCES has contracted with RTI International (RTI) to conduct the next data collection cycle for both studies under the 2004 National Study of Faculty and Students (NSoFaS:04) in order to minimize the reporting burden to postsecondary institutions. Additional information about our plans for NSoFaS:04 is provided in the enclosed materials, which include an NSoFaS brochure and copies of the brochures that participating students or faculty will receive.

Your institution's participation is crucial to the success of NSoFaS:04. **I am writing to request that you appoint an NSoFaS coordinator to oversee the preparation of lists of faculty/instructional staff and students at your institution.** The NSoFaS coordinator will also complete a brief questionnaire on the Internet about your institution's policies and procedures related to faculty and instructional staff. We will use the lists prepared by your institution to draw samples of faculty/instructional staff and students for participation in the 2004 NSOPF and NPSAS data collection cycles, respectively. Sampled faculty and students will be asked to complete a questionnaire on the Internet.

The individual whom you designate as coordinator should be someone (such as the Director of Institutional Research) who is familiar with data and information sources at your institution. If you require assistance with selecting an appropriate coordinator, you may call the NSoFaS Help Desk at 1-866-NSOFAS4 (1-866-676-3274, toll-free).

We are aware that you and the staff at your institution are confronted with many competing demands for your time. Therefore, we are providing you—and the coordinator you designate—with this advance notice of the study to allow you adequate time to plan for this data collection effort and, if needed, to contact us for more information prior to the start of data collection in the fall 2003/2004 term. Once designated, an RTI representative will contact your coordinator to discuss the study timeline and procedures required for your institution. Your coordinator will also be provided with a complete summary of our data request for the NPSAS and NSOPF components of NSoFaS.

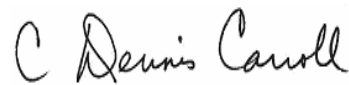
All responses that relate to or describe identifiable characteristics of individuals may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose, unless otherwise compelled by law. The enclosed pamphlets detail our data collection procedures and provide a full description of the laws and procedures safeguarding the confidentiality of questionnaire responses, contact information, and other data. Additional information, including reports based on data from previous NSOPF and NPSAS studies, is available on the NSoFaS web site:
<https://surveys.nces.ed.gov/nsofas2004>

If you have any questions about the study or procedures involved, please contact the RTI Project Coordinator, Brian Kuhr, at 1-866-676-3274 or via e-mail at nsofas2004@rti.org. You may also direct questions to NCES by contacting James Griffith at 1-202-502-7387 (e-mail address: James.Griffith@ed.gov) or Linda Zimble at 1-202-502-7481 (e-mail address: Linda.Zimble@ed.gov).

At your earliest convenience, please complete the NSoFaS Designate a Coordinator form online at the NSoFaS web site, using the IPEDS UNITID and password printed on the first page of this letter.

We look forward to your participation in this important study. Thank you for your cooperation and prompt completion of the NSoFaS *Designate a Coordinator* form.

Sincerely,


C. Dennis Carroll, Ph.D.
Associate Commissioner
Postsecondary Studies Division

Enclosures

<p>The NSoFaS <i>Designate a Coordinator</i> form may be completed online at</p> <p>https://surveys.nces.ed.gov/nsofas2004</p> <p>To access the online form, enter the user name (which is your IPEDS UNITID) and password printed on the first page of this letter.</p>

INSTITUTION COORDINATOR EARLY CONTACTING LETTER

**NSoFaS
Endorsed by**

American Association for
Higher Education

American Association of
Collegiate Registrars and
Admissions Officers

American Association of
Community Colleges

American Association of
State Colleges and
Universities

American Association of
University Professors

American Council on
Education

American Federation of
Teachers

Association for Institutional
Research

Association of American
Colleges and Universities

Association of Catholic
Colleges and Universities

Career College Association

The Carnegie Foundation for
the Advancement of Teaching

College and University
Professional Association for
Human Resources

The College Board

The College Fund/UNCF

Council of Graduate Schools

The Council of Independent
Colleges

Hispanic Association of
Colleges and Universities

National Accrediting
Commission of Cosmetology
Arts and Sciences

National Association of
College and University
Business Officers

National Association for
Equal Opportunity in Higher
Education

National Association of
Independent Colleges and
Universities

National Association of State
Universities and
Land-Grant Colleges

National Association of
Student Financial Aid
Administrators

National Education
Association

<DATE>

<COORD NAME>

<ADDR 1>

<ADDR 2>

<CITY STATE ZIP>

Your IPEDS UNITID:

Your PASSWORD:

Dear <NAME>

<INSTITUTION NAME> has been selected to participate in the 2004 National Study of Faculty and Students. The Higher Education Act (Sec. 131 (d), as amended in 1998) authorizes the U.S. Department of Education, National Center for Education Statistics (NCES) to periodically gather information from students, faculty, and instructional staff on two pivotal areas of national concern:

- How do students and their families finance education beyond high school?
- Who teaches in our colleges and universities, and how do they conduct their work?

In response to the continuing need for these data, information was collected from students in 1987, 1990, 1993, 1996, and 2000 as part of the National Postsecondary Student Aid Study (NPSAS). Data on full- and part-time faculty and instructional staff were collected for the National Study of Postsecondary Faculty (NSOPF) in 1988, 1993, and 1999. NCES has contracted with RTI International (RTI) to conduct the next data collection cycle for both studies under the 2004 National Study of Faculty and Students (NSoFaS:04) in order to minimize the reporting burden to postsecondary institutions. Additional information about our plans for NSoFaS:04 is provided in the enclosed materials, which include an NSoFaS brochure and copies of the brochures that participating students or faculty will receive.

The chief administrative officer of your institution has selected you as your institution's coordinator for NSoFaS:04. The enclosed materials detail your role and the role of your institution in this study and contain a timetable of major project activities. You will have four primary responsibilities for NSoFaS:04:

- Complete the *Coordinator Response Form* online at the NSoFaS web site, within the next few weeks, using the user name and password printed at the top of this letter. We will schedule data collection for your institution based on the information you provide. A facsimile of the *Coordinator Response Form* is included in the attached folder.
- Oversee the preparation of two data files: (1) a list of faculty and instructional staff and (2) an enrollment list of students at your institution. These data files will be used to draw samples of faculty/instructional staff and students for participation in NSoFaS:04. Sampled faculty and students will be asked to complete a questionnaire on the Internet.

- Complete a separate web-based program requiring institution record information for a sample of students.

NSoFaS:04 will begin in September 2003. At that time, complete instructions for your institution's participation will be sent directly to you. **In the meantime**, please review the enclosed materials at your earliest convenience.

We are aware that you and other staff at your institution are confronted with many competing demands for your time. We hope that giving you this advance notice of the study will provide you with ample time to plan for your school's participation in NSoFaS:04. A project representative will call you in the next few days to ensure that you have received this notification and to answer any questions that you may have. You may also call the NSoFaS Help Desk directly at 1-866-NSOFAS4 (1-866-676-3274).

All responses that relate to or describe identifiable characteristics of individuals may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose, unless otherwise compelled by law. The enclosed materials detail our data collection procedures and provide a detailed description of the laws and procedures safeguarding the confidentiality of questionnaire responses, contact information, and demographic data. Additional information, including reports based on data from previous NSOPF and NPSAS studies, is available on the NSoFaS web site:

<https://surveys.nces.ed.gov/nsofas2004>

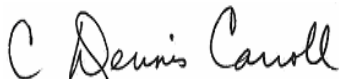
If you have questions about the study or procedures, please contact the RTI Project Coordinator, Brian Kuhr, at 1-866-676-3274 or via e-mail at nsfas2004@rti.org. You may also direct questions to NCES by contacting James Griffith at 1-202-502-7387 (e-mail address: James.Griffith@ed.gov) or Linda Zimpler at 1-202-502-7481 (e-mail address: Linda.Zimpler@ed.gov).

At your earliest convenience, please complete Coordinator Response Form online at the NSoFaS web site, using the IPEDS UNITID and password printed on the first page of this letter.

We look forward to your participation in this important study.

Thank you for your cooperation.

Sincerely,



C. Dennis Carroll, Ph.D.
Associate Commissioner
Postsecondary Studies Division

Enclosures

The NSoFaS *Coordinator Response Form* may be completed online at

<https://surveys.nces.ed.gov/nsfas2004>

To access the online form, enter the IPEDS UNITID and password printed on the first page of this letter.

INSTITUTION COORDINATOR BINDER LETTER

**NSoFaS
Endorsed by**

American Association for Higher Education

American Association of Collegiate Registrars and Admissions Officers

American Association of Community Colleges

American Association of State Colleges and Universities

American Association of University Professors

American Council on Education

American Federation of Teachers

Association for Institutional Research

Association of American Colleges and Universities

Association of Catholic Colleges and Universities

Career College Association

The Carnegie Foundation for the Advancement of Teaching

College and University Professional Association for Human Resources

The College Board

The College Fund/UNCF

Council of Graduate Schools

The Council of Independent Colleges

Hispanic Association of Colleges and Universities

National Accrediting Commission of Cosmetology Arts and Sciences

National Association of College and University Business Officers

National Association for Equal Opportunity in Higher Education

National Association of Independent Colleges and Universities

National Association of State Universities and Land-Grant Colleges

National Association of Student Financial Aid Administrators

National Education Association

<DATE>

<COORD NAME>

<ADDR 1>

<ADDR 2>

<CITY STATE ZIP>

Your IPEDS UNITID:

Your PASSWORD:

Dear <NAME>:

As the person designated to be the Institution Coordinator for the 2004 National Study of Faculty and Students (NSoFaS:04) at your institution, you are receiving detailed instructions (see enclosed binder) to ensure your full participation in both the study's faculty and student components. We look forward to working with you on this important research effort, and are available to answer any questions you may have on how to carry out the coordination activities requested of you.

As described in materials provided during the early notification period of the study this past spring/summer, NSoFaS:04 is being conducted for the U.S. Department of Education's National Center for Education Statistics (NCES) by RTI International (RTI). This ongoing study, designed to collect data from nationally representative samples of postsecondary students and faculty and instruction staff, provides vital information on changes over time in two pivotal areas of national concern:

- How students and their families finance education after high school, and
- Who teaches in our colleges and universities and how they conduct their work.

In response to the continuing need for the data provided by NSoFaS, Congress has authorized NCES to collect these data periodically. Data on full- and part-time faculty and instructional staff were collected through the faculty component—the National Study of Postsecondary Faculty (NSOPF)—in 1988, 1993, and 1999. Information on students and student financial aid was previously collected in 1987, 1990, 1993, 1996, and 2000 as part of the student component—the National Postsecondary Student Aid Study (NPSAS).

Your institution has been sampled for participation in both the faculty and student components of NSoFaS:04. As the Institution Coordinator, you are asked to oversee the completion of the following activities for NSoFaS:04:

- **Completion of the *Coordinator Response Form (CRF)* online at the NSoFaS web site, <https://surveys.nces.ed.gov/nsofas2004/>, using the IPEDS UNITID and password printed at the top of this letter.** If you have already completed this document, a copy of the form may be printed from the web site after log in. A data collection timeline for your institution has been scheduled based on the information you provided. *If you have not completed the CRF online, please do so at your earliest convenience.* For reference, a facsimile of the CRF is included in the enclosed binder.

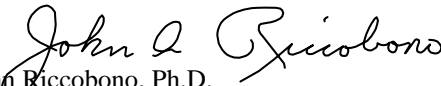
- **Preparation of a complete data file listing all full- and part-time faculty, adjunct faculty, and instructional staff (including available contact and demographic information).** The file should be current as of November 1, 2003, or the date at your institution when faculty rosters for the fall academic term are complete. [FOR INST THAT COMPLETED THE CRF AND HAVE INDICATED DATE OTHER THAN DEC 6]: *<Information provided on the CRF indicates that you will send your faculty list to RTI on <DATE>[FOR NULL/DEC 6: The NSoFaS help desk will call to confirm the date at which we can expect your institution's list. It is important that we receive your institution's list prior to the end of the fall term, if possible.]*
- **Completion of the *Institution Questionnaire* online at the NSoFaS web site.** The questionnaire may be completed in multiple sessions; however, Question 1 (which asks for counts of full- and part-time faculty and instructional staff at your institution) should be answered at the time you send your list of faculty. A facsimile of the questionnaire is included in your binder. *Please complete this questionnaire online by December 5, 2003, or by the date you submit your faculty list noted above if different.*
- **Preparation of a complete data file listing all students enrolled at your institution at any time between July 1, 2003, and April 30, 2004.** Please refer to the enclosed NPSAS materials for a complete set of student eligibility criteria. Your *list of students enrolled* should be transmitted to RTI as early as possible. This data file will be used to draw a sample of students for participation in NPSAS. Sampled students will be asked to complete a questionnaire on our secured web site over the Internet. It is critical that we allow students ample time to respond before the end of the academic year. [FOR INST THAT COMPLETED A CRF: *<Information provided on the CRF indicates that you will send the student list to RTI on <DATE>.* [NO CRF/ UNKNOWN AFTER DATE: *The NSoFaS help desk will call to confirm the date at which we can expect your institution's list.*]
- **Completion of a separate web-based computer-assisted data entry (webCADE) program that requires institution record information for those students who are sampled.** This includes specific information on their enrollment status, financial assistance, and demographic characteristics. More details can be found in the enclosed binder.

All responses that relate to or describe identifiable characteristics of individuals may be used only for statistical purposes and may not be disclosed or used, in identifiable form, for any other purpose, unless otherwise compelled by law. The enclosed materials detail our data collection procedures and provide a detailed description of the laws and procedures safeguarding the confidentiality of individual questionnaire responses, contact information, and demographic data. Additional sources of information, including reports based on data from previous NSOPF and NPSAS studies, are available on the NSoFaS web site: <https://surveys.nces.ed.gov/nsofas2004/>.

If you have questions about the study purposes or procedures, please contact either of us or Brian Kuhr, Project Coordinator, at 1-866-NSOFAS4 (1-866-676-3274) or via e-mail at nsofas2004@rti.org. You may also direct questions to NCES by contacting either James Griffith at 1-202-502-7387 (e-mail address: James.Griffith@ed.gov) or Linda Zimbler at 1-202-502-7481 (e-mail address: Linda.Zimbler@ed.gov).

We look forward to your participation in this important study. Thank you for your cooperation.

Sincerely,


John Riccobono, Ph.D.
NPSAS Project Director


Margaret Cahalan, Ph.D.
NSOPF Project Director

Enclosures

Your institution's response to the National Study of Faculty and Students may be completed online at <https://surveys.nces.ed.gov/nsofas2004/>
To upload lists or other data collection forms, go to the **login** tab found on the home/login page. You will be prompted to enter the IPEDS UNITID and password printed on the first page of this letter.

INSTITUTION REFUSAL CONVERSION LETTER

**NSoFaS
Endorsed by**

- American Association for Higher Education
- American Association of Collegiate Registrars and Admissions Officers
- American Association of Community Colleges
- American Association of State Colleges and Universities
- American Association of University Professors
- American Council on Education
- American Federation of Teachers
- Association for Institutional Research
- Association of American Colleges and Universities
- Association of Catholic Colleges and Universities
- Career College Association
- The Carnegie Foundation for the Advancement of Teaching
- College and University Professional Association for Human Resources
- The College Board
- The College Fund/UNCF
- Council of Graduate Schools
- The Council of Independent Colleges
- Hispanic Association of Colleges and Universities
- National Accrediting Commission of Cosmetology Arts and Sciences
- National Association of College and University Business Officers
- National Association for Equal Opportunity in Higher Education
- National Association of Independent Colleges and Universities
- National Association of State Universities and Land-Grant Colleges
- National Association of Student Financial Aid Administrators
- National Education Association

<DATE>
 <NAME>
 <ADDR 1>
 <ADDR 2>
 <CITY STATE ZIP>

Your IPEDS UNITID:
 Your PASSWORD:

Dear <NAME>:

I am writing to you again to urge your participation in the 2004 National Study of Faculty and Students (NSoFaS:04). Because your participation is so important to the success of NSoFaS:04, I have authorized assistance to your institution to facilitate its timely participation in NSoFaS:04.

The Higher Education Act (Sec. 131 (d)), as amended by the United States Congress in 1998, provides the U.S. Department of Education, National Center for Education Statistics (NCES) with the authority and a mandate to periodically gather data on the condition of postsecondary education in the United States. NSoFaS:04 plays an essential role in fulfilling this mandate.

NSoFaS:04 consists of two very important studies conducted by NCES: the 2004 National Study of Postsecondary Faculty (NSOPF:04) and the 2004 National Postsecondary Student Aid Study (NPSAS:04). The nationally representative sample for the two studies is selected from among all Title IV eligible institutions. To ensure representation of the entire range of postsecondary institutions in the nation, we count on cooperation from each of the sampled institutions. We are grateful for the outstanding cooperation that we have received in previous cycles of these studies. We urgently request your institution's participation in NSoFaS:04.

We are well aware that, especially under difficult economic conditions, postsecondary institutions have limited staff and resources to devote to participating in research studies, regardless of their importance. That is why we have instructed RTI International, NCES' contractor for NSoFaS:04, to provide your institution with the assistance necessary to accomplish the following:

- Provide a list of faculty and instructional staff employed by your institution as of November 1, 2003;
- Complete a brief Institution Questionnaire concerning your institution's policies and procedures regarding faculty;
- Provide a list of postsecondary students enrolled at your institution between July 1, 2003 and April 30, 2004; and
- Complete a student record abstraction form for a small number of students selected from the enrollment list.

To assist your institution in participating in the study, NCES has authorized RTI International to provide compensation for the staff and resources required by your institution to compile lists of faculty and students and associated documentation.

Moreover, if necessary, RTI will also arrange for one of its specially-trained staff to visit your institution and perform the record abstractions for sampled students.

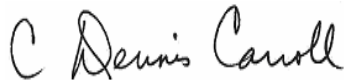
Data collection for NSoFaS:04 is both authorized and protected by federal confidentiality laws, including the Family Education Rights and Privacy Act (FERPA). The small number of faculty and students sampled from the lists provided by your institution will be asked to participate in NSoFaS:04 by completing a questionnaire online or by telephone in a confidential and secure manner. We encourage you to review the additional information available about NSoFaS:04 at the following web site: <https://surveys.nces.ed.gov/nsofas2004/>

Both the Institution Questionnaire and secure uploads for faculty and student lists may be accessed at this site. The user name (IPEDS UNITID) and password required to access the forms and procedures for your institution are printed at the top of this letter.

Over the course of the next 2 weeks, a representative from RTI will be contacting you to discuss your needs and the best way to facilitate your institution's participation in NSoFaS:04. You may also contact Brian Kuhr, the Project Coordinator at 1-866-676-3274 or by e-mail at nsofas2004@rti.org to confirm your participation in the study and to request any necessary assistance in providing the data requested. You may direct questions to NCES by contacting James Griffith at 1-202-502-7387 (e-mail address: James.Griffith@ed.gov) or Linda Zimble at 1-202-502-7481 (e-mail address: Linda.Zimble@ed.gov).

Once again, thank you for your consideration.

Sincerely,



C. Dennis Carroll, Ph.D.
Associate Commissioner
Postsecondary Education Division

The NSoFaS forms may be completed online at

<https://surveys.nces.ed.gov/nsofas2004/>

To access the online form, enter the user name (which is your IPEDS UNITID) and password printed on the first page of this letter.



The 2004 National Study of Faculty and Students
(NSoFaS:04)



**COORDINATOR RESPONSE FORM (CRF)
FACSIMILE**

If you completed the CRF in spring/summer 2003, a report can be viewed and/or printed from the web site with your responses—specifically, the due dates established for submitting your list of faculty and instructional staff and/or list of students enrolled.

Follow the steps below to connect to the study's secure web site.

Connect browser to:

<https://surveys.nces.ed.gov/nsofas2004/>

At the Home/Login page:

Enter your unique IPEDS UNITID and password.¹

Select the option *View Coordinator Response Form Report*. (Click on link.)

If you did not complete the form in spring/summer 2003, please review this facsimile and complete the CRF online as soon as possible upon receipt of this binder.

Follow the steps below to connect to the study's secure web site.

Connect browser to:

<https://surveys.nces.ed.gov/nsofas2004/>

At the Home/Login page:

Enter your unique IPEDS UNITID and password.¹

Select the option *Coordinator Response Form*. (Click on button.)

If you are unable to complete the CRF online, you may complete the form by telephone. Please call the 2004 National Study of Faculty and Students (NSoFaS:04) Help Desk at 1-866-NSOFAS4 (1-866-676-3274). Staff members are available Monday through Friday, from 9 a.m. to 7 p.m. (Eastern Time). You will be able to immediately complete the information with a staff member or schedule an appointment to complete it at a more convenient time.

¹ Your unique and secure Integrated Postsecondary Education Data System (IPEDS) UNITID and password are printed on the letter accompanying this material or they may be obtained by contacting the Help Desk at 1-866-NSOFAS4 (1-866-676-3274).



The 2004 National Study of Faculty and Students (NSoFaS:04)



Coordinator Response Form

Your response to these questions will allow RTI to customize some of the systems on the NSoFaS web site with characteristics unique to your institution. This will make it easier for you and your staff to move through the various study components.

1. Institutions use different methods to account for a student's credits—that is, to track completion of required curricula, courses, or programs offered at that institution.

How are course/programs measured at your institution?

- Clock hours
- Credit hours
- Both

2. Institutions use a variety of structures to quantify the hours that are taken by a student during a calendar year or school year.

What calendar system is used at your institution?

- Semesters
- Quarters
- Trimesters
- 4-1-4
- Differs by program
- Continuous/Open Enrollment
- No standard terms



The 2004 National Study of Faculty and Students
(NSoFaS:04)



3. Identify the names of each of the terms/enrollment periods (sometimes referred to as payment periods) that a student may enroll in between July 1, 2003, and June 30, 2004. Please include all terms, even those that may apply to special types of students (e.g., medical or MBA students).

NOTE: SOME PORTION OF THE TERM MUST OCCUR BETWEEN JULY 1, 2003, AND JUNE 30, 2004, BUT MAY START PRIOR TO JULY 1 OR END AFTER JUNE 30.

After all the terms are added, please press the Continue button.

Add Term

Please add a term.

Please enter the name of the term and the associated start and end dates.

Term Name:

Start date: Month: Day: Year:

End date: Month: Day: Year:

THIS IS AN EXAMPLE OF HOW QUESTION 3 MAY BE COMPLETED.

3. Identify the names of each of the terms/enrollment periods (sometimes referred to as payment periods) that a student may enroll in between July 1, 2003, and June 30, 2004. Please include all terms, even those that may apply to special types of students (e.g., medical or MBA students).

NOTE: SOME PORTION OF THE TERM MUST OCCUR BETWEEN JULY 1, 2003, AND JUNE 30, 2004, BUT MAY START PRIOR TO JULY 1 OR END AFTER JUNE 30.

After all the terms are added, please press the Continue button.

Delete?	Term Name	Term start date	Term end date
<input type="checkbox"/>	First Summer	6/6/2003	7/15/2003
<input type="checkbox"/>	Second Summer	7/21/2003	8/8/2003
<input type="checkbox"/>	Fall 2003	8/28/2003	12/6/2003
<input type="checkbox"/>	Spring 2004	2/10/2004	5/5/2004
<input type="checkbox"/>	First Summer 2004	5/6/2004	6/15/2004

Add Term

Delete selected Terms



The 2004 National Study of Faculty and Students
(NSoFaS:04)



4. Identify institution grants and scholarships. Include only those institutional grants and scholarships paid out of institutional revenue, including restricted funds that originate from private donations or endowments. Do not include grants or scholarships funded by state or federal sources, even if the award decisions are made by institution staff. State grant program funds that are allocated to and awarded by your institution (instead of a centralized state grant system that makes awards to students) should not be included as institutional aid.

Please list up to 12 names of the most prevalent institution grants and scholarships awarded and indicate whether “need,” “merit,” or “both” is considered when making these awards.

Check here if your institution **does not** award institution grants or scholarships. Then click on the Continue button below.

Add Award

THIS IS AN EXAMPLE OF HOW QUESTION 4 MAY BE COMPLETED.

4. Identify institution grants and scholarships. Include only those institutional grants and scholarships paid out of institutional revenue, including restricted funds that originate from private donations or endowments. Do not include grants or scholarships funded by state or federal sources, even if the award decisions are made by institution staff. State grant program funds that are allocated to and awarded by your institution (instead of a centralized state grant system that makes awards to students) should not be included as institutional aid.

Please list up to 12 names of the most prevalent institution grants and scholarships awarded and indicate whether “need,” “merit,” or “both” is considered when making these awards.

Delete?	Name of Award	Basis of Award Decision
<input type="checkbox"/>	Future Teachers of North Carolina Scholarship	BOTH

Add Award

Delete selected Awards



The 2004 National Study of Faculty and Students
(NSoFaS:04)



**NPSAS (STUDENT COMPONENT ONLY) INSTITUTIONS
WILL AUTOMATICALLY SKIP THIS QUESTION WHEN FORM IS COMPLETED ON
WEB.**

5. We would like to receive a list of faculty and instructional staff employed at your institution as of November 1, 2003. The table to the right depicts the data elements to be included on the list for each faculty and instructional staff member. We'd like to receive the list of faculty and instructional staff no later than December 5, 2003.

When will you be able to provide the list of faculty and instructional staff?



On or before December 5, 2003



After December 5, 2003. (A project staff member will call to establish a specific date.)

[▶ CONTINUE](#)

[◀ BACK](#)

Faculty and Instructional Staff Data Elements

1. First Name
2. Middle Initial
3. Last Name
4. Name Suffix (e.g., Jr., Sr., III, etc.)
5. Employee ID
6. Race/Ethnicity
7. Gender
8. Employment Status
9. Academic Field
10. Campus Address 1
11. Campus Address 2
12. Campus City
13. Campus State
14. Campus Zip Code
15. Campus Telephone Number
16. Campus e-mail
17. Home Address 1
18. Home Address 2
19. Home City
20. Home State
21. Home Zip Code
22. Home Telephone Number
23. Home e-mail



The 2004 National Study of Faculty and Students
(NSoFaS:04)



THESE DATES ARE AN EXAMPLE OF HOW THE DATE FILLS IN BASED ON YOUR INSTITUTION'S RESPONSE TO QUESTION 4 (IF ANY TERMS WERE ENTERED)

6. Please provide a list of all students enrolled at your institution. The table to the right depicts the data elements to be included on the list for each student. We'd like to receive the enrollment list as soon as possible. Based on the dates you provided for terms during the 2003-04 academic year, **February 24, 2004**, is 2 weeks after the beginning of the **"Spring 2004"** term, which is the last term with a start date that is **on or before April 30, 2004**.

When will you be able to provide the list of all students enrolled?



On or before **February 24, 2004**



After **February 24, 2004**. (A project staff member will call to establish a specific date.)

[▶ CONTINUE](#)

[◀ BACK](#)

Student Data Element
1. First Name
2. Middle Initial
3. Last Name
4. Name Suffix (e.g., Jr., Sr., III, etc.)
5. Student ID
6. Social Security Number
7. Educational Level
8. First Time Beginner
9. Local Address 1
10. Local Address 2
11. Local City
12. Local State
13. Local ZIP Code
14. Local Telephone Number
15. Campus e-mail
16. Permanent Address 1
17. Permanent Address 2
18. Permanent City
19. Permanent State
20. Permanent ZIP Code
21. Permanent Telephone Number
22. Permanent e-mail



The 2004 National Study of Faculty and Students (NSoFaS:04)



7. When RTI receives your list of students enrolled, a random sample will be selected. During the final stage of the study, you will enter specific data from sampled students' records pertaining to enrollment and financial aid status. NPSAS webCADE (a computer-assisted data entry Internet application) is the application developed to assist in your completing this stage. It will be available on the study web site once the sample has been selected. You will enter student data on this site using either **Netscape 4.8 or higher** or **MS Internet Explorer 5.0** or higher with the following:

- **128-bit encryption.** You may need to adjust your browser settings or download an update to activate 128-bit encryption.

- **JavaScript enabled.** JavaScript is the programming language of the interactive sections of our web site and must be enabled for many pages to work properly.

Will it be possible for you to use this software to provide the requested data?

Yes

No

Would like to discuss options with staff

▶ CONTINUE

◀ BACK

OPTIONS AT END OF CRF

You have reached the end of this form. Please check the option that best describes how you would like us to proceed:

Close completed form: You have completed all the information, including all terms, awards, and dates when we can expect your faculty list and your list of students enrolled. Checking this option means that you are submitting this form as final. If you later determine that you need to make modifications, please call 1-866-NSOFAS4 (1-866-676-3274) or e-mail the changes to nsotas2004@rti.org.

Keep form open for later completion: You have completed all or most of the information, including some terms, some awards, and dates when we can expect your faculty list and your list of students enrolled. Checking this option will allow you to continue accessing this form on the web until you are entirely satisfied that all information has been entered. NSoFaS staff may call you to offer their assistance.

Provide assistance: You would like NSoFaS staff to call you to schedule a time to complete the items. Checking this option forwards an auto e-mail to nsotas2004@rti.org and a staff person will call to set an appointment for completing the Response Form with you over the telephone. A facsimile of the form was provided with your early notification packet to assist with preparation of your responses at that time.

▶ CONTINUE

◀ BACK



The 2004 National Postsecondary Student Aid Study (NPSAS:04)

GUIDANCE FOR PREPARING THE LIST OF STUDENTS ENROLLED

Background

The *list of students enrolled* that you provide will be used to randomly select a nationally representative sample of students in postsecondary institutions across the nation. To ensure a scientifically valid sample, it is extremely important that you follow the instructions provided in this document when preparing your institution's list. Because postsecondary institutions vary widely in their organizational structures, we realize that some of the criteria presented below may not apply to your institution. Please interpret the instructions and terms according to your institution's usage.

Should you have any questions about these instructions, or whether students should or should not be included on the list, we urge you to contact the NSoFaS Help Desk at:

- Phone: 1-866-NSOFAS4 (1-866-676-3274)
- E-mail: nsofas2004@rti.org

Eligibility Requirements

Include all students enrolled at your institution at any time between July 1, 2003, and April 30, 2004, who satisfy **all** of the following requirements:

- The student was enrolled during these dates in at least one term or course of instruction that is one of the following (i.e., student considered to be eligible for Title IV aid):
 - i. an academic program;
 - ii. at least one course for credit that could be applied toward fulfilling the requirements for an academic degree; *or*
 - iii. an occupational or vocational program that requires at least 3 months or 300 clock hours of instruction to receive a degree, certificate, or other formal award.
- The student was not enrolled concurrently in high school and your institution during this *entire* period. (Note: A student enrolled in courses at your institution while also enrolled in high school is not eligible. However, if that student completes high school and then enrolls in a course of instruction at your institution at some time during the above dates, the student is eligible.)
- The student was not enrolled in your institution during this *entire* period solely for the purpose of earning a general equivalency diploma (GED) or finishing another high school completion program. (Note: If the student completes such a program at your institution and then enrolls in another course of instruction there at any time during the above dates, the student is eligible.)



The 2004 National Postsecondary Student Aid Study (NPSAS:04)

- The student was not enrolled in your institution during these dates only for vocational purposes, not receiving credit.
- The student did not drop out of your institution early enough to receive a full refund of their tuition.
- The student did not pay tuition during these dates solely to a different institution.

Data Elements Required

For each eligible student on the list we will need the information listed in the accompanying *Contact Information and File Layout* document. If you use other codes or another layout, please provide us with a detailed description of the codes and layout of your list.

File Types

As detailed on the *Contact Information and File Layout* document, you may choose to submit your *list of students enrolled* as an ASCII fixed-field file, a comma-delimited file, or an Excel spreadsheet. If you choose to use a different file type, please be sure to indicate its type and layout. If you have no option but to send your list in paper form, we prefer to receive a single, unduplicated list in which each student's name appears only once.



The 2004 National Postsecondary Student Aid Study
(NPSAS:04)

**CONTACT INFORMATION AND FILE LAYOUT FOR CREATING
THE LIST OF STUDENTS ENROLLED**

This document is in two sections. In the first section (pages 1–3) we ask you to provide the information requested for all individuals responsible for preparing your student list. Please include this information when you provide the list. This information will be used only when we need to contact these individuals with questions regarding your list. The second section (page 4) provides details of our suggested file layout for creating your list.

You can transmit this document to us via one of the following two modes:

- Select the option *Upload List of Students Enrolled* after logging in to the web site at: <https://surveys.nces.ed.gov/nsotas2004/>.
- Federal Express (use the airbill information provided as part of the Transmittal Options document that follows this document in this tab).

Should you have any questions, please call the NSoFaS Help Desk at: 1–866–NSOFAS4 (1–866–676–3274).

1. Institution Identification: Please provide the following information about your institution:

Institution Name: _____

Institution IPEDS UNITID:² _____

Date: Please specify the date your student list was prepared (mm/dd/yyyy): ____ / ____ / ____

Contact Information: Please provide the following information for all individuals responsible for preparing your *list of students enrolled*.

Name	Department	E-mail address	Telephone number

² Note that your institution name and Integrated Postsecondary Education Data System (IPEDS) UNITID is printed on the letter that accompanies this binder.



The 2004 National Postsecondary Student Aid Study (NPSAS:04)

Counts of Eligible Students: Between July 1, 2003, and April 30, 2004, how many students have been enrolled in your institution that satisfy **all** the following requirements?

- The student was enrolled during these dates in at least one term or course of instruction that is one of the following (i.e., student considered to be eligible for Title IV aid):
 - i. an academic program;
 - ii. at least one course for credit that could be applied toward fulfilling the requirements for an academic degree; *or*
 - iii. an occupational or vocational program that requires at least 3 months or 300 clock hours of instruction to receive a degree, certificate, or other formal award.
- The student was not enrolled concurrently in high school and your institution during this *entire* period. (Note: A student enrolled in courses at your institution while also enrolled in high school is not eligible. However, if that student completes high school and then enrolls in a course of instruction at your institution at some time during the above dates, the student is eligible.)
- The student was not enrolled in your institution during this *entire* period solely for the purpose of earning a general equivalency diploma (GED) or finishing another high school completion program. (Note: If the student completes such a program at your institution and then enrolls in another course of instruction there at any time during the above dates, the student is eligible.)
- The student was not enrolled in your institution during these dates only for vocational purposes, not receiving credit.
- The student did not drop out of your institution early enough to receive a full refund of their tuition.
- The student did not pay tuition during these dates to a different institution.

Please provide the total number of eligible students: _____

- 5. Electronic File Type and Layout:** Using the file layout specifications on the next page, please mark which of the following file types you will use to provide your list. If you choose to use a type or layout other than what is suggested, please be sure to specify its type and complete layout.

ASCII Fixed-field: Please use the suggested file layout provided on the next page.

Comma-delimited: Please use a blank space for any missing data elements and use the data order and codes in the suggested file layout provided on the next page.

Excel spreadsheets: Please properly label all columns and use the order and codes in the suggested file layout provided on the next page.



The 2004 National Postsecondary Student Aid Study
(NPSAS:04)

Other (e.g., paper list): Please specify type and layout of your list (use additional pages if necessary):

- 6. Special Comments:** In the space provided below, please tell us about any of the requested data items that you cannot provide. Also, please provide any additional details that would clarify the layout of the student list you are submitting, as well as any information necessary to correctly interpret the information provided (e.g., educational level, abbreviations, codes, etc.).



The 2004 National Postsecondary Student Aid Study (NPSAS:04)

Student List File Specifications			
Student data element	Code	Starting column	Ending column
1. First name		1	25
2. Middle initial		26	26
3. Last name		27	51
4. Name suffix (e.g., Jr., Sr., III, etc.)		52	54
5. Student ID		55	66
6. Social Security number		67	75
7. Educational level	U = Undergraduate student M = Master's student D = Doctoral student G = Other graduate student P = First-professional student ¹	76	76
8. First-time beginner ²	Y = First-time beginner N = Not a first-time beginner X = Unknown beginner status	77	77
9. Local address 1		78	127
10. Local address 2		128	177
11. Local city		178	227
12. Local state		228	229
13. Local ZIP code		230	238
14. Local telephone number		239	248
15. Campus e-mail		249	298
16. Permanent address 1		299	348
17. Permanent address 2		349	398
18. Permanent city		399	448
19. Permanent state		449	450
20. Permanent country (if not U.S.)		451	500
21. Permanent ZIP code ³		501	510
22. Permanent telephone number ³		511	535
23. Permanent e-mail		536	585

¹ A *first-professional* student is a student enrolled in any of the following degree programs: chiropractic (D.C. or D.C.M.); osteopathic medicine (D.O.); dentistry (D.D.S. or D.M.D.); pharmacy (Pharm.D.); law (L.L.B. or J.D.); podiatry (D.P.M., D.P., or Pod.D.); medicine (M.D.); theology (M.Div., M.H.L., B.D., or Ordination); optometry (O.D.); or veterinary medicine (D.V.M.).

² A *first-time beginning* student is defined as a student satisfying all of the following conditions: (a) had no transfer credits from another postsecondary institution. If you are unable to determine transfer credits, you may ignore transfer credits when identifying your first-time beginning students and (b) first term of enrollment at this institution was between July 1, 2003, and April 30, 2004, or has not completed a postsecondary class prior to July 1, 2003; (c) was an undergraduate between July 1, 2003, and April 30, 2004; (d) was freshman or first-year student between July 1, 2003, and April 30, 2004.

³ The field length for permanent ZIP code and telephone number allows for international ZIP codes and telephone numbers, respectively.



The 2004 National Postsecondary Student Aid Study (NPSAS:04)

TRANSMITTAL OPTIONS FOR THE LIST OF STUDENTS ENROLLED

**Please submit your list after January 2004
within 2 weeks following
the beginning of the last term at your institution
that begins on or before April 30, 2004.**

This document specifies the different file delivery options you can use to submit the requested *list of students enrolled* for your institution. **We strongly encourage you to send us your list as an electronic file.** However, if you are unable to provide an electronic file, we will accept paper lists as a last resort. Please note that information regarding the eligibility definitions and the needed data items can be found in the documents: *Guidance for Preparing the List of Students Enrolled*, *Contact Information and File Layout for Creating the List of Students Enrolled*, and *Frequently Asked Questions (FAQs)*.

Please select one of the following four transmittal options that is most appropriate for your institution. Regardless of the option you select, please also complete and transmit the *Contact Information and File Layout for Creating the List of Students Enrolled* document to provide information about the list(s) you will submit. Should you use a different file layout other than what we have suggested, please provide details of your file layout.

I. Upload to the 2004 NSoFaS Web Site

You may upload your files directly to the web site for NSoFaS, located at: <https://surveys.nces.ed.gov/nsofas2004/>. After login, simply click on "Upload List of Students Enrolled" and follow the instructions on the screen. You will be instructed to provide the following information:

- Institution name and IPEDS UNITID;
- Contact information for the person who prepares the list; and
- File layout.

II. Electronic Mail (e-mail to studentlist@rti.org)

You may choose to send your student list as an attachment via electronic mail. In this case, please send your e-mail to RTI at studentlist@rti.org. Please be sure to separately transmit your completed electronic copy of the *Contact Information and File Layout* document for the list that you will be submitting. (See the *Contact Information and File Layout* document for modes to transmit that document.) **Please do not send questions to this address.**



The 2004 National Postsecondary Student Aid Study (NPSAS:04)

III. Diskette, Zip Disk, or CD-ROM

You may write your student list to diskette, Zip disk, or CD-ROM and mail it to RTI using the enclosed Federal Express airbill, along with a completed copy of the *Contact Information and File Layout* document for each list. Please identify all materials (diskette, Zip Disk, CD-ROM, and file layout) that you send to RTI with the IPEDS UNITID for your institution.

IV. Paper List

If possible, we would greatly appreciate it if you did not use this option. However, if you cannot provide an electronic list of your students, paper lists may be mailed to RTI using the enclosed Federal Express airbill. Please identify each list and file layout document that you send to RTI with the IPEDS UNITID for your institution. See the following page for Instructions for completing the airbill.

If you need assistance, please call the NSoFaS Help Desk at: 1-866-NSOFAS4 (1-866-676-3274).



The 2004 National Postsecondary Student Aid Study (NPSAS:04)

When sending a diskette, Zip disk, CD-ROM, or hard copy of the *list of students enrolled*, use the standard Federal Express airbill enclosed in the pocket at the end of this binder. Follow the instructions below.

ITEM 1:

Fill in Date, Sender's Name, Phone, Company, Address, City, State, ZIP Code.

ITEM 2:

Your Internal Billing Reference Information will **08407.200.310** for the *list of students enrolled*.

ITEM 3:

ON AIRBILL	TO BE ENTERED
Recipient's Name:	Linda Rattelade
Phone:	(919) 541-8984
Company	RTI International
Address	1000 Parliament Ct., Suite 100
City	Durham
State:	NC
ZIP Code	27703-8464

ITEM 4a:

Please mark FedEx Priority Overnight.

ITEM 5:

Indicate the type of package/letter you are shipping.

ITEM 7:

Please check Third Party and use FedEx Account No. **159621286**.

Pamphlets

The 2004 National Study of Faculty and Students
NSoFaS:04

For more information about NSoFaS:04, please contact
members of the project team at this number:
1-866-NSOFAS4 (1-866-676-3274)

RTI International*

Brian Kühr
Project Coordinator
nsolas2004@rti.org

Dr. Margaret Cahalan
Associate Project Director NSOPF
cahalan@rti.org

Dr. John Riccobono
Project Director NPSAS
jar@rti.org

National Center for Education Statistics

Linda Zimble
NCES Project Officer NSOPF
1-202-502-7481
Linda.Zimble@ed.gov

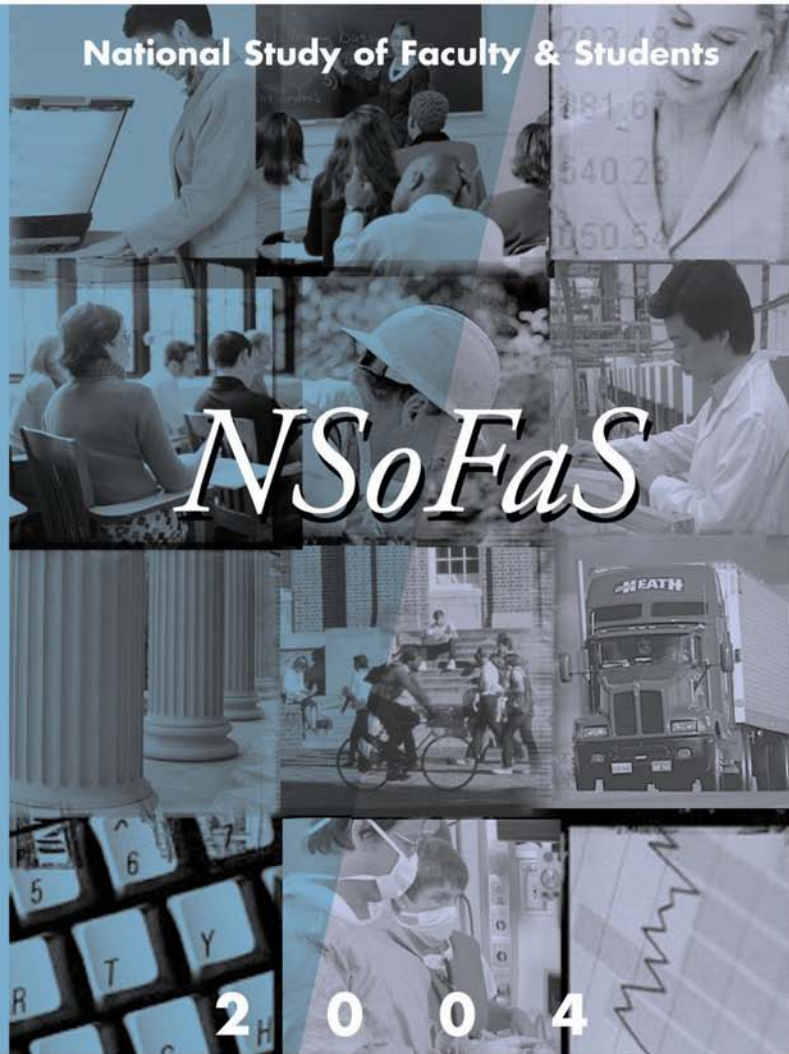
Dr. James Griffith
NCES Project Officer NPSAS
1-202-502-7387
James.Griffith@ed.gov

Sponsored by



U.S. Department of Education
National Center for Education Statistics, Washington, DC
<http://nces.ed.gov>
March 2003

* RTI International is a trade name of Research Triangle Institute



The quality and affordability of postsecondary education are vital concerns for students and their families. That is why the information gathered by the 2004 National Study of Faculty and Students (NSoFaS:04) is so important. The student component explores how families with varying resources are able to pay for education after high school and provides comprehensive data on the enrollment status, education goals, employment, and demographic characteristics of postsecondary students. The faculty component provides critical data on those individuals who are most pivotal to a quality education—faculty and instructional staff—including information on their training, experience, and duties, as well as the key policy issues affecting them and their work.

Basic Issues

National Study of Postsecondary Faculty (NSOPF)

NSOPF responds to the continuing need for data on postsecondary faculty and instructional staff—those who directly affect the quality of education in postsecondary institutions. Research questions that can be studied using the data from NSOPF include the following:



- How many full- and part-time faculty and instructional staff are there?
- What are their background characteristics?
- What are their workloads, and how is their time allocated between classroom instruction and other activities?
- What are the current teaching practices and uses of technology among postsecondary faculty and instructional staff?

National Postsecondary Student Aid Study (NPSAS)

NPSAS data provide information on the cost of postsecondary education, the distribution of financial aid, and the characteristics of both aided and nonaided students and their families. Research questions that can be studied using the data from NPSAS include the following:



- What is the “net price” of education to the student and family?
- How is student “need” for financial aid being met?
- How much are students borrowing?
- How does the distribution of aid differ by major field of study?
- What are the characteristics of students beginning their postsecondary education in 2004, and how many of them persist in postsecondary education?

Data Analysis and Dissemination

To make the data as useful as possible, the National Center for Education Statistics (NCES) will publish information in several ways:

- Descriptive reports are published by NCES on selected topics. Publications from previous NSOPF and NPSAS studies may be accessed electronically through NCES’s web sites at <http://nces.ed.gov/surveys/nsopf> and <http://nces.ed.gov/surveys/npsas>
- Special tabulations are provided on request.
- Data files (without identifying information) are available.
- Presentations on study findings are made at conferences.

How Will the Study Be Conducted?

NSoFaS is sponsored by NCES and conducted under contract with RTI International (RTI). RTI is a nonprofit research organization with headquarters in North Carolina.

NSoFaS:04 begins with the contacting of postsecondary institutions in March 2003 to provide early notification of their selection in the study and to initiate coordination of the various study components. About 1,100 institutions will be sampled for both NSOPF and NPSAS, while another 500 will be asked to participate only in NPSAS.

The collection of information from student records and interviewing of faculty and students will take place in 2004, reflecting the 2003–2004 academic year. However, experience from prior NPSAS and NSOPF studies tells us that institutions would welcome information earlier in the process to enable them to better coordinate staff and resources in completing the requirements of this study. Because over 1,600 postsecondary institutions, about 120,000 students, and 35,000 faculty/instructional staff will be a part of this national study, timeliness at every step in the process is critical to its success.

These activities may differ somewhat according to your type of institution and method of record keeping. The study will consist of the following stages:

Winter 2002/Spring 2003

- Beginning in March 2003, the chief administrative officer (CAO) at each institution will be asked to designate an NSoFaS:04 institutional coordinator(s) to work with RTI.
- Beginning in March 2003, RTI will contact the institutional coordinator(s) to clarify the tasks, timeline, and responsibilities. They will be asked to complete a brief "response form" on the Web at <https://surveys.nces.ed.gov/nsotas2004> that identifies the 2003–2004 terms and types of awards granted by the institution.
- RTI will provide updates throughout the spring and summer of 2003 to the institutional coordinator and respond to any questions or concerns presented.

Fall 2003

- In September 2003, a set of detailed materials will be sent by RTI to all institutional coordinators.
- By November 2003, the institutional coordinator (for those 1,100 institutions participating in NSOPF—faculty component) or other designated staff will complete a web-based questionnaire about institutional policies/practices related to faculty and instructional staff at their institution.
- By December 5, 2003, the institutional coordinator (NSOPF—faculty component) will supply RTI with a list of faculty and instructional staff.

Winter 2003 (early 2004)

- By mid-December 2003, RTI will begin selecting samples from the lists of faculty and instructional staff sent by the institutions.
- By late January 2004, sampled faculty and instructional staff will begin completing a web-based or telephone interview.
- Beginning January 2004, the institutional coordinator (for each of the 1,600 institutions participating in NPSAS—student component) will supply RTI with a list of students enrolled at the institution. The list will include contact and basic demographic information for students enrolled at the institution during any term that includes July 1, 2003, through April 30, 2004.
- Beginning mid-February 2004, RTI will select samples of students from each enrollment list received.

Spring 2004

- Beginning March 2004, the institutional coordinator or other designated staff will provide student record information (e.g., enrollment status, major, aid package received), for only those students sampled at the institution, via a web-based computer-assisted data entry (webCADE) instrument. For the student component (NPSAS), RTI field staff will be available to provide assistance with the student record abstraction phase.
- Beginning in March 2004, sampled students will complete web-based or telephone interview.

Web-based data entry applications have been developed to facilitate participation and to minimize the burden on institutional staff in providing the data. The software is user friendly and efficient.

Confidentiality Issues

The National Education Statistics Act (NESA) of 1994, as amended by the USA PATRIOT Act of 2001, authorizes NCES to collect and disseminate information about education in the United States. Collection is most often done through surveys. This Act, which incorporates and expands upon the Privacy Act of 1974, requires strict procedures to protect the **confidentiality of persons in the collection, reporting, and publication of data**. The Family Education Rights and Privacy Act of 1974 (FERPA) (20 U.S.C. 1232g) allows for the release of institutional record information to the Secretary of Education or his agent without prior consent of survey members [20 U.S.C. 1232g(b)(3)]. RTI International, as the contractor for NCES, has been given the authority to collect information from institutional records under the provisions of NESA.

All responses that relate to or describe identifiable characteristics of individuals may be used only for statistical purposes and may not be disclosed or used in identifiable form for any other purpose, unless otherwise compelled by law.

Protection of Electronic Files

All electronic files from institution records and student, faculty, and instructional staff interviews will be carefully protected. Computer accounts used to access data will be password protected with multilevel access controls to ensure that only those individuals with a need to access confidential information are allowed access to it. For the web-based data collection, proven methods of protection for online sessions and data security over the Internet will be used. Secure Sockets Layer (SSL) protocol will be used to encrypt the data over the Internet. All of the data entry modules on this site will be password protected, which will require the user to log in to the site before accessing confidential data. The system will automatically log the user out after 30 minutes of inactivity on the session, which will prevent unauthorized user access to the site.

Protection of Paper Records

All paper records will be maintained in locked storage cabinets. A unique study identification variable (not the Social Security Number or school ID) will be created and maintained for each survey participant to protect against disclosure of confidential data.

Preparation of Data for Public Release

All data released to the general public (for example, statistical tables) will be designed so that it will not be possible to identify specific individuals.

Violations

All personnel with access to individual data will be required to sign a confidentiality agreement and an affidavit of nondisclosure. Anyone who violates the confidentiality provisions of the act when using the data shall be found guilty of a **Class E felony** and can be **imprisoned up to 5 years, and/or fined up to \$250,000**.

Endorsements

American Association for Higher Education
American Association of Collegiate Registrars and Admissions Officers
American Association of Community Colleges
American Association of State Colleges and Universities
American Association of University Professors
American Council on Education
American Federation of Teachers
Association for Institutional Research
Association of American Colleges and Universities
Association of Catholic Colleges and Universities
Career College Association
The Carnegie Foundation for the Advancement of Teaching
College and University Professional Association for Human Resources
The College Board
The College Fund/UNCF
Council of Graduate Schools
The Council of Independent Colleges
Hispanic Association of Colleges and Universities
National Accrediting Commission of Cosmetology Arts & Sciences *NPSAS only*
National Association of College and University Business Officers
National Association for Equal Opportunity in Higher Education
National Association of Independent Colleges and Universities
National Association of State Universities and Land-Grant Colleges
National Association of Student Financial Aid Administrators
National Education Association

About the Study

The 2004 National Study of Faculty and Students NSoFaS:04

NCES, part of the U.S. Department of Education, is authorized by federal law to collect, analyze, and publish statistics and other data related to education in the United States and other nations. As part of its program, NCES conducts large national surveys involving students enrolled in, and faculty and instructional staff employed by, postsecondary institutions. Two of these studies, the National Study of Postsecondary Faculty (NSOPF) and the National Postsecondary Student Aid Study (NPSAS), will be conducted together in 2004 as NSoFaS to realize efficiencies and reduce overall burden associated with institutional participation.

NSOPF is the major source of comprehensive information about faculty and instructional staff. It includes a nationally representative sample of full- and part-time faculty and instructional staff at public and private not-for-profit 2- and 4-year institutions in the United States. Previous NSOPF studies are widely recognized resources for researchers and policymakers in postsecondary education. This fourth cycle of NSOPF will expand the information about faculty and instructional staff in two important ways: (1) by allowing for comparisons to be made over an extended period of time, and (2) by examining critical issues concerning faculty and instructional staff that may have developed since the last study.

NPSAS is the only comprehensive, nationally representative survey of student financial aid. No other single national database contains student-level records for students receiving aid from the numerous and disparate programs funded by the federal government, the states, postsecondary institutions, employers, and private organizations. The purpose of NPSAS is to compile a comprehensive research data set that contains information about all of these programs, together with demographic and enrollment data. In addition, NPSAS provides vital information about the affordability of postsecondary education and the effectiveness of existing financial aid programs that will inform public policy at all levels. NPSAS not only includes students enrolled at public and private not-for-profit, 2- and 4-year postsecondary institutions; it also includes those postsecondary institutions that are less-than-2-year and are private for-profit. NPSAS provides comprehensive data on undergraduate, graduate, and first-professional students—including those who receive aid and those who do not.

Endorsements

The following organizations recognize the study's contribution to the body of knowledge about postsecondary faculty and instructional staff and have endorsed NSOPF:04:

- American Association for Higher Education
- American Association of Collegiate Registrars and Admissions Officers
- American Association of Community Colleges
- American Association of State Colleges and Universities
- American Association of University Professors
- American Council on Education
- American Federation of Teachers
- Association for Institutional Research
- Association of American Colleges and Universities
- Association of Catholic Colleges and Universities
- Career College Association
- The Carnegie Foundation for the Advancement of Teaching
- College and University Professional Association for Human Resources
- The College Board
- The College Fund/UNCF
- Council of Graduate Schools
- The Council of Independent Colleges
- Hispanic Association of Colleges and Universities
- National Association of College and University Business Officers
- National Association for Equal Opportunity in Higher Education
- National Association of Independent Colleges and Universities
- National Association of State Universities and Land-Grant Colleges
- National Association of Student Financial Aid Administrators
- National Education Association

Confidentiality

The 2004 National Study of Postsecondary Faculty (NSOPF:04) is being conducted for the National Center for Education Statistics (NCES) of the U.S. Department of Education in compliance with the Education Sciences Reform Act of 2002 (Public Law 107-279), the Federal Statistical Confidentiality Order of 1997, the Privacy Act of 1974 (5 U.S.C. 552a), and the E-Government Act of 2002.

Any faculty data released to the general public (for example, statistical tables) are designed so that it is not possible to identify specific individuals. Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law.

All RTI project staff have signed confidentiality agreements and affidavits of nondisclosure and are prohibited by law from using the obtained information for anything other than the research study.

If you have questions about your rights as a study participant, you may call RTI's Institutional Review Board at 1-919-316-3358 in Research Triangle Park, NC or 1-866-214-2043 (toll-free number) or send an e-mail message to urpe@rti.org.

You may complete the questionnaire, or simply learn more about NSOPF by visiting our web site: <https://nces.ed.gov/ipeds/data/nsopf/>.

For more information, contact the following:

Margaret Cahalan
NSOPF Project Director
1-866-NSOPF04
1-866-676-7304
ncopf@rti.org

Linda Zimble
NCES Project Officer
1-202-502-7481
Linda.Zimble@ed.gov



National Center for Education Statistics
U.S. Department of Education
Institute of Education Sciences

January 2004



2004 National Study Of Postsecondary Faculty

U.S. Department of Education
Institute of Education Sciences
NCES 2004-151



Study Design

The National Center for Education Statistics (NCES) is conducting the fourth cycle of the National Study of Postsecondary Faculty (NSOPF) to respond to the critical need for information on faculty and instructors—those who directly affect the quality of education in postsecondary institutions in the United States.

Faculty members and instructional staff are pivotal to a quality postsecondary education. They determine curriculum content, student performance standards, and the quality of students' preparation for careers. Faculty members perform research and development work upon which much of this nation's technological and economic advancement depends. Through their public service activities, they also contribute to the public good. For these reasons, it is important for researchers and policymakers to understand who faculty are, what they do, and if and how their roles are changing over time.

Previous studies conducted in 1988, 1993, and 1999 (called NSOPF:88, NSOPF:93, and NSOPF:99, respectively) generated immediate interest in the postsecondary community because they provided national profiles of faculty and instructional staff in postsecondary institutions in the United States, national benchmarks for faculty productivity and workload, and information on institutional policies and practices that affect faculty and instructional staff.

The 2004 National Study of Postsecondary Faculty (NSOPF:04) includes faculty and instructional staff. The study will add information about faculty and instructional staff in two important ways: (1) it will allow for comparisons to be made over an extended period of time, and (2) it will examine critical issues concerning faculty that have developed since the last study.

Analytical Objectives

NSOPF:04 is designed to address a variety of policy-relevant issues concerning faculty, instructional staff, and institutions. The study includes a faculty questionnaire and an institution questionnaire covering general policies concerning faculty. Information obtained from these two sources can answer important questions about postsecondary education, such as the following:

- How many full- and part-time faculty and instructional staff are there?
- What are their background characteristics?
- What are their workloads, and how is their time allocated between classroom instruction and other activities?
- What are the current teaching practices and uses of technology among postsecondary faculty and instructional staff?
- How satisfied are they with current working conditions and institutional policies?
- How are faculty and instructional staff compensated by their institutions? How important are other sources of income?
- What are the career and retirement plans of faculty and instructional staff?
- What retirement packages are available to faculty and instructional staff?
- Have institutions changed their policies on granting tenure to faculty members? Are changes anticipated in the future?



How NSOPF Will Be Conducted

The National Center for Education Statistics (NCES) has contracted with RTI International (RTI) to conduct the 2004 NSOPF (NSOPF:04). RTI is an independent, nonprofit contract research organization located in Research Triangle Park, NC that was established by a joint action of the three major universities in North Carolina: University of North Carolina at Chapel Hill, North Carolina State University, and Duke University. RTI began operations in 1958 and has provided contract support to NCES on postsecondary research that dates back to 1971.

NSOPF:04 consists of a sample of 35,000 faculty and instructional staff selected from 1,100 sampled institutions in the 50 states and the District of Columbia.

You will be able to access the NSOPF faculty and instructional staff questionnaire on the web site at <https://surveys.nces.ed.gov/nsopf>

All data entry modules on this site will require a unique login for access and will be password protected. Proven methods of protection for online sessions and data security over the Internet will be used. Secure Sockets Layer (SSL) technology will be used to encrypt faculty responses as they travel over the Internet.

Data Analysis and Dissemination

Data collected from NSOPF are made available to the public in various ways:

- Descriptive reports are published by NCES on selected topics. NSOPF publications can be accessed electronically through the NCES web site at <http://nces.ed.gov/surveys/nsopf>
- Special tabulations are provided on request.
- Data files (without identifying information) are available.
- Presentations on study findings are made at conferences.

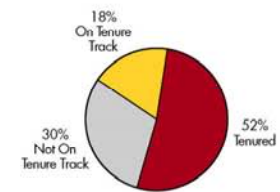
Findings from Prior Data Collection

The following are examples of key results from NSOPF:99:

- There were about 1.1 million faculty and instructional staff in 2- and 4-year postsecondary institutions in the fall of 1998. Approximately 58 percent were employed full time and 42 percent were employed part time by their postsecondary institutions.
- Across all postsecondary institutions, Whites accounted for 84 percent of full-time instructional faculty and staff and 88 percent of part-time faculty and instructional staff. Asians comprised about 6 percent of faculty, African-Americans about 5 percent, Hispanics/Latinos about 3 percent, and American Indians/Alaska Natives about 1 percent.
- Men made up 64 percent of full-time faculty and instructional staff and 52 percent of part-time faculty and instructional staff.
- Full-time instructional faculty and staff spent an average of 11 hours a week in the classroom in the fall of 1998. The number of hours spent teaching classes ranged from 7 hours at private research institutions to 17 hours at public 2-year institutions.
- The average base salary for full-time faculty and instructional staff during the 1998 calendar year was \$57,200. The average total income—base salary, other institutional income, consulting, and other outside income—was \$68,900. For part-time faculty and instructional staff, the average base salary was \$12,000, and the average total income was \$46,300, including income from other (perhaps full-time) employment

Research reports and articles using data from previous NSOPF studies can be accessed through the NCES web site at <http://nces.ed.gov/surveys/nsopf>

Tenure Status of Postsecondary Faculty: Fall 1998



Faculty and Instructional Staff Participation

To find out more about the 2004 NSOPF study or to complete the questionnaire, visit the study web site at <https://surveys.nces.ed.gov/nsopf>

Faculty and instructional staff selected for the study are encouraged to complete the interview on the Web beginning in January 2004. If preferred, the questionnaire may be completed by telephone with a professionally trained interviewer from RTI. An individual study ID and password will be provided to the study sample members. If assistance is needed with accessing the questionnaire on the web site, or if faculty and instructional staff wish to complete a telephone interview, they may call the NSOPF Help Desk at 1-866-NSOPF04 (1-866-676-7304).



Why is the study being conducted?

The National Postsecondary Student Aid Study (NPSAS) is a large national survey of undergraduate and graduate students, with a special focus on how they finance their education at different types of institutions. Information is collected from institutions and students to get a national picture of the background of students, their educational costs, amount of family support, types of financial aid, student loan debt, and earnings from jobs. The NPSAS survey results are widely used by researchers to study whether the current financial aid programs are adequate to meet student needs. These results may also be used by Congress to make changes to the federal student loan and grant programs.

Students who are beginning their postsecondary education—attending a postsecondary school for the first time—will be part of a special follow-up study in subsequent years. This will help us to learn more about the students who complete their postsecondary education and the factors that influence their success.

When?

If you have additional questions or concerns about the study, please contact the NPSAS:04 Project Director at RTI or the NCES Project Officer listed on the back of this pamphlet.

Who?

What?

Where can I get *more information* about NPSAS:04?

If you have questions about *your rights* as a study participant, please call RTI's Institutional Review Board at 1-866-214-2043 (a toll-free number) or send an e-mail message to orpe@rti.org.

If you have *questions* or concerns about the study, contact the following:

John Riccobono
RTI NPSAS Project Director
1-866-NPSAS04
1-866-677-2704
npsas@rti.org

James Griffith
NCES Project Officer
1-202-502-7387
James.Griffith@ed.gov

You may complete your interview or simply learn more about NPSAS:04 by visiting our web site at: <https://surveys.nces.ed.gov/npsas/>.

For more information about NPSAS publications and other educational research, visit the NCES web site at: <http://nces.ed.gov/pubsearch/>.



National Center for Education Statistics
U.S. Department of Education
Institute of Education Sciences

January 2004



2004
National
Postsecondary
Student
Aid
Study

U.S. Department of Education
Institute of Education Sciences
NCES 2004-152



Who is conducting the study?

The 2004 National Postsecondary Student Aid Study (NPSAS:04) is sponsored by the U.S. Department of Education's National Center for Education Statistics (NCES) in the Institute of Education Sciences. The study is conducted under contract by RTI International (RTI), a nonprofit research organization located in North Carolina.

Who is included in the study?

NPSAS:04 consists of a sample of 120,000 students randomly selected from enrollment lists at about 1,600 institutions in the 50 states, the District of Columbia, and Puerto Rico.

When will the study be conducted?

Institutions were initially contacted beginning in spring 2003 to take part in NPSAS:04. Beginning in spring 2004, sampled students will be contacted to complete the web-based interview. Students may access the interview on the web at <https://surveys.nces.ed.gov/npsas/> or by calling the NPSAS Help Desk at 1-866-NPSAS04 (1-866-677-2704).

Why should I participate?

Participation in this study is voluntary. Your participation, however, is essential to making this study a success. By participating, you have the opportunity to help policymakers, researchers, counselors, and others better understand and meet the financial needs of postsecondary students in the United States and Puerto Rico.

How can I Participate?

You may complete the study in one of two ways:

1. Log in to the web site at <https://surveys.nces.ed.gov/npsas/>.

Once at the site, from the *Home/Login* page, enter your study ID and password, which are printed at the bottom of your NPSAS cover letter. If you need assistance with accessing the questionnaire on the web site, please call the NPSAS Help Desk at 1-866-NPSAS04 (1-866-677-2704) or contact us via e-mail at npsas@rti.org.

2. Complete the interview over the phone.

We encourage web completion but, if you prefer, you may complete the questionnaire by telephone with a professionally trained interviewer from RTI. You may choose to complete the interview when our staff call or set an appointment for a later date. We will attempt to

identify a convenient time to call. Students may e-mail questions to RTI staff at npsas@rti.org or call the NPSAS Help Desk at 1-866-NPSAS04 (1-866-677-2704) with best times to do the interview.

How Long will this take?

On average, you should complete either the self-administered web-based questionnaire or the interviewer-administered telephone interview in about 25 minutes. Web interview time may vary depending on your Internet connection speed. If you do not have access to a computer with a fast connection, you may prefer to call the Help Desk to complete the interview by telephone.

Will my answers be kept Confidential?

Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law. The answers that you provide are compiled with the responses from other students and reported to the general public in statistical form. The graphs in this brochure are good examples of how data are reported.

The following procedures have been implemented to ensure the confidentiality of your responses:

- Your answers are secured behind firewalls and are encrypted during Internet transmission using Secure Sockets Layer (SSL) protocol. All data entry modules are password protected and require the user to log in before accessing confidential data.
- Project staff may be severely fined or imprisoned for disclosure of individual responses.
- Confidentiality procedures are reviewed and approved by RTI's Institutional Review Board (Committee for Protection of Human Subjects).

How can I get a copy of the Results?

Publications from previous studies are currently available from the NCES web site at <http://nces.ed.gov/surveys/npsas/>.

Reports can be downloaded or ordered at no charge. Current titles of interest include the following:

Student Financing of Undergraduate Education 1999–2000 (NCES 2002-167)

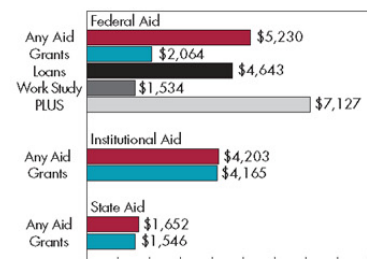
Student Financing of Graduate and First-Professional Education 1999–2000 (NCES 2002-166)

What have we learned from prior NPSAS studies?

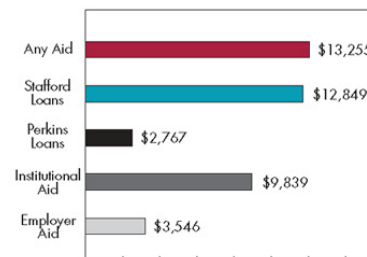
The following are estimates based on information from 50,000 undergraduates, 11,000 graduates, and 1,000 first-professional students enrolled at approximately 1,000 postsecondary institutions during the 1999–2000 academic year.

- Fifty-five percent of undergraduates (about 9.2 million) received some type of financial aid, averaging \$6,265.
- About two out of five undergraduates (39 percent) received some type of federal aid, averaging \$5,230.

Average amounts of selected types of aid for undergraduates: 1999–2000



Average amounts of selected types of aid for graduate and first-professional students: 1999–2000



SOURCE: U.S. Department of Education, National Center for Education Statistics. 2001. *National Postsecondary Student Aid Study: Student Financial Aid Estimates for 1999–2000* (NCES 2001-209). Washington, DC: 2001.

Student Contacting Letters and E-Mail

Initial Letter

NPSAS:04

Endorsed by

American Association for Higher Education
 American Association of Collegiate Registrars and Admissions Officers
 American Association of Community Colleges
 American Association of State Colleges and Universities
 American Association of University Professors
 American Council on Education
 American Federation of Teachers
 Association for Institutional Research
 Association of American Colleges and Universities
 Association of Catholic Colleges and Universities
 Career College Association
 The Carnegie Foundation for the Advancement of Teaching
 College and University Professional Association of Human Resources
 The College Board
 The College Fund/UNCF
 Council of Graduate Schools
 The Council of Independent Colleges
 National Accrediting Commission of Cosmetology Arts and Sciences
 Hispanic Association of Colleges and Universities
 National Association of College and University Business Officers
 National Association for Equal Opportunity in Higher Education
 National Association of Independent Colleges and Universities
 National Association of State Universities and Land-Grant Colleges
 National Association of Student Financial Aid Administrators
 National Education Association

<DATE>
 <SM NAME>
 <ADDRESS 1>
 <ADDRESS 2>
 <CITY, STATE ZIP>

Dear <SM NAME>:

I am writing to ask you to participate in an important study that will help determine how students and their families meet the cost of education beyond high school. For your participation, I would like for you to complete a questionnaire over the Internet. On average, the questionnaire takes about 25 minutes to complete.

When you access the questionnaire on the Internet, you will be asked questions about how you paid for your school expenses during the 2003–2004 school year, including whether you received financial aid. If you received financial aid, you will be asked whether the amount of aid was enough to meet your educational expenses. If you did not receive financial aid, you will be asked about how you met your school expenses.

Students from all types of institutions and all financial situations have been randomly selected to participate in the 2004 National Postsecondary Student Aid Study. Your responses along with those of other selected students will represent responses of all students enrolled in postsecondary education. Therefore, your participation in this study is critical.

To complete the questionnaire over the Internet:

Go to: <https://surveys.nces.ed.gov/npsas>,
 Type the study ID and password (provided below) on the Home/Login page, and Press “Enter” or click “Login” to begin the questionnaire.

RTI International (RTI) of North Carolina is conducting the study for the U.S. Department of Education. To express our appreciation, **a \$10 check will be mailed to you, if you complete the questionnaire by <FILL DATE, 2004.>** If you are unable to complete the survey by that date, an RTI interviewer will call you to complete the questionnaire by telephone.

Participation in this study is voluntary and will not affect any aid or any benefits you receive. The enclosed pamphlet answers many common questions about the study and contains additional information on laws and procedures that protect the confidentiality of your responses.

If you have questions about the study, you can visit our web site at <https://surveys.nces.ed.gov/npsas>, you can call us toll-free at 1-866-NPSAS04 (1-866-677- 2704), or you can e-mail us at npsas@rti.org. Persons who are hearing or speech-impaired can call us at 1-877-212-7230 (TDD).

We sincerely appreciate your participation and thank you in advance for helping us conduct this very important study.

Sincerely,



C. Dennis Carroll, Ph.D.
 Associate Commissioner
 Postsecondary Studies Division
 Enclosures

Go to: <https://surveys.nces.ed.gov/npsas>
 Your study ID: <ID FILL>
 Your password: <PASSWORD FILL>

Initial Letter (Spanish Version)

NPSAS:04

Aprobado por

American Association for
Higher Education

American Association of
Collegiate Registrars and
Admissions Officers

American Association of
Community Colleges

American Association of State
Colleges and Universities

American Association of
University Professors

American Council on
Education

American Federation of
Teachers

Association for Institutional
Research

Association of American
Colleges and Universities

Association of Catholic
Colleges and Universities

Career College Association

The Carnegie Foundation for
the Advancement of Teaching

College and University
Professional Association for
Human Resources

The College Board

The College Fund/UNCF

Council of Graduate Schools

The Council of Independent
Colleges

National Accrediting
Commission of Cosmetology
Arts and Sciences

Hispanic Association of
Colleges and Universities

National Association of
College and University
Business Officers

National Association for Equal
Opportunity in Higher
Education

National Association of
Independent Colleges and
Universities

National Association of State
Universities and
Land-Grant Colleges

National Association of
Student Financial Aid
Administrators

National Education
Association

Me dirijo a usted para pedirle su participación en un estudio de investigación importante que ayudará a determinar la manera en la que los estudiantes y sus familias financian el costo de la educación postsecundaria. En lo referente a su participación, le estamos pidiendo que complete un cuestionario en el Internet. Completar el cuestionario toma un promedio de 25 minutos.

Una vez que usted tenga acceso al cuestionario en el Internet, se le hacen preguntas sobre cómo pagó por sus gastos en el año escolar 2003-2004, incluyendo si es que usted recibió ayuda económica. Si recibió ayuda económica, se le pregunta si la cantidad de ayuda que recibió fue suficiente para afrontar sus gastos educacionales. Si usted no recibió ayuda económica, se le pregunta cómo afronta sus gastos educacionales.

Estudiantes de todo tipo de instituciones y condiciones económicas han sido seleccionados al azar para participar en el Estudio Nacional de Ayuda Financiera Postsecundaria del 2004. Sus respuestas junto a las de otros estudiantes seleccionados representarán a las respuestas de todos los estudiantes matriculados en estudios postsecundarios. Por lo tanto, su participación en el estudio es muy valiosa. Para completar el cuestionario en el Internet:

Diríjase a: <https://surveys.nces.ed.gov/npsas>.

Escriba en el teclado el código del identificación del estudio y la contraseña (que se proporciona abajo) en la página de registro (o 'Home/Login') y

Oprima la tecla 'Enter' o seleccione 'Login' para comenzar el cuestionario.

RTI Internacional de Carolina del Norte está llevando a cabo este estudio para el Departamento de Educación de los Estados Unidos. **Si usted completa el cuestionario antes del [fill date, 2004], se le enviarán \$10 dólares** como muestra

de nuestro agradecimiento. Si no puede completar este cuestionario para esa fecha, un entrevistador de RTI le llamará para completar la entrevista por teléfono.

La participación en este estudio es voluntaria y no afectará a la ayuda o beneficios que usted recibe. El folleto adjunto contesta a preguntas frecuentes sobre el estudio y contiene información adicional sobre leyes y procedimientos que protegen la confidencialidad de sus respuestas.

Si tiene preguntas sobre el estudio, usted puede visitar nuestro sitio web en:

<https://surveys.nces.ed.gov/npsas>, puede llamarnos gratis por teléfono al 1-866-

NPSAS04 (1-866-677-2704), o puede comunicarse con nosotros por correo electrónico a npsas@rti.org. Las personas que tengan problemas de audición o de habla pueden llamarnos al 1-877-212-7230 (TDD).

Apreciamos su participación y le agradecemos con anticipación por ayudarnos a llevar a cabo este importante estudio.

Atentamente,



C. Dennis Carroll, Ph.D.

Comisionado Asociado

División de Estudios Postsecundarios

Anexos

Web Insert

HOW TO COMPLETE THE NPSAS:04 QUESTIONNAIRE

To complete the self-directed web questionnaire:

1. Go to: <https://surveys.nces.ed.gov/npsas>
2. At the login and password prompts, enter your study ID and password.
3. Press “Enter” or click “Login” to begin the questionnaire.

If you need assistance in completing the self-directed web questionnaire or if you would like to complete the questionnaire over the phone, please call our Help Desk at 1-866-NPSAS04 (1-866-677-2704) for assistance.

You may complete the NPSAS web questionnaire at any time during the data collection period. We will also begin making calls asking study participants to complete the questionnaire over the phone starting on March 4, 2004.

For more information about this study visit the web site at:

<https://surveys.nces.ed.gov/npsas>

NOTE: The study has been approved by the Office of Management and Budget (OMB). The valid OMB control number for this information collection is 1850-0666. The expiration date is 2/28/06. Public reporting burden for this information request in its entirety is estimated at 25 minutes per response. You may send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, Information Management and Compliance Division, Washington, DC 20202-4651; and to the Office of Management and Budget, Paperwork Reduction Project 1850-0608, Washington, DC 20503.

Initial E-mail

E-mail Subject line: U.S. Department of Education Study

Dear <FNAME> <MNAME> <LNAME>,

You have been randomly selected to participate in a United States Department of Education study. This important study will help determine how students and their families meet the cost of education beyond high school. For your participation, I would like for you to complete a questionnaire over the Internet. On average, the questionnaire takes about 25 minutes to complete.

Students from all types of institutions and all financial situations are being asked to participate in the 2004 National Postsecondary Student Aid Study. Your responses along with those of selected students will represent responses of all students enrolled in postsecondary education. Therefore, your participation in this study is critical.

To find out more about the study, click the link below. To respond to the questionnaire over the Internet, log in using your study ID and password:

<https://surveys.nces.ed.gov/npsas/>

Study ID: <STUDYID>

Password: <PASSWORD>

The U.S. Department of Education has contracted with RTI International to conduct the study. To respond to the questionnaire by telephone or ask questions about the study, please call:

1-866-NPSAS04 (1-866-677-2704)

You will need to use Internet Explorer or Netscape as your browser to complete the web version.

As a small token of our appreciation, if you complete the questionnaire by <DATE28>, you will receive a \$10 check.

Your responses may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose, except as required by law. Your responses will be secured behind firewalls and will be encrypted during Internet transmission. To learn more about the study and the laws protecting your confidentiality, please click on the link above.

Thank you in advance for your participation in this important study.

Sincerely,

John Riccobono, Ph.D.

NPSAS Project Director

RTI International

Note: To ensure that as many sample members as possible receive this message, we also have sent printed materials to you via U.S. mail. All the information in the printed materials also is available through the web site listed above.

Second E-mail

E-mail Subject line: U.S. Department of Education Study
Dear <FNAME> <MNAME> <LNAME>,

We are writing to urge your completion of the questionnaire for the 2004 National Postsecondary Student Aid Study (NPSAS:04), sponsored by the U. S. Department of Education. As indicated to you in previous correspondence, this important study will help determine how students and their families meet the cost of education beyond high school.

Students from all types of institutions and all financial situations are being asked to participate in the NPSAS:04 study and your participation is vital to its success. Your responses along with those of other selected students will represent responses of all students enrolled in postsecondary education. The results of this study are useful to policymakers interested in improving student financial aid policy and practice; therefore, your participation is critical.

To find out more about the study, click on the link below. To respond to the questionnaire over the Internet, log in using your study ID and password:

<https://surveys.nces.ed.gov/npsas/>

Study ID: <STUDYID>

Password: <PASSWORD>

On average, the questionnaire takes about 25 minutes to complete. The U.S. Department of Education has contracted with RTI International to conduct the study. To respond to the questionnaire by telephone (rather than over the Internet) or ask questions about the study, please call the RTI Help Desk at:

1-866-NPSAS04 (1-866-677-2704)

If you complete the questionnaire by <DATE28>, you will receive a \$10 check as a small token of our appreciation.

Your responses may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose, except as required by law. Your responses will be secured behind firewalls and will be encrypted during Internet transmission. To learn more about the study and the laws protecting your confidentiality, please click on the link above.

Thank you in advance for your participation in this important study.

Sincerely,

James Griffith, Ph.D.
NPSAS Project Officer
U. S. Department of Education

John Riccobono, Ph.D.
NPSAS Project Director
RTI International

Third E-mail

E-mail Subject line: U.S. Dept. of Ed. Study Early-response Period Ends After <Y_WEB_INCENT_EXP_DATE>

Dear <FNAME> <MNAME> <LNAME>,

This message is only intended as a reminder to you that the early-response period for the 2004 National Postsecondary Student Aid Study (NPSAS:04) is drawing to a close. We hope you will find the time to participate in the study soon. If you complete the questionnaire by <DATE28>, you will receive a \$10 check as a small token of our appreciation. This important study will help determine how students and their families meet the cost of education beyond high school.

To access the questionnaire on the web or to obtain more information about the study, go to <https://surveys.nces.ed.gov/npsas> and log in using your study ID and password:

Study ID: <CASEID>

Password: <PASSWORD>

You will need to use Internet Explorer or Netscape as your browser to complete the web version. Please be assured that your responses will be secured behind firewalls and will be encrypted during Internet transmission. If you need help accessing the web or if you prefer to complete the questionnaire by telephone, please call our Help Desk at 1-866-NPSAS04 (1-866-677-2704).

Thank you in advance for your participation in this very important study.

Sincerely,

James Griffith, Ph.D.
NPSAS Project Officer
U.S. Department of Education

John Riccobono, Ph.D.
NPSAS Project Director
RTI International

Nonresponse Letter

<DATE>
 <NPSASID>
 <FNAME><MNAME><LNAME><SUFFIX>
 <ADDR1>
 <ADDR2>
 <CITY>, <STATE> <ZIP>-<ZIP4>

Dear <NAME>:

I am writing to urge you to participate in a U.S. Department of Education study that determines how students and their families meet the cost of education beyond high school. Specifically, I would like you to complete a questionnaire about your education experiences and how you paid for your education during the past school year. Your responses may be used only for statistical purposes, and will be kept confidential and protected to the fullest extent allowed by law.

Your participation in this study is very important, regardless of whether you have received financial aid or not. Students from all types of institutions and all financial situations have been randomly selected to participate in the 2004 National Postsecondary Student Aid Study (NPSAS:04). The U.S. Department of Education has contracted with RTI International to conduct NPSAS:04.

We have been unable to reach you by telephone to complete the interview; therefore, we urge you to contact us by calling toll free at 1-866-NPSAS04 (1-866-677-2704), or e-mailing us at npsas@rti.org. If you have questions about the study or would rather complete the questionnaire on the Internet, visit our web site at <https://surveys.nces.ed.gov/npsas>.

You will need to use Internet Explorer or Netscape as your browser to complete the web version. Persons who are hearing or speech-impaired call 1-877-212-7230 (TDD). Upon completion of the questionnaire, you will receive a <\$10/\$20/\$30> check as a small token of our appreciation.

Thank you for your time and your willingness to participate in this very important study.

Sincerely,



James Griffith, Ph.D.
 NPSAS Project Officer
 U.S. Department of Education

Go to: https://surveys.nces.ed.gov/npsas Your study ID: <ID FILL> Your password: <PASSWORD FILL>
--

Nonresponse Letter (Spanish Version)

En nombre del Departamento de Educación de Estados Unidos, le pedimos su participación en un estudio que determina la manera en la que los estudiantes y sus familias financian la educación postsecundaria. Me interesa especialmente que complete el cuestionario sobre sus experiencias educacionales y como pagó por su educación durante el año escolar anterior. Sus respuestas serán usadas con fines estadísticos y se mantendrán en forma confidencial y serán protegidas hasta donde sea permitido por ley.

Su participación en este estudio es muy importante, independientemente de que usted haya o no recibido asistencia económica. Se ha seleccionado estudiantes de todo tipo de instituciones y de todo tipo de situaciones económicas para participar en Estudio Nacional sobre Asistencia Económica para Estudiantes en Escuelas Post-Secundarias del 2004 (NPSAS: 04, por sus siglas en inglés). El Departamento de Educación de Estados Unidos tiene un contrato con RTI Internacional para llevar a cabo este estudio.

Como no hemos podido comunicarnos con usted por teléfono para que complete la entrevista, le pedimos que se comunique con nosotros llamándonos gratis al 1-866-NPSAS04 (1-866-677-2704), o por correo electrónico a npsas@rti.org. Si usted tiene preguntas sobre el estudio o prefiere completar la entrevista en el Internet, puede visitar nuestro sitio web en <https://surveys.nces.ed.gov/npsas>.

Usted necesitará usar Internet Explorer o Netscape como su programa de navegación para completar la versión del cuestionario el sitio web. Las personas con problemas de audición o de habla pueden llamar al 1-877-212-7230 a un aparato de telecomunicación para las personas con problemas de audición (TDD, por sus siglas en inglés).

Después de terminada la entrevista, usted recibirá un cheque por <\$10/\$20/\$30> dólares como muestra de nuestro agradecimiento.

Le agradecemos por su tiempo y participación en este importante estudio.

Atentamente,



Dr. James Griffith
Oficial a cargo del Estudio
Nacional sobre Asistencia Económica para Estudiantes en Escuelas Post-secundarias.

Nonresponse E-mail

E-mail Subject line: U.S. Department of Education Study

Dear Student,

We are writing to urge you to participate in a U.S. Department of Education study that determines how students and their families meet the cost of education beyond high school. Specifically, we would like you to complete a questionnaire about your education experiences and how you paid for your education during the past school year. Your responses may be used only for statistical purposes, and will be kept confidential and protected to the fullest extent allowed by law.

Your participation in this study is very important, regardless of whether you have received financial aid or not. Students from all types of institutions and all financial situations have been randomly selected to participate in the 2004 National Postsecondary Student Aid Study (NPSAS:04). The U.S. Department of Education has contracted with RTI International to conduct NPSAS:04.

We have been unable to reach you by telephone to complete the interview; therefore, we urge you to contact us by calling toll free at 1-866-NPSAS04 (1-866-677-2704), or e-mailing us at npsas@rti.org. Persons who are hearing or speech-impaired call 1-877-212-7230 (TDD).

To complete the questionnaire on the Internet, you can visit our web site at:

<https://surveys.nces.ed.gov/npsas/>

Study ID: <STUDYID>

Password: <PASSWORD>

You will need to use Internet Explorer or Netscape as your browser to complete the web version.

Upon completion of the questionnaire, you will receive a \$<10/20> check as a small token of our appreciation.

Thank you for your time and your willingness to participate in this very important study.

Sincerely,

John Riccobono, Ph.D.
NPSAS Project Director
RTI International

James Griffith, Ph.D.
NPSAS Project Officer
U.S. Department of Education

Note: To ensure that as many sample members as possible receive this message, we also have sent printed materials to you via U.S. mail. All the information in the printed materials is also available through the web site listed above.

Refusal Letter

Date

NPSAS ID: <NPSASID>
<FNAME><MNAME><LNAME><SUFFIX>
<ADDR1>
<ADDR2>
<CITY>, <STATE> <ZIP>-<ZIP4>

Dear <NAME>:

I understand that you recently spoke with a member of our project staff for the 2004 National Postsecondary Student Aid Study (NPSAS:04). I realize that there are many demands for your time and that you have other priorities, but I am writing to you again because your participation in this U.S. Department of Education study is so very critical to its success.

Your participation in this study is needed regardless of whether you have received financial aid or not. Students from all types of institutions and all financial situations have been randomly selected to participate in NPSAS:04. By completing a questionnaire about your education experiences and how you paid for your education during the past school year, you have the opportunity to help policymakers better understand and meet the financial needs of postsecondary students. Your responses may be used only for statistical purposes, and will be kept confidential and protected to the fullest extent allowed by law.

To complete the questionnaire on the Internet, visit our web site at <https://surveys.nces.ed.gov/npsas>. You will need to use Internet Explorer or Netscape as your browser to complete the web version.

To complete the questionnaire with a trained interviewer, call toll free 1-866-NPSAS04 (1-866-677-2704). Persons who are hearing or speech-impaired can call 1-877-212-7230 (TDD).

Upon completion of the interview, we will send you a **\$30 check** as a small token of our appreciation.

Please take the time to participate in this very important study. With input from individuals like you, we can improve our ability to help individuals receive an education beyond high school.

Sincerely,



James Griffith, Ph.D.
NPSAS Project Officer
U.S. Department of Education

Go to: https://surveys.nces.ed.gov/npsas Your study ID: <ID FILL> Your password: <PASSWORD FILL>
--

REFUSAL LETTER (SPANISH VERSION)

Tengo entendido que usted habló recientemente con un miembro del personal de nuestro proyecto para el Estudio Nacional sobre Asistencia Económica para Estudiantes en Escuelas Post-secundarias (NPSAS: 04, por sus siglas en inglés). Entendemos que usted tiene muchas obligaciones y otras prioridades, pero le estoy escribiendo nuevamente porque su participación en este estudio del Departamento de Educación de los Estados Unidos es esencial para nuestro éxito.

Su participación en este estudio es muy importante, independientemente de que usted haya o no recibido asistencia económica. Estudiantes de todo tipo de instituciones y situaciones económicas han sido seleccionados al azar para participar en el Estudio Nacional sobre Asistencia Económica para Estudiantes en Escuelas Post-secundarias. Al completar este cuestionario sobre sus experiencias educacionales y la forma en la que pagó sus estudios durante el año escolar anterior, ayudará a funcionarios políticos a entender y responder a las necesidades económicas de los estudiantes de escuelas postsecundarias. Su respuestas podrán ser usadas únicamente con fines estadísticos, se mantendrán en forma confidencial y serán protegidas hasta donde lo permita la ley.

Para completar este cuestionario en inglés en el Internet, visite nuestro sitio web en:

<https://surveys.nces.ed.gov/npsas>. Para completar esa versión del cuestionario, necesitará usar Internet Explorer o Netscape como navegador.

Para completar este cuestionario con un entrevistador preparado, llame por teléfono gratis al 1-866-NPSAS04 (1-866-677-2704) Las personas con problemas de audición o de habla pueden llamar al 1-877-212-7230 a un aparato de telecomunicación para las personas con problemas de audición (TDD, por sus siglas en inglés). Después de terminada la entrevista, usted recibirá un cheque por **\$30 dólares** como muestra de nuestro agradecimiento.

Por favor participe en esta importante entrevista. Con la cooperación de individuos como usted, podemos mejorar nuestra capacidad de ayudar a personas a recibir una educación post-secundaria.

Atentamente,



Dr. James Griffith
Oficial a cargo del Estudio
Nacional sobre Asistencia Económica para Estudiantes en Escuelas Post-secundarias.

Refusal E-mail

E-mail Subject line: U.S. Department of Education Study

Dear Student,

We understand that you recently spoke with a member of our project staff for the 2004 National Postsecondary Student Aid Study (NPSAS:04). We realize that there are many demands for your time and that you have other priorities, but we are writing to you again because your participation in this U.S. Department of Education study is so very critical to its success.

Your participation in this study is needed regardless of whether you have received financial aid or not. Students from all types of institutions and all financial situations have been randomly selected to participate in NPSAS:04. By completing a questionnaire about your education experiences and how you paid for your education during the past school year, you have the opportunity to help policymakers better understand and meet the financial needs of postsecondary students. Your responses may be used only for statistical purposes, and will be kept confidential and protected to the fullest extent allowed by law.

To complete the questionnaire on the Internet, visit our web site at:

<https://surveys.nces.ed.gov/npsas/>

Study ID: <STUDYID>

Password: <PASSWORD>

You will need to use Internet Explorer or Netscape as your browser to complete the web version.

To complete the questionnaire with one of our trained interviewers, call us toll free at

1-866-NPSAS04 (1-866-677-2704). Persons who are hearing or speech-impaired can call us at 1-877-212-7230 (TDD).

Upon completion of the interview, we would like to send you a **\$10 check** as a small token of our appreciation.

Please take the time to participate in this very important study. With input from individuals like you, we can improve our ability to help individuals receive an education beyond high school.

Sincerely,

John Riccobono, Ph.D.
NPSAS Project Director
RTI International

James Griffith, Ph.D.
NPSAS Project Officer
U.S. Department of Education

Note: To ensure that as many sample members as possible receive this message, we also have sent printed materials to you via U.S. mail. All the information in the printed materials is also available through the web site listed above.

Will Complete Web E-mail Document

Subject: National Postsecondary Student Aid Study - Reminder Information

Dear <SM NAME>,

Thank you for your interest in the National Postsecondary Student Aid Study. This message is being sent to you as a follow-up to the telephone conversation in which you indicated your preference to complete the survey via the web.

To respond to the questionnaire over the Internet, log in using your study ID and password:

<https://surveys.nces.ed.gov/npsas/>

Study ID:

Password:

You will need to use Internet Explorer or Netscape as your browser to complete the web version. If you need help accessing the web or if you decide to complete the questionnaire by telephone, please call the RTI help desk at: 1-866-NPSAS04 (1-866-677-2704).

Sincerely,

NPSAS Project Staff

Postcard

NPSAS FS27/<ADDR_ID>

NATIONAL POSTSECONDARY STUDENT AID STUDY (NPSAS:2004)
Complete your FINAL NPSAS interview and earn

\$30 for your time.

To complete a telephone interview, call 1-866-677-2704

OR

To complete a Web interview over our secured Website:

<https://surveys.nces.ed.gov/npsas>

Your Study ID is: «caseid»

Your Password is: «password»

Thank you for your participation in NPSAS.

Dear <FNAME><MNAME><LNAME><SUFFIX>:

Data collection in the U.S. Department of Education's National Postsecondary Student Aid Study is coming to a close. If you recently completed the interview, we sincerely appreciate your participation – you should receive your incentive soon.

If, however, you have not yet completed the interview let me remind you that your participation is critical to the success of the study. The study is being conducted for the U.S. Department of Education (<https://surveys.nces.ed.gov/npsas>) and the information you provide will help develop policy related to higher education and financial aid—*We don't want to lose your input!*

In recent weeks, you may have received other letters regarding your participation in the National Postsecondary Student Aid Study. You were sent this post card to inform you that **you will receive \$30 for completing the NPSAS interview**. The top half of this card explains that the 25 minute interview may be completed with a professionally trained telephone interviewer or by logging on and completing an interview over our secured Website. We thank you in advance for your participation in this important study.

If you have any questions or concerns about the study, please contact the NPSAS Project Director or Project Officer:

RTI Project Director:
Dr. John Riccobono
877-225-8470

NCES Project Officer:
Dr. James Griffith
202-502-7387

Final Letter

<DATE>

<ADDRESS_NAME>
 <FNAME><MNAME><LNAME><SUFFIX>
 <ADDR1>
 <ADDR2>
 <CITY>, <STATE> <ZIP>-<ZIP4>

Dear <NAME>:

On behalf of the U.S. Department of Education, we would like you to complete a questionnaire about your education experiences and how you paid for your education during the past school year. You have been randomly selected to participate in the 2004 National Postsecondary Student Aid Study (NPSAS:04). The U.S. Department of Education has contracted with RTI International to conduct NPSAS:04.

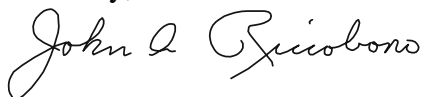
Your participation in this study is very important, regardless of whether you have received financial aid or not. By participating, you have the opportunity to help policymakers better understand and meet the financial needs of postsecondary students. Be assured that your responses will be kept confidential and protected to the fullest extent allowed by law. Your responses may be used only for statistical purposes.

Data collection for NPSAS is coming to a close, so we urge you to contact us this week, by calling toll free at 1-866-NPSAS04 (1-866-677-2704), or e-mailing us at npsas@rti.org. If you have questions about the study or would rather complete the questionnaire on the Internet, you can visit our web site at <https://surveys.nces.ed.gov/npsas>.

You will need to use Internet Explorer or Netscape as your browser to complete the web version. Persons who are hearing or speech-impaired can call us at 1-877-212-7230 (TDD). Upon completion of the questionnaire, you will receive a <\$20/\$30> check as a token of our appreciation.

Please take the time to participate in this very important study. With input from individuals like you, we can improve our ability to help individuals receive an education beyond high school.

Sincerely,



John Riccobono, Ph.D.
 NPSAS Project Director
 RTI International

Go to: https://surveys.nces.ed.gov/npsas Your study ID: «caseid» Your password: «password»
--

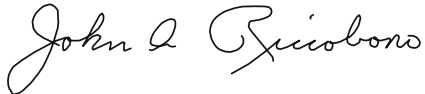
Final Letter (Spanish Version)

En nombre del Departamento de Educación de Estados Unidos, le pedimos su participación en una entrevista del Estudio Nacional sobre Asistencia Económica para Estudiantes en Escuelas Post-secundarias (NPSAS, por sus siglas en inglés). El objetivo de este estudio es determinar la manera en la que los estudiantes y sus familias financian la educación postsecundaria.

Su participación en este estudio es muy importante, independientemente de que usted haya o no recibido asistencia económica. Al completar el cuestionario del estudio, en el que se pregunta sobre sus experiencias y opiniones, usted ayudará al congreso a desarrollar políticas más efectivas relacionadas con la manera que los estudiantes y sus familias financian la educación superior. Tenga la completa seguridad que sus respuestas se mantendrán en forma confidencial y serán protegidas hasta donde está permitido por ley.

El tiempo asignado a la recolección de datos para NPSAS está por terminar, por consiguiente, le pedimos que por favor se comunique con nosotros esta semana llamándonos gratis al 1-866-NPSAS04 (1-866-677-2704), o por correo electrónico a npsas@rti.org. Si usted tiene preguntas sobre el estudio o prefiere completar la entrevista en el Internet, puede visitar nuestro sitio web en <https://surveys.nces.ed.gov/npsas>. Las personas con problemas de audición o de habla pueden llamar al 1-877-212-7230 a un aparato de telecomunicación para las personas con problemas de audición (TDD, por sus siglas en inglés). Después de terminada la entrevista, usted recibirá un cheque por <\$20/\$30 dólares> como muestra de nuestro agradecimiento. Le agradecemos por su tiempo y participación.

Atentamente,



Dr. John Riccobono, Ph.D.
NPSAS Project Director
RTI International

Final E-mail

E-mail Subject line: U.S. Department of Education Study

Dear Student,

On behalf of the U.S. Department of Education, we would like you to complete a questionnaire about your education experiences and how you paid for your education during the past school year. You have been randomly selected to participate in the 2004 National Postsecondary Student Aid Study (NPSAS:04). The U.S. Department of Education has contracted with RTI International to conduct NPSAS:04.

Your participation in this study is very important, regardless of whether you have received financial aid or not. By participating, you have the opportunity to help policymakers better understand and meet the financial needs of postsecondary students. Be assured that your responses will be kept confidential and protected to the fullest extent allowed by law. Your responses may be used only for statistical purposes.

Data collection for NPSAS is coming to a close, so we urge you to contact us this week, by calling toll free at 1-866-NPSAS04 (1-866-677-2704), or e-mailing us at npsas@rti.org. Persons who are hearing or speech-impaired can call us at 1-877-212-7230 (TDD).

If you have questions about the study or would rather complete the questionnaire on the Internet, you can visit our web site at:

<https://surveys.nces.ed.gov/npsas/>

Study ID: <STUDYID>

Password: <PASSWORD>

You will need to use Internet Explorer or Netscape as your browser to complete the web version. Upon completion of the questionnaire, you will receive a \$20 check as a token of our appreciation.

Please take the time to participate in this very important study. With input from individuals like you, we can improve our ability to help individuals receive an education beyond high school.

Sincerely,

John Riccobono, Ph.D.
NPSAS Project Director
RTI International

James Griffith, Ph.D.
NPSAS Project Officer
U.S. Department of Education

Note: To ensure that as many sample members as possible receive this message, we also have sent printed materials to you via U.S. mail. All the information in the printed materials is also available through the web site listed above.

Incentive Letter

<DATE>

Dear Student:

On behalf of the Department of Education and the RTI Project Staff, I would like to thank you for participating in the 2004 National Postsecondary Student Aid Study (NPSAS:04). Your input into this study is important to our ultimate success.

Enclosed you will find a check for <\$10/\$20/\$30> as a small token of appreciation for completing the interview.

Please do not hesitate to contact me at 1-800-334-8571 ext. 3598 if I can provide any additional information or assistance about the study or your interview.

Thank you again for your time and willingness to participate.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Roe', written in a cursive style.

David James Roe, M.A.
NPSAS Project Staff
RTI International

Appendix D

Endorsements



The 2004 National Study of Faculty and Students (NSoFaS:04)



ENDORSEMENTS

The following professional associations have endorsed the research efforts of the 2004 National Study of Faculty and Students (NSoFaS:04) being conducted at a sample of postsecondary institutions in the United States and Puerto Rico.

American Association for Higher Education
 American Association of Collegiate Registrars and Admissions Officers
 American Association of Community Colleges
 American Association of State Colleges and Universities
 American Association of University Professors
 American Council on Education
 American Federation of Teachers
 Association for Institutional Research
 Association of American Colleges and Universities
 Association of Catholic Colleges and Universities
 Career College Association
 The Carnegie Foundation for the Advancement of Teaching
 College and University Professional Association for Human Resources
 The College Board
 The College Fund/UNCF
 Council of Graduate Schools
 The Council of Independent Colleges
 Hispanic Association of Colleges and Universities
 National Accrediting Commission of Cosmetology Arts and Sciences (NPSAS only)
 National Association of College and University Business Officers
 National Association for Equal Opportunity in Higher Education
 National Association of Independent Colleges and Universities
 National Association of State Universities and Land-Grant Colleges
 National Association of Student Financial Aid Administrators
 National Education Association

Appendix E Facsimiles

Student Record Abstraction (CADE).....	E-3
Student Interview	E-15
Student Interview–Abbreviated Version.....	E-53

Student Record Abstraction (CADE)

For each eligible sampled student, please provide the following data.

I. FINANCIAL AID INFORMATION	
Question Number	Description
A. Financial Aid Awards	
Question 1.	<p>Did the student receive any financial aid, such as:</p> <ul style="list-style-type: none"> • assistantships • grants • scholarships • loans • fellowships • work study • tuition waivers or discounts • tuition aid from employers • veterans benefits • other financial aid <p>for terms or courses in which they were enrolled between July 1, 2003, and June 30, 2004? [y/n] (Some portion of the term must occur between these dates but may start prior to July 1 or end after June 30.)</p> <p>NOTE: Please do not include any information on state prepaid or savings plans in this section. You may enter that information at the end of the Tuition section.</p>
IF NO, YOU HAVE COMPLETED THIS SUBSECTION	
Question 2.	Did the student receive any federal aid, such as those program listed below? [y/n]
Question 3.	<p>Please enter the amounts of federal financial aid received by the student within each program.</p> <p>Federal Aid Programs</p> <ol style="list-style-type: none"> 1. Pell Grant program 2. Stafford Loan - subsidized (FFEL or Direct) 3. Stafford Loan - unsubsidized (FFEL or Direct) 4. PLUS parent loan (FFEL or Direct) 5. Perkins loan 6. Federal SEOG grant 7. Federal work-study (FWS) 8. Robert Byrd honors scholarship 9. Federal health professions loans (Nursing, HPSL, Primary Care, Disadvantaged) 10. Federal health professions Disadvantaged Student Scholarships (SDS)
Question 4.	Did the student receive any state aid, such as those programs listed below? [y/n]

I. FINANCIAL AID INFORMATION (continued)

Question Number	Description
A. Financial Aid Awards (continued)	
Question 5.	<p><i>[If yes, enter amounts.]</i></p> <p>State Aid Programs (List up to 12 awards)</p> <ul style="list-style-type: none"> A. <i>Customized for each state</i> B. <i>Customized for each state</i> C. <i>Customized for each state</i> D. <i>Customized for each state</i> E. <i>Customized for each state</i> F. <i>Customized for each state</i> G. <i>Customized for each state</i> H. <i>Customized for each state</i> I. <i>Customized for each state</i> J. <i>Customized for each state</i> K. <i>Customized for each state</i> L. <i>Customized for each state</i>
Question 6.	Did the student receive any institutional aid, such as those programs listed below? [y,n]
Question 7.	<p><i>[If yes, enter amounts.]</i></p> <p><u>Institutional Financial Aid</u></p> <ul style="list-style-type: none"> A. <i>Customized for each institution</i> B. <i>Customized for each institution</i> C. <i>Customized for each institution</i> D. <i>Customized for each institution</i> E. <i>Customized for each institution</i> F. <i>Customized for each institution</i> G. <i>Customized for each institution</i> H. <i>Customized for each institution</i> I. <i>Customized for each institution</i> J. <i>Customized for each institution</i> K. <i>Customized for each institution</i> L. <i>Customized for each institution</i> M. Other grants and scholarships: need-based N. Other grants and scholarships: merit-based only O. Other grants and scholarships: both need and merit P. Athletic scholarship Q. Undergraduate Tuition waivers for faculty/staff, family R. Tuition waivers and discounts for other undergraduates S. Undergraduate institutional loan T. Undergraduate institutional work-study U. Undergraduate resident assistants, tutors, or advisor stipends <p><i>NOTE: Preloaded customized list has been expanded from a maximum of 3 aid programs to 12. List shown on screen will shrink and expand as necessary to show the preloaded institution aid for that institution, and it will probably be on two screens.</i></p>

I. FINANCIAL AID INFORMATION (continued)	
A. Financial Aid Awards (continued)	
Question Number	Description
Question 8.	<i>[If DEGREE <= 4 then skip the following graduate aid questions. Go to "other aid" (Q10).]</i> Did the student receive any graduate aid, such as those programs listed below? [y,n]
Question 9.	<i>[If yes, enter amounts.]</i> <u>Graduate Institutional Financial Aid</u> A. Graduate fellowship or scholarship B. Federal fellowship (NSF, NASA, NIH, USDA, etc.) C. Federal traineeship D. Teaching assistantships/stipends E. Research assistantships/stipends F. Other graduate assistant, tutor, or reader stipends G. Tuition waivers for graduate students (including assistants) H. Tuition waivers for faculty/staff, spouse, or children I. Institutional work-study J. Institutional loan
Question 10.	Did the student receive any other aid, such as those programs listed below? [y/n]
Question 11.	<i>[If yes, enter amounts.]</i> A. Scholarships/grants from private organizations, foundations, unions B. Employer-paid tuition C. Veteran benefits D. ROTC and grants for Armed Forces personnel E. WIA, other job training, vocational rehabilitation F. Bureau of Indian Affairs grants G. Scholarships/grants from state agencies in other states H. Private or commercial loans (including Law, Medical, TERI, Nellie Mae)
Question 12.	<u>List of Other Financial Aid</u> Please also report any other financial aid awarded to the student. Provide 1. the <i>name</i> of the award 2. the <i>type</i> of award (Use key below) 1. Grant/scholarship: need-based 2. Grant/scholarship: merit-based 3. Grant/scholarship: both need and merit 4. Tuition waiver 5. Loan 6. Work-study or assistantship 7. Other 3. the <i>source</i> of the award (Use key below) 1. Institution 2. State 3. Federal 4. Other 4. the <i>amount</i> of the award
	<u>Summary Screen</u> The final screen in the Financial Aid subsection lists all of the aid programs for which the user entered amounts. The user can then click on the types of aid to go back to that screen to make any necessary changes, or can accept those amounts and continue.

I. FINANCIAL AID INFORMATION (continued)	
B. Need Analysis	
Question Number	Description
Question 1.	Is there financial aid budget information or a Federal Expected Family Contribution (EFC) value available for the student? [y/n]
IF NO, Skip to Question 8.	
Question 2.	What was the student's dependency status during the study year for federal financial aid purposes? (Use key below) 1. Dependent 2. Independent
Question 3.	For purposes of determining the student's financial aid budget, was the student's local residence...? (Use key below) 1. On-campus or school-owned housing 2. Off-campus without parents 3. Off-campus with parents
Question 4.	Please enter or update the Federal Expected Family Contribution (EFC) amount for the student.
Question 5.	Is there a Cost of Attendance or Student Expense Budget available for this student? [y/n]
Question 6	Please provide line-item budget amounts (if only a total budget amount is available, please provide the total amount; line-item amounts are preferred over a total amount). 1. Tuition and fees 2. Books and supplies 3. Room and board 4. Transportation 5. Computer technology fees 6. All other expenses <u>OR</u> Total Cost of Attendance
Question 7	For what period does this budget apply? (Use key below) 1. Full time, full year 2. Full time, one term 3. Part time, full year 4. Part time, one term 5. 5. Other
Question 8	<i>[If the institution is located in one of the 12 states with representative samples and the student is an undergraduate, ask this question. Base student status first on DEGREE <5, but if the DEGREE variable is blank, then use the preloaded student type.]</i> Is there a <i>[fill with preloaded state EFC name]</i> value available for this student? [y/n] [If yes] Please enter the amount: <i>[NOTE: We will obtain the specific names of the state EFC values from each of the 12 states prior to data collection and preload the correct name based on the state in which the institution is located.]</i>
C. Institution Student Information Record	
<i>[only students who did not match to CPS prior to CADE get this section]</i>	
Question 1	Is there an Institution Student Information Record (ISIR) or computerized ISIR data available for this student (y/n)?
Question 2	Student's Social Security number from the ISIR.
Question 3	Student's last name from ISIR.

II. REGISTRATION/ADMISSIONS

A. Locating Information Subsection

Question Number	Description												
Question 1.	Student's PERMANENT phone number [area code + prefix + number]												
	Student's PERMANENT International phone number [country code + number] <i>[NOTE: Provide only if no US phone number available.]</i>												
	Student's PERMANENT address												
	Student's PERMANENT city												
	Student's PERMANENT state												
	Student's PERMANENT zip code												
	Student's PERMANENT country (if not USA)												
	Student's permanent e-mail address <i>[NOTE: If available, permanent e-mail address from the enrollment list will be preloaded and can be edited or confirmed.]</i>												
Question 2.	Is the LOCAL address the same as the PERMANENT address? [y/n]												
Question 3.	Student's LOCAL phone number [area code + prefix + number]												
	Student's LOCAL International phone number [country code + number] <i>[NOTE: Provide only if no US phone number available.]</i>												
	Student's LOCAL address												
	Student's LOCAL city												
	Student's LOCAL state												
	Student's LOCAL zip code												
	Student's campus e-mail address <i>[NOTE: If available, campus e-mail address from the enrollment list will be preloaded and can be edited or confirmed.]</i>												
Question 4.	Is the LOCAL address the same as the PERMANENT address? [y/n]												
Question 5.	FIRST NAME, MIDDLE initial, LAST NAME, and SUFFIX of parent for whom locating information is available.												
Question 6.	Is address/phone information available for parents of the student? [y/n]												
Question 7.	Is PARENT'S address same as student's LOCAL or PERMANENT or DIFFERENT? <i>[NOTE: May choose one of the previously entered addresses or if different continue with Q8.]</i>												
Question 8.	For parent named in Question 5. <i>(You will get the option of choosing student's address for the parent's address.)</i>												
	PARENT'S phone number [area code + number]												
	PARENT'S International phone number [country code + number] <i>[NOTE: Provide only if no US phone number available.]</i>												
	PARENT'S address												
Question 8.	PARENT'S city												
	PARENT'S state												
	PARENT'S zip code												
	PARENT'S country (if not USA)												
Question 9.	Is other phone/address information (DIFFERENT from what was previously entered) available for another parent, a relative, or a friend of the student? [y/n]												
Question 10.	FIRST NAME, MIDDLE Initial, LAST NAME, and SUFFIX of parent or relative/friend for whom locating information is available.												
Question 11.	Relationship of parent or relative/friend to STUDENT. <table border="0" style="width: 100%;"> <tr> <td>1. FATHER</td> <td>7. AUNT</td> </tr> <tr> <td>2. MOTHER</td> <td>8. GRANDFATHER</td> </tr> <tr> <td>3. SPOUSE</td> <td>9. GRANDMOTHER</td> </tr> <tr> <td>4. BROTHER</td> <td>10. FRIEND</td> </tr> <tr> <td>5. SISTER</td> <td>11. CO-WORKER</td> </tr> <tr> <td>6. UNCLE</td> <td>12. OTHER (SPECIFY)</td> </tr> </table>	1. FATHER	7. AUNT	2. MOTHER	8. GRANDFATHER	3. SPOUSE	9. GRANDMOTHER	4. BROTHER	10. FRIEND	5. SISTER	11. CO-WORKER	6. UNCLE	12. OTHER (SPECIFY)
1. FATHER	7. AUNT												
2. MOTHER	8. GRANDFATHER												
3. SPOUSE	9. GRANDMOTHER												
4. BROTHER	10. FRIEND												
5. SISTER	11. CO-WORKER												
6. UNCLE	12. OTHER (SPECIFY)												

II. REGISTRATION/ADMISSIONS (continued)

A. Locating Information Subsection (continued)

Question Number	Description
Question 12.	For <i>parent</i> or <i>relative/friend</i> , please provide: Last Name, First Name, Middle Initial Phone number [area code + number] <i>[NOTE: Provide International number only if no US phone number available.]</i> Address City State Zip Code Country

B. Student Characteristics Section

Question 1.	Student's LAST name Student's FIRST name Student's MIDDLE initial Student's suffix (e.g., Jr., III)
Question 2.	Student's Social Security number
Question 3.	Student's date of birth
Question 4.	Student's gender (Use key below) 1. Male 2. Female
Question 5.	Student's driver's license number and state.
Question 6.	Student's marital status (Use key below) 1. Not married (single, widowed, divorced) 2. Married 3. Separated 4. Don't know If married and female, please also provide: Student's maiden name If married, please also provide: Spouse's name (Last, First, Middle)
Question 7.	<i>[If student is not an undergraduate then go to question 8. Determine student type by first checking the degree program in the enrollment section (DEGREE <=4) and if that is blank, use the preloaded student type.]</i> Student's high school degree (Use key below) 1. High school diploma 2. GED or other equivalency 3. Certificate of high school completion 4. Foreign high school 5. No high school degree or certificate
Question 7a.	<i>[If Question 7 above = 5, then skip to Question 8.]</i> Year Student Received High School Diploma/GED/Certificate
Question 7b.	<i>[If age >=30 then go to question 8. Age calculated based on date of birth as of January 1 of the interview year.]</i> Is the high school located in <INSTITUTION STATE>? [Y/N/DK] <i>[If NO:]</i> Where is the high school located? <give drop-down list of states>
Question 8.	What is the student's ethnicity? (Use key below) 1=Hispanic or Latino 2=Not Hispanic or Latino

II. REGISTRATION/ADMISSIONS (continued)

B. Student Characteristics Section	
Question Number	Description
Question 9.	What is the student's race? (Choose one or more) 1. White 2. Black or African American 3. Asian 4. American Indian or Alaska Native 5. Native Hawaiian or Other Pacific Islander
Question 10.	What is the student's citizenship status? (Use key below) 1. U.S. citizen or U.S. National 2. Resident alien 3. Foreign/International student or non-resident alien
Question 11.	<i>[Students with a DOB year prior to 1983 get this question. If it is skipped due to age, insert a 0 for NO into the database.]</i> Is the student a veteran of the U.S. Armed Forces? [y/n]
C. Admissions Information Section	
<i>For Undergraduates:</i>	
Question 1.	Is an SAT I score available? [y/n] If yes: Student's SAT I verbal score Student's SAT I math score
Question 2.	Is an ACT score available? [y/n] If yes: Student's composite ACT score
<i>For Graduate, Doctoral, and First-Professional Students</i>	
Question 1.	Are scores from the Graduate Record Exam (GRE) available for this student? [y/n] If yes: Student's GRE verbal score Student's GRE quantitative score Student's GRE analytic score

III. ENROLLMENT/TUITION SECTION	
A. Enrollment Term Subsection <i>[MUST BE COMPLETED BEFORE TUITION SUBSECTION]</i>	
Question Number	Description
	<p>If student was enrolled in a course for credit at any time during the study period (July 1, 2003, through June 30, 2004) list all terms for which the student was enrolled and provide the following information for each term:</p> <p style="padding-left: 40px;">Name of term or payment period [EX: Fall, 2003] Start date of that term/period [mm/yyyy] End date of that term/period [mm/yyyy] Attendance status (use key below): 1 = Full-time (12 or more credits) 2 = Half-time (6 to 11 credits) 3 = Less than Half-time (5 or less credits)</p> <p><i>[If school is not a clock-hour school:]</i> Credit hours [number]</p>
<p>Question 1.</p> <p>This item is referred to as DEGREE throughout this document.</p>	<p>During [LAST TERM ENROLLED], in what type of degree program was the student enrolled (Use key below):</p> <p style="padding-left: 40px;">1 = Bachelor's degree 2 = Associate's degree 3 = Undergraduate certificate or diploma (occupational or technical program) 4 = Undergraduate, not in a degree program 5 = Master's degree program 6 = First-professional degree (law, medicine, chiropractic, pharmacy, ordination) 7 = Doctoral degree program 8 = Post-baccalaureate certificate program (including teaching credential) <i>[skip next item, advanced degree, and code it as 28]</i> 9 = Graduate, not in a degree program <i>[skip next item, advanced degree, and code it as 29]</i></p>
<p>Question 1a.</p>	<p><i>[if DEGREE=2 then]</i> What type of Associate's degree? 1 = AA,AS, general education or transfer program 2 = AAS, occupational or technical program</p>
<p>Question 2.</p>	<p><i>[Only applicable to students in Master's Degree program. If DEGREE=5]</i> Which of the following Master's degrees was the student working toward during [LAST TERM ENROLLED]? (Use key below)</p> <p style="padding-left: 40px;">1 = Master of Science (MS) 2 = Master of Arts (MA) 3 = Master of Education (MEd) or Teaching (MAT) 4 = Master of Business Administration (MBA) 5 = Master of Public Administration (MPA) 6 = Master of Social Work (MSW) 7 = Master of Fine Arts (MFA) 8 = Master of Public Health (MPH) 9 = Master of Divinity (MDiv) <i>[code as 19]</i> 10 = Other master's degree programs not listed</p>

III. ENROLLMENT/TUITION SECTION (continued)	
A. Enrollment Term Subsection (continued) [MUST BE COMPLETED BEFORE TUITION SUBSECTION]	
Question Number	Description
Question 2.	<p><i>[Only applicable to students in Doctoral or FP program. If DEGREE=6 or 7]</i> Which of the following doctoral or first professional degrees was the student working toward during [LAST TERM ENROLLED]? (Use key below)</p> <p>DOCTORAL DEGREES 11 = Doctor of Philosophy (PhD) 12 = Doctor of Education (EdD) 13 = Doctor of Science (DSc/ScD) or Engineering (DEng) 14 = Doctor of Psychology (PsyD) 15 = Doctor of Business or Public Administration (DBA, DPA) 16 = Doctor of Fine Arts (DFA) 17 = Doctor of Theology (ThD) 18 = Other doctoral degrees not listed</p> <p>FIRST PROFESSIONAL DEGREES 19 = Ministry or Divinity (MDiv, DMin, MHL, BD, ordination) 20 = Law (JD, LLB) 21 = Medicine or Osteopathic Medicine (MD, DO) 22 = Dentistry (DDS, DMD) 23 = Chiropractic (DC, DCM) 24 = Pharmacy (PharmD) 25 = Optometry (OD) 26 = Podiatry (DPM, DP, PodD) 27 = Veterinary medicine (DVM)</p>
Question 3.	<p>During [LAST TERM ENROLLED], what was this student's class level? (Use key below) <i>[If the student is in an undergraduate degree program, the user will see only the undergraduate levels below. If the student is in a graduate/first professional degree program, the user will see only the graduate/professional levels below.]</i></p> <p>1 = 1st Year/Freshman 2 = 2nd Year/Sophomore 3 = 3rd Year/Junior 4 = 4th Year/Senior 5 = 5th Year or Higher Undergraduate 6 = Undergraduate (unclassified) 7 = Student with advanced degree taking undergraduate courses 8 = 1st year Graduate/professional 9 = 2nd year Graduate/professional 10 = 3rd year Graduate/professional 11 = Beyond 3rd year Graduate/professional</p>
Question 3a.	<p><i>[Only applicable to graduate and first professional students. If DEGREE > 4:]</i> You have indicated that this student is enrolled as a graduate or first professional student. When did this student obtain a Baccalaureate degree? Month/Year: Student does not have a Baccalaureate degree. <i>[NOTE: User can give the month and year or the "Student does not have a BA degree" option can be selected.]</i></p>
Question 4.	<p><i>[If the school does not have GPA's, skip to Question 5.]</i> Cumulative GPA</p>
Question 5.	<p>What is the student's current or most recent major or field of study? <i>(In some cases, this will be filled automatically filled based on type of Masters, doctoral, or first-professional degree program, but the user can still edit it.)</i></p>

III. ENROLLMENT/TUITION SECTION (continued)	
A. Enrollment Term Subsection (continued) [MUST BE COMPLETED BEFORE TUITION SUBSECTION]	
Question Number	Description
Question 6.	<i>[Only applicable to undergraduate students. If DEGREE <= 4 or "student does not have a baccalaureate degree" option was selected in question 3a:]</i> Was this student ever enrolled in this institution prior to July 1, 2003? [y/n] <i>[If YES:]</i> When did this student FIRST enroll at [INSTITUTION NAME]? [mm/yr]
Question 7.	<i>[Only applicable to undergraduate students. If DEGREE <= 4 or "student does not have a baccalaureate degree" option was selected in question 3a:]</i> Did the student transfer any credits from another postsecondary institution? [y/n]
Question 8.	<i>[Only applicable to undergraduate students. If DEGREE <= 4 or "student does not have a baccalaureate degree" option was selected in question 3a:]</i> Is this student classified as a first-time, first-year degree-seeking student for IPEDS reporting purposes? [y/n]
Question 9.	<i>[Ask of all students]</i> Is the student expected to have completed the requirements for the [DEGREE] on or before June 30, 2004? [y/n]
	<i>For CLOCK HOUR Institutions ONLY.</i>
Question 10.	What is the total length of the program in clock/contact hours? [Specify hours]
Question 11.	How many hours (lab and classroom) are required per week? [Specify hours]
B. Tuition Charges	
Question 1.	For each term attended by the student (those terms identified in the Enrollment/Term subsection above), specify amounts of tuition and fees charged. Please provide separate amounts for each term, if available. <i>[User can enter tuition amounts by term or total.]</i>
Question 2.	Total tuition and fees charged for all terms. <i>[automatically computed if user entered tuition by term.]</i>
Question 3.	<i>[If the institution is public:]</i> For tuition purposes, this student was classified as: (Use key below) 1. In jurisdiction (e.g., in-state, in-district, etc.) 2. Out-of-jurisdiction (e.g., out-of-state, out-of-district, etc.)
Question 4.	Was any of the tuition paid by a state prepaid or savings plan such as those listed below? [y/n]
Question 4a.	<i>[If yes]</i> Please enter the amount received by the student within each plan. A. Customized for each state B. Customized for each state C. Plan from another state <i>[NOTE: We will preload the names of the one or two state prepaid or savings plans for that state. If there is only one, then the "plan from another state" will move up to slot B on the screen.]</i>

Student Interview

Section A: Eligibility and Enrollment

N4ELIG

NPSAS enrollment during NPSAS year

Have you been enrolled at [NPSAS] at any time since July 1, 2003?

- 0 = No
- 1 = Yes, currently enrolled
- 2 = Yes, but not currently enrolled
- 3 = Have been enrolled, but still enrolled in high school

Applies to: All respondents.

TCURENRL

Current enrollment flag

Internal variable

Current enrollment is defined as any respondent who indicates that they are currently enrolled at the time of the interview. If respondents were never enrolled at NPSAS, are still in high school, or were enrolled at NPSAS before the time of the interview, then they are considered not currently enrolled.

If N4ELIG=1 then TCURENRL=1 else

TCURENRL=0.

- 0 = Not currently enrolled
- 1 = Currently enrolled

Applies to: All respondents.

N4DRPMY

Date left NPSAS

When did you last attend [NPSAS]?

Applies to: Respondents who have been enrolled since July 1, 2003 but were not enrolled at NPSAS during the time of the interview.

CATI Code: N4ELIG=2

N4DRPTM

Left NPSAS with a completed term

[If N4DRPMY is blank]

When you last attended [NPSAS], did you leave at the end of the term, or did you leave before the term ended?

[else]

Is that date [N4DRPMY] at the end of the term, or did you leave before the term ended?

- 1 = Left at the end of the term
- 2 = Left before the term ended

Applies to: Respondents who have been enrolled since July 1, 2003 but were not enrolled at NPSAS during the time of the interview.

CATI Code: N4ELIG=2

N4DRPRF

Received full tuition refund

Did you receive a full refund of your tuition when you left?

- 0 = No
- 1 = Yes

Applies to: Respondents who left NPSAS before the end of the term.

CATI Code: N4ELIG=2 and N4DRPTM in (2, -9)

N4DRPCMP

Completed previous course/term

Have you completed a course or term at [NPSAS] at any time since July 1, 2003?

- 0 = No
- 1 = Yes

Applies to: Respondents who left NPSAS before completing a term and received a full tuition refund.

CATI Code: N4ELIG=2 and N4DRPTM in (2, -9) and N4DRPRF in (1, -9)

N4STAT

Student status at NPSAS

For all questions about your 2003–2004 enrollment at [NPSAS], please refer to your most recent term of enrollment at the school.

[If TCURENRL=1]

In your most recent term at [NPSAS], have you been enrolled as an undergraduate or graduate student, or have you been taking courses without being enrolled in a degree program?

[else]

In your most recent term at [NPSAS], were you enrolled as an undergraduate or graduate student, or were you taking courses without being enrolled in a degree program?

- 1 = Undergraduate student (includes associate's and bachelor's degrees, postsecondary diplomas and certificates at the undergraduate level, as well as professional degrees that do not require a bachelor's degree))
- 2 = Graduate student (includes master's and doctoral degrees, and post-baccalaureate and post-master's certificates, as well as professional degrees that may be pursued after obtaining a bachelor's degree))
- 3 = Taking classes without being enrolled in a degree program

Applies to: All respondents.

N4DGUG

Undergraduate degree type

What undergraduate degree or certificate {[if TCURENRL=1] are you [else] were you} working on at [NPSAS] during the 2003–2004 school year?

Note: An internally assigned value of 99 was used for cases that said N4DGUG=11, N4DGPR=28, and came back to N4DGUG=11 again to avoid getting stuck in loop.

- 1 = Bachelor's degree
- 2 = Associate's degree
- 3 = Undergraduate certificate or diploma (occupational or technical program)
- 4 = Undergraduate student, not in a degree program
- 8 = Post-baccalaureate certificate
- 11 = Professional degree (only includes the following degree programs: chiropractic, dentistry, law, medicine, optometry, osteopathic medicine, pharmacy, podiatry, divinity/theology, or veterinary medicine)
- 99 = Misclassified professional

Applies to: Undergraduate respondents.

CATI Code: N4STAT in (1, -9)

N4DGGR

Graduate degree type

What graduate degree or certificate were you working on at [NPSAS] during the 2003–2004 school year?

If you are enrolled in more than one program, enter the highest. For example, if you are working on both a doctoral degree and a professional degree, enter a doctoral degree.

Note: An internally assigned value of 99 was used for cases that said N4DGUG=11, N4DGPR=28, and came back to N4DGUG=11 again to avoid getting stuck in loop.

- 6 = Master's degree
- 7 = Doctoral degree
- 8 = Post-baccalaureate certificate
- 9 = Graduate student, not in a degree program
- 10 = Post-master's certificate
- 11 = First professional degree (only includes the following degree programs: chiropractic, dentistry, law, medicine, optometry, osteopathic medicine, pharmacy, podiatry, divinity/theology, or veterinary medicine)
- 99 = Misclassified first professional

Applies to: Graduate respondents.

CATI Code: N4STAT=2

N4CLSLV

Mainly undergraduate or graduate classes

During the 2003–2004 school year, have you been taking mainly undergraduate or graduate classes at [NPSAS]?

- 1 = Mainly undergraduate classes
- 2 = Mainly graduate classes
- 3 = An equal mix of undergraduate and graduate classes

Applies to: Respondents who were not enrolled in a degree program during the 2003–2004 school year.

CATI Code: N4STAT in (3, -9)

N4CKHOUR

Clock hour requirement

Did your program of study require at least 3 months or 300 clock hours of instruction in order for a certificate to be awarded?

- 0 = No
- 1 = Yes

Applies to: Undergraduate respondents who were working on a diploma or certificate during the 2003–2004 school year.

CATI Code: N4STAT in (1, -9) and N4DGUG in (3, -9)

N4ASSOC

Type of associate's degree

What type of associate's degree were you working on at [NPSAS]?

- 1 = AA, AS, general education or transfer program
- 2 = AAS, occupational or technical program

Applies to: Undergraduate respondents who were working on an associate's degree during the 2003–2004 school year.

CATI Code: N4DGUG in (2, -9)

N4DGD

Type of doctoral degree

What specific degree were you working toward in your most recent term in the 2003–2004 school year?

Doctoral degree

- 11 = Doctor of Philosophy (PhD)
- 12 = Doctor of Education (EdD)
- 13 = Doctor of Science (DSc/ScD) or Engineering (DEng)
- 14 = Doctor of Psychology (PsyD)
- 15 = Doctor of Business or Public Administration (DBA/DPA)
- 16 = Doctor of Fine Arts (DFA)
- 17 = Doctor of Divinity/Theology (ThD)
- 18 = Other doctoral degree not listed

Applies to: Respondents who were working on a doctoral degree.

CATI Code: N4DGGR in (7, -9)

N4DGMS*Type of master's degree*

What specific degree were you working toward in your most recent term in the 2003–2004 school year?

Master's degree

- 1 = Master of Science (MS)
- 2 = Master of Arts (MA)
- 3 = Master of Education (MEd) or Teaching (MAT)
- 4 = Master of Business Administration (MBA)
- 5 = Public administration (MPA)
- 6 = Master of Social Work (MSW)
- 7 = Master of Fine Arts (MFA)
- 8 = Master of Public Health (MPH)
- 9 = Other master's degree program not listed
- 19 = Master of Divinity (MDiv)

Applies to: Respondents who were working on a master's degree.

CATI Code: N4DGGR in (6, -9)

N4DGPR*Type of first professional degree*

What specific degree were you working toward in your most recent term in the 2003–2004 school year?

First professional degree

- 19 = Ministry or Divinity
(MDiv/DMin/MHL/BD/ordination)
- 20 = Law (JD/LLB)
- 21 = Medicine (MD) or Osteopathic medicine (DO)
- 22 = Dentistry (DDS/DMD)
- 23 = Chiropractic (DC/DCM)
- 24 = Pharmacy (PharmD)
- 25 = Optometry (OD)
- 26 = Podiatry (DPM/DP/PodD)
- 27 = Veterinary medicine (DVM)
- 28 = Other undergraduate degree not listed
- 29 = Other graduate degree not listed

Applies to: Respondents who were working on a first professional degree.

CATI Code: (N4STAT=1 and N4DGUG in (11, 99)) or (N4STAT=2 and N4DGGR in (11, 99))

N4PRBA*Earned BA while a first professional student*

Which of the following describes your most recent enrollment at [NPSAS]?

If you are/were enrolled in more than one program, enter the highest. For example, if you are/were working on both a bachelor's degree and a professional degree, enter the professional degree.

- 1 = Enrolled in a first professional degree program, but have not yet earned a bachelor's degree
- 2 = Have already earned a bachelor's degree and was/nor enrolled for a first professional degree at the graduate level

Applies to: Respondents who were working on a first professional degree.

CATI Code: (N4STAT=1 and N4DGUG in (11, 99)) or (N4STAT=2 and N4DGGR in (11, 99))

TSTAT*Internal variable: student status*

Internal variable

TSTAT represents student status and corrects for any inconsistencies in the reported data: undergraduate, graduate

if N4STAT = 1 then

TSTAT = 1

if N4STAT = 1 and N4DGUG = 8 then

TSTAT = 2

if N4STAT = 2 then

TSTAT = 2

if (N4DGUG = 11 or N4DGGR = 11) and N4PRBA = 1 and

(N4DGPR = 19 or N4DGPR = 20 or N4DGPR = 21 or N4DGPR = 22 or

N4DGPR = 23 or N4DGPR = 24 or N4DGPR = 25 or N4DGPR = 26 or

N4DGPR = 27) then

TSTAT = 1

if (N4DGUG = 11 or N4DGGR = 11) and N4PRBA = 2 and

(N4DGPR = 19 or N4DGPR = 20 or N4DGPR = 21 or N4DGPR = 22 or

N4DGPR = 23 or N4DGPR = 24 or N4DGPR = 25 or N4DGPR = 26 or

N4DGPR = 27) then

TSTAT = 2

if N4STAT = 2 and N4DGPR = 28 and (N4DGUG = 1 or N4DGUG = 2

or N4DGUG = 3 or N4DGUG = 4) then

TSTAT = 1

if N4STAT = 2 and N4DGPR = 28 and N4DGUG = 8 then

TSTAT = 2

if N4STAT = 1 and N4DGPR = 29 and (N4DGGR = 6 or N4DGGR = 7

or N4DGGR = 8 or N4DGGR = 9 or N4DGGR = 10) then

TSTAT = 2

if N4STAT = 3 and (N4CLSLV = 1 or N4CLSLV = 3) then

TSTAT = 1

if N4STAT = 3 and N4CLSLV = 2 then

TSTAT = 2

if TSTAT = -9 then

TSTAT = 1

1 = Undergraduate

2 = Graduate

Applies to: All respondents.

TDEGREN

Numeric degree

Internal variable

TDEGREN = -9;

if N4STAT = 3 then do;

 if TSTAT = 1 then TDEGREN = 4;

 if TSTAT = 2 then TDEGREN = 9;

end;

else if TSTAT = 1 then do;

 if N4DGUG = 1 then TDEGREN = 1;

 else if N4DGUG = 2 then TDEGREN = 2;

 else if N4DGUG = 3 then TDEGREN = 3;

 else if N4DGUG = 4 then TDEGREN = 4;

 else if N4DGUG = 8 then TDEGREN = 8;

 else if N4DGUG in (11,99) then TDEGREN = 5;

 else if N4DGGR in (11,99) then TDEGREN = 5;

 else if N4DGUG = -9 then TDEGREN = 4;

end;

else if TSTAT = 2 then do;

 if N4DGGR = 6 then TDEGREN = 6;

 else if N4DGGR = 7 then TDEGREN = 7;

 else if N4DGGR = 8 then TDEGREN = 8;

 else if N4DGUG = 8 then TDEGREN = 8;

 else if N4DGGR = 9 then TDEGREN = 9;

 else if N4DGGR = 10 then TDEGREN = 10;

 else if N4DGGR in (11,99) then TDEGREN = 11;

 else if N4DGUG in (11,99) then TDEGREN = 11;

 else if N4DGGR = -9 then TDEGREN = 9;

end;

 1 = Bachelor's degree

 2 = Associate's degree

 3 = Undergraduate certificate/diploma

 4 = Undergraduate, not in a degree program

 5 = Undergraduate first professional

 6 = Master's degree

 7 = Doctoral degree

 8 = Post-baccalaureate certificate

 9 = Graduate, not in a degree program

 10 = Post-master's certificate

 11 = Graduate first professional

Applies to: All respondents.

N4ELCRD

Enrolled for transferable credit

For all questions about your 2003–2004 enrollment at [NPSAS], please refer to your most recent term of enrollment at the school. In your most recent term at [NPSAS], were you enrolled in a course for credit that could be transferred to another school?

 0 = No

 1 = Yes

Applies to: All respondents.

Recode Note: If TDEGREN not in (4, 9) then N4ELCRD=1.

N4NPELG

NPSAS eligibility flag

Coding Flag

Internal variable

NPSAS eligibility

If (((N4HSYR > 0 and N4HSYR < begyear) or

N4CMP <> 1) and

(N4ELIG = 1 or N4DRPTM = 1 or N4DRPRF = 0 or

N4DRPCMP = 1))

AND

((N4STAT = 1 or N4STAT = -9)

and

((N4DGUG = 3 and N4CKHOUR = 1)

or ((N4DGUG = 4 or N4DGUG = -9) and

N4ELCRD = 1)

or (N4DGUG = 1 or N4DGUG = 2 or N4DGUG =

8 or

N4DGUG = 11 or N4DGUG = 99)))

or (N4STAT = 2

and

((N4dggr = 9 or N4dggr = -9) and N4ELCRD = 1)

or (N4dggr = 6 or N4dggr = 7 or N4dggr = 8 or

N4dggr = 10

or N4dggr = 11 or N4dggr = 99)))

or (N4STAT = 3 and N4ELCRD = 1))

then N4NPELG = 1

else N4NPELG = 0

0 = Not eligible

1 = Eligible

Applies to: All respondents.

N4UGYR

Undergraduate level last term

What was your year or level during your most recent term at [NPSAS] in the 2003–2004 school year?

 1 = First year or freshman

 2 = Second year or sophomore

 3 = Third year or junior

 4 = Fourth year or senior

 5 = Fifth year or higher undergraduate

 6 = Unclassified undergraduate

 7 = Graduate student taking undergraduate classes

Applies to: Undergraduate respondents who were working on a degree during the 2003–2004 school year.

CATI Code: TSTAT=1 and N4DGUG in (not = 4, -9)

N4GRYR*Graduate level last term*

[If N4DGPR > 0 then]

What year of your professional program were you in during your most recent term at [NPSAS] in the 2003–2004 school year?

[else]

What year of your graduate program were you in during your most recent term at [NPSAS] in the 2003–2004 school year?

8 = First year

9 = Second year

10 = Third year

11 = Fourth year

12 = Fifth year

13 = Sixth year or higher

Applies to: Graduate respondents who were working on a degree.

CATI Code: TSTAT=2 and TDEGREN not in (4, 9)

N4BGMY*Beginning date at NPSAS during NPSAS year*

Internal variable

N4BGMY indicates the beginning date at NPSAS during the NPSAS year. The beginning date is derived from the enrollment string (N4NEN01–N4NEN13).

*Applies to: All respondents.***N4EMY***Ending date at NPSAS during NPSAS year*

Internal variable

N4EMY indicates the ending date at NPSAS during the NPSAS year. The ending date is derived from the enrollment string (N4NEN01–N4NEN13).

*Applies to: All respondents.***N4DBLMAJ***Major declared/undeclared*

Have you declared a major yet?

0 = Not in a degree program

1 = Declared major

2 = Declared double major

3 = Not yet declared

Applies to: All respondents.

Recode Note: If TDEGREN in (4,9) then

N4DBLMAJ=0.

If TSTAT=2 and TDEGREN not in (4,9) then

N4DBLMAJ=1.

N4CLTYA–N4CLTYL, N4CLTYX*Types of classes*

What types of classes have you been taking during the 2003–2004 school year?

(Please check all that apply.)

0 = No

1 = Yes

N4CLTYA—Business**N4CLTYB**—Health**N4CLTYC**—Education**N4CLTYD**—Engineering and Engineering Technology**N4CLTYE**—Computer and Information Sciences**N4CLTYF**—Social Sciences**N4CLTYG**—Natural Sciences and Mathematics**N4CLTYH**—Arts and Humanities**N4CLTYI**—Communications**N4CLTYJ**—Vocational Programs**N4CLTYK**—University Transfer**N4CLTYL**—General Education**N4CLTYX**—Other*Applies to: Respondents who were not enrolled in a degree program during the 2003–2004 school year.*

CATI Code: TDEGREN in (4, 9)

N4GPA1*GPA measured on 4.00 scale*

Is your grade point average (GPA) measured on a 4.00 scale?

1 = Yes

2 = No, it is measured on another grading scale

3 = No, the school does not award grades

4 = Yes, but no GPA yet

Applies to: All respondents.

Recode Note: If N4GPA= -5 then N4GPA1=4.

N4GPA*Cumulative GPA*

What was your cumulative GPA at [NPSAS] through the end of your most recent term in the 2003–2004 school year?

Range: 0.00 to 4.00

Applies to: Respondents whose GPA was measured on a 4.0 scale.

CATI Code: N4GPA1 in (1, -9)

N4GPAEST

Estimate of GPA

Which of the following would you say best describes your grade point average at [NPSAS]?

- 1 = Mostly A's (3.75 and above)
- 2 = A's and B's (3.25-3.74)
- 3 = Mostly B's (2.75-3.24)
- 4 = B's and C's (2.25-2.74)
- 5 = Mostly C's (1.75-2.24)
- 6 = C's and D's (1.25-1.74)
- 7 = Mostly D's or below (below 1.24)
- 8 = Don't know

Applies to: Respondents whose GPA was on a 4.0 point scale and did not know their numeric GPA, or who were on a grading scale other than a 4.0 point scale.

CATI Code: (N4GPA1 in (1, -9) and N4GPA= -9.00) or (N4GPA1=2))

N4DGBMY

Date first began NPSAS ever

In what month and year did you first attend [NPSAS] after completing high school requirements?

Applies to: Undergraduate respondents.

CATI Code: TSTAT=1

N4CMPDGN

Completed requirements for degree

Have you completed all the requirements for your [TDEGREN]?

- 0 = No
- 1 = Yes

Applies to: Respondents in a degree program.

Cati Code: TDEGREN not in (4, 9)

Recode Note: If TCURENRL=1 and TDEGREN not in (4, 9) then N4CMPDGN=0.

If TCURENRL=0 and (N4GRYR=8 and TDEGREN in (5, 7, 11) or (N4UGYR in (1, 2) and TDEGREN=1) then N4CMPDGN=0.

N4GRMY

Date began graduate studies

When did you begin your [TDEGREN] at [NPSAS]?

Applies to: Graduate respondents who were working on a degree.

CATI Code: TSTAT=2 and TDEGREN not = 9

N4GRST

Graduate enrollment status

Earlier you told us about your enrollment status for the 2003–2004 school year. Now we'd like to ask about your enrollment since you began your graduate program. Since you started working on your [TDEGREN], have you been enrolled mainly as a full-time student or a part-time student?

- 1 = Mainly full-time
- 2 = Mainly part-time
- 3 = Mix of full- and part-time

Applies to: Graduate respondents who were working on a degree.

CATI Code: TSTAT=2 and TDEGREN not =9

N4EXNMY

Date expect degree at NPSAS

In what month and year do you expect to complete the requirements for your [TDEGREN]?

Applies to: Respondents who were working toward a degree at NPSAS who expect to complete it.

CATI Code: TDEGREN not in (4, 9) and N4CMPDGN not =1 and N4EXPN not =1

N4EXPN

Date expect degree: will not complete

In what month and year do you expect to complete the requirements for your [TDEGREN]?

Will not finish the [TDEGREN]

- 0 = No
- 1 = Yes

Applies to: Respondents who are working toward a degree at NPSAS but have not completed it.

CATI Code: TDEGREN not in (4,9) and N4CMPDGN not =1

N4DGNMY

Date awarded degree at NPSAS

In what month and year did you complete your [TDEGREN] at [NPSAS]?

Applies to: Respondents who completed a degree at NPSAS.

CATI Code: N4CMPDGN in (1, -9)

N4ENRPLN

Plan to be enrolled next year at NPSAS

Do you plan to be enrolled at [NPSAS] during the 2004-2005 school year?

- 0 = No
- 1 = Yes

Applies to: Respondents who are not currently enrolled at NPSAS and have not completed a degree.

CATI Code: TCURENRL=0 and N4CMPDGN not =1

N4EXPNP

Highest level of education expected at NPSAS

[If TCURENRL = 1 then]

What is the highest level of education you expect to complete at [NPSAS]?

[else]

What was the highest level of education you expected to complete at [NPSAS]?

- 0 = No degree/certificate
- 1 = Bachelor's degree
- 2 = Associate's degree
- 3 = Undergraduate certificate or diploma
(occupational or technical program)
- 6 = Master's degree
- 7 = Doctoral degree (such as the Ph.D., Ed.D., etc.)
- 8 = Post-baccalaureate certificate
- 10 = Post-master's certificate
- 12 = Professional degree (only includes the following degree programs: chiropractic, dentistry, law, medicine, optometry, osteopathic medicine, pharmacy, podiatry, divinity/theology, or veterinary medicine)

Applies to: All respondents except those who did not plan on being enrolled at NPSAS in 2004-2005.

CATI Code: N4ENRPLN not = 0

Recode Note: If N4DGGR=7 then N4EXPNP=7.

N4NEW1-5

Attended other schools (1-5) during NPSAS year

Have you attended any other schools besides [NPSAS] since July 1, 2003?

- 0 = No
- 1 = Yes

Applies to: All respondents.

N4NUMSCH

Total schools attended

Derived variable

N4NUMSCH is calculated based on enrollment history during the 2003-2004 school year and respondents' reporting of attendance at other institutions.

If no other schools attended, N4NUMSCH=1;

If 1 other school attended, N4NUMSCH=2;

If 2 other school attended, N4NUMSCH=3;

If 3 other school attended, N4NUMSCH=4;

If 4 other school attended, N4NUMSCH=5;

If 5 other school attended, N4NUMSCH=6;

Observed range: 1 - 6

Applies to: All respondents.

NEWNUMSC

Revised number of schools attended during NPSAS year

Internal variable

This variable represents the number of institutions the respondent attended during the NPSAS year, correcting for duplicate entries as well as institutions that were coded after data collection.

Observed range: 1 - 6

Applies to: All respondents.

N4ENSTCT

Number of valid enrollment strings

Internal variable

This variable holds the number of valid enrollment strings we have for each respondent.

0 = 0

1 = 1

2 = 2

3 = 3

4 = 4

5 = 5

6 = 6

Applies to: All respondents.

TMULTPL

Indicator of multiple enrollment during NPSAS year

Internal variable

TMULTPL is calculated from the number of valid IPEDS codes.

If N4NUMSCH>1 then TMULTPL=1 (Attended additional schools)

else TMULTPL=0 (Only attended NPSAS)

0 = No

1 = Yes

Applies to: All respondents.

N4EMX

Monthly enrollment indicators-all schools

N4EMX is the overall enrollment string. It shows enrollment during the NPSAS year regardless of school. Therefore, it is a combination enrollment string for all schools attended.

Each month is designated by a character in the 12 month (12 character) enrollment string. The string runs from July 2003-June 2004. Within each character space, we allow the following designators for type of enrollment:

- <1> Mostly Full-time
- <3> Mostly Part-time
- <4> Equal mix of Full-time and Part-time
- <9> Enrolled, status unknown
- <0> None
- <-1> Don't know
- <-9> Missing

For example, If the respondent was enrolled part time for the first half of the year, and then mixed for the 2nd half of the year then N4EMX = 333333444444.

If the respondent attended more than one school during the NPSAS year, there is an order of precedence for each character space:

- 1st=Full time
- 2nd=Mixed
- 3rd=Part time

Therefore, if the respondent was enrolled as at fulltime student at one school during December, and also as a part time student somewhere else in December, we mark "full time".

Further examples:

- a) If the respondent has 2 schools and N4NEMX = 101010101010 and N41EMX = 111111111111, then N4EMX = 111111111111.
- b) If the respondent has 2 schools and N4NEMX = 111111222222 and N41EMX = 111111111111, then N4EMX = 111111111111.

Applies to: All respondents.

N4EMXFLG

N4EMX flag

Coding Flag

N4EMXFLG indicates the following values for the enrollment string (N4EMX):

- 1: entire string is -1 (don't know)
- 9: entire string is -9 (missing)
- 1: entire string is valid (no -1 nor -9)
- 2: mixed with valid strings (1-4, -1, -9)

Examples:

- a) A value of 1 in N4EMXFLG means that the overall enrollment string, N4EMX, is made up of enrollment strings that are all valid strings. For example, if the respondent has 2 schools and N4NEMX =

101010101010 and N41EMX = 111111111111, then N4EMX = 111111111111 and N4EMXFLG = 1.

- b) A value of 2 means that N4EMX is made up of some valid strings and some not valid strings (i.e. -9, -1). For example, if the respondent has 2 schools and N4NEMX = 101010101010 and N41EMX = -9, then N4EMX = 101010101010 and N4EMXFLG = 2.

1 = Entire string is valid: no -1 or -9

2 = Mixed with valid strings

Applies to: All respondents.

N4NFST

NPSAS was first school attended after high school

Was [NPSAS] the first college or trade school you enrolled in after completing your high school requirements?

- 0 = No
- 1 = Yes

Applies to: Undergraduate respondents.

CATI Code: TSTAT=1

N4FSTMY

Date attended first school

In what month and year did you first attend any college, university, or trade school after high school?

Applies to: Respondents for whom NPSAS was not the first school after high school.

CATI Code: N4NFST in (0, -9)

N4CMPCLS

Completed postsecondary course after high school

Did you complete one or more postsecondary classes (at a college or trade school) toward a degree or formal award between the time you completed high school and July 1, 2003?

- 0 = No
- 1 = Yes

Applies to: Undergraduates who first enrolled at a postsecondary institution prior to July 1, 2003 and are either in the first or second year of a degree program, or not in a degree program.

CATI Code: ((TSTAT=1) and ((N4NFST=1 and N4DGBMY<200307) or (N4NFST not = 1 and N4FSTMY < 200307)) and ((N4DGUG = 4) or ((N4DGUG not = 4) and (N4UGYR in (1, 2, 6,-3, -9))))

N4TRNSFR

Transferred to NPSAS

Did you transfer to [NPSAS] from another school at any time during 2003-2004?

0 = No

1 = Yes

Applies to: Undergraduate respondents who went to multiple schools during the 2003–2004 school year and NPSAS was not their first school.

CATI Code: TSTAT=1 and TMULTPL=1 and N4NFST in (0, -9)

N4TRNCRD

Transferred credits to NPSAS

Did [NPSAS] accept all, some, or none of the credits you wanted to transfer?

0 = None

1 = All

2 = Some

Applies to: Undergraduate respondents who transferred to NPSAS from another school during the 2003–2004 school year.

CATI Code: TSTAT=1 and TMULTPL=1 and N4NFST in (0, -9) and N4TRNSFR in (1, -9)

N4TRNAWY

Transferred from NPSAS

Did you transfer from [NPSAS] to another school at any point during, 2003-2004?

0 = No

1 = Yes

Applies to: Undergraduates who were not enrolled at NPSAS during the time of the interview and were enrolled at multiple schools during the 2003–2004 school year.

CATI Code: TSTAT=1 and N4ELIG not =1 and TMULTPL=1

N4TRNPLN

Plan to transfer from NPSAS

Do you plan to transfer from [NPSAS] to another school?

0 = No

1 = Yes

Applies to: Undergraduates who were either currently enrolled, or not currently enrolled but who planned to be enrolled at NPSAS in 2004-2005, and did not complete a degree and had not transferred away from NPSAS.

CATI Code: TSTAT=1 and (TCURENRL=1 or (TCURENRL=0 and N4ENRPLN in (1, -9))) and N4CMPDGN not = 1 and N4TRNAWY not = 1

N4PRDG

Earned prior degree/certificates

[If TDEGREN in (4, 9)]

Have you earned any degrees or certificates since you left high school?

[else]

Other than the [TDEGREN] that you [are working on/earned] at [NPSAS], have you earned any other degrees or certificates since you left high school?

0 = No

1 = Yes

Applies to: All respondents.

Recode note: If N4CMPCLS=0 then N4PRDG=0.

N4PRCHKA

Prior degree check: bachelor's degree

Have you earned a bachelor's degree?

0 = No

1 = Yes

Applies to: Respondents who worked on a master's, post master's or doctoral degree at NPSAS and reported not completing a prior degree.

CATI Code: TDEGREN in (7, 6, 10) and N4PRDG not = 1

N4PRCHKB

Prior degree check: master's degree

Have you earned a master's degree?

0 = No

1 = Yes

Applies to: Respondents who worked on a master's, post master's or doctoral degree at NPSAS and reported not completing a prior degree.

CATI Code: (TDEGREN in 7, 6, 10) and N4PRDG not = 1

N4OTDGA–N4OTDGH

Degrees earned

What degrees or certificates have you already earned? (Please check all that apply.)

0 = No

1 = Yes

N4OTDGA—Bachelor's degree

N4OTDGB—Associate's degree

N4OTDGC—Undergraduate certificate/diploma

N4OTDGD—Post-baccalaureate certificate

N4OTDGE—Master's degree

N4OTDGF—Post-master's certificate

N4OTDGG—First professional degree

N4OTDGH—Doctoral degree

Applies to: Respondents who have earned other degrees or certificates.

CATI Code: N4PRDG in (1, -9)

N4PRDGMY

Bachelor's degree completed date

In what month and year was your bachelor's degree awarded?

Applies to: Respondents who have earned a bachelor's degree.

CATI Code: N4OTDGA in (1, -9)

N4EXPEVR

Highest level of education expected

What is the highest level of education you ever expect to complete?

- 0 = No degree/certificate
- 1 = Bachelor's degree
- 2 = Associate's degree
- 3 = Undergraduate certificate or diploma (occupational or technical program)
- 6 = Master's degree
- 7 = Doctoral degree (such as the PhD, EdD, etc.)
- 8 = Post-baccalaureate certificate
- 10 = Post-master's certificate
- 12 = Professional degree (includes the following degree programs: chiropractic, dentistry, law, medicine, optometry, osteopathic medicine, pharmacy, podiatry, divinity/theology, or veterinary medicine)

Applies to: All respondents.

Recode Note: If N4DGGR=7 or N4EXPNP=7 then N4EXPEVR=7.

N4EVRCC

Ever attended community college

Have you ever taken classes at a community college?

- 0 = No
- 1 = Yes

Applies to: All respondents.

Recode Note: If (Y_NPLEVL = 2 and Y_NPCTRL = 1) or (N4LEVL1 = 2 and N4CTRL1 = 1) or (N4LEVL2 = 2 and N4CTRL2 = 1) or (N4LEVL3 = 2 and N4CTRL3 = 1) or (N4LEVL4 = 2 and N4CTRL4 = 1) or (N4LEVL5 = 2 and N4CTRL5 = 1) then N4EVRCC=1.

N4RSNA–N4RSNG

Reason for attending NPSAS

What were your main reasons for enrolling at [NPSAS]?

(Please check all that apply.)

- 0 = No
- 1 = Yes
- N4RSNA**—Learn job skills/prepare for job
- N4RSNB**—Transfer to a 2-year school
- N4RSNC**—Transfer to a 4-year school
- N4RSND**—Transfer but not known where
- N4RSNE**—Personal interest or enrichment

N4RSNF—Complete an undergraduate certificate or diploma

N4RSNG—Complete an associate's degree

Applies to: Respondents enrolled in a less-than-4-year institution and respondents enrolled in a 4-year institution who are not working on a degree.

CATI Code: Y_NPLEVL gt 1 or (Y_NPLEVL = 1 and TDEGREN in (4, 9))

N4EVR4YR

Ever attended 4-year school

Have you ever attended a 4-year school?

- 0 = No
- 1 = Yes

Applies to: All respondents.

Recode Note: If (Y_NPLEVL=1 or N4LEVL1=1 or N4LEVL2=1 or N4LEVL3=1 or N4LEVL4=1 or N4LEVL5=1) then N4EVR4YR=1.

N4GENDR

Gender

So that the rest of this interview may be customized for you, please answer the following questions.

What is your gender?

- 1 = Male
- 2 = Female

Applies to: All respondents.

N4DOBMY

Date of birth

[If N4GENDR = -3 then]

So that the rest of this interview may be customized for you, please answer the following questions.

In what month and year were you born?

[else]

In what month and year were you born?

Applies to: All respondents.

N4LT30

Age: less than 30

What is your age? Are you...

- 1 = Under 24
- 2 = 24-29
- 3 = 30 or over

Applies to: Respondents who did not provide a date of birth.

CATI Code: N4DOBY= -9

TAGE*Age as of January 1, 2004*

Internal Variable

Calculate age as of January 1, 2004 based on N4DOB.

IF N4DOBY=blank and N4LT30=1 THEN

TAGE=1;

IF N4DOBY=blank and N4LT30=2 THEN

TAGE=2;

IF N4DOBY=blank and N4LT30=3 THEN

TAGE=99;

*Applies to: All respondents.***N4MARR***Current marital status*

What is your current marital status?

1 = Single, never married

2 = Married

3 = Separated

4 = Divorced

5 = Widowed

*Applies to: All respondents.***N4DIPL***Type of high school completion*

Which of the following best describes your high school completion?

1 = Received a high school diploma

2 = Passed a GED (General Educational Development) test

3 = Received a high school completion certificate

4 = Attended a foreign high school

5 = Did not complete high school or a high school equivalency program

6 = I was home schooled

Applies to: Undergraduate respondents.

CATI Code: TSTAT=1

N4HSYR*Date completed high school*

When did you complete high school?

[If N4DIPL=4]

When did you last attend high school?

[If N4DIPL=1]

When did you receive your high school diploma?

[If N4DIPL=3]

When did you receive your high school certificate?

[If N4DIPL=2]

When did you receive your GED?

Year

Applies to: Undergraduate respondents.

CATI Code: TSTAT=1

Recode Note: If N4DIPL=5 then N4HSYR=0.

TDELAY*One year delay after high school*

Internal variable

TDELAY calculates the amount of time between first enrollment in postsecondary education and high school completion.

If [N4SCHSTR-N4HSYR]>0 THEN TDELAY=1

else if N4NFST not = 1 THEN

If [N4FSTYY-N4HSYR]>0 THEN TDELAY=1;

else TDELAY=0;

0 = No delay

1 = Delay

*Applies to: All respondents.***N4CMP***Currently completing high school requirements*

Were you completing high school requirements for the entire time you were enrolled at [NPSAS] between July 1, 2003 and June 30, 2004?

0 = No

1 = Yes

Applies to: Undergraduates who completed high school during 2004, or who did not provide a date for high school graduation, or who had not completed high school during the time of the interview.

CATI Code: TSTAT=1 and N4HSYR in (2004, 0, -9)

N4HSST

High school state

In what state did you last attend high school?

- | | |
|-----------------------------|------------------------------|
| 1 = Alabama | 31 = New Jersey |
| 2 = Alaska | 32 = New Mexico |
| 3 = Arizona | 33 = New York |
| 4 = Arkansas | 34 = North Carolina |
| 5 = California | 35 = North Dakota |
| 6 = Colorado | 36 = Ohio |
| 7 = Connecticut | 37 = Oklahoma |
| 8 = Delaware | 38 = Oregon |
| 9 = District of
Columbia | 39 = Pennsylvania |
| 10 = Florida | 40 = Rhode Island |
| 11 = Georgia | 41 = South Carolina |
| 12 = Hawaii | 42 = South Dakota |
| 13 = Idaho | 43 = Tennessee |
| 14 = Illinois | 44 = Texas |
| 15 = Indiana | 45 = Utah |
| 16 = Iowa | 46 = Vermont |
| 17 = Kansas | 47 = Virginia |
| 18 = Kentucky | 48 = Washington |
| 19 = Louisiana | 49 = West Virginia |
| 20 = Maine | 50 = Wisconsin |
| 21 = Maryland | 51 = Wyoming |
| 22 = Massachusetts | 52 = Puerto Rico |
| 23 = Michigan | 54 = American Samoa |
| 24 = Minnesota | 55 = Guam |
| 25 = Mississippi | 56 = Fed State
Micronesia |
| 26 = Missouri | 57 = Marshall Islands |
| 27 = Montana | 58 = Northern Mariana Isl |
| 28 = Nebraska | 59 = Palau |
| 29 = Nevada | 60 = Virgin Islands |
| 30 = New Hampshire | 63 = FOREIGN
COUNTRY |

Applies to: Undergraduate respondents who were not enrolled in a foreign high school.

CATI Code: TSTAT=1 and N4DIPL not = 4

N4HSTYP

Type of high school attended

Was your high school public or private?

- 1 = Public
- 2 = Private
- 3 = Attended a foreign high school

Applies to: Undergraduate respondents who received a high school diploma, completion certificate, attended a foreign high school, or were home schooled.

CATI Code: TSTAT=1 and N4DIPL not = (2, 5, 6)

Recode Note: If N4DIPL=4 then N4HSTYP=3

N4BPSELG

BPS eligibility flag

Coding Flag

Internal Variable

N4BPSELG determines eligibility for inclusion in the BPS cohort.

N4BPSELG=1 if:

An undergraduate freshman or first-year student between July 1, 2003 and June 30, 2004, had not completed any prior degrees, and had not completed at least one postsecondary class toward a degree or formal award since completing high school.

- 0 = Not BPS eligible
- 1 = BPS eligible-NPSAS
- 2 = BPS eligible-not NPSAS

Applies to: All respondents

Section B: Financial Aid

N4TASST, N4RASST, N4GFEL, N4TRNSHP, N4GASST

Graduate teaching assistantship

For the 2003–2004 school year, which of the following did you have?

(Please check all that apply.)

(If you did not receive any of the following types of aid, choose None and then hit continue.)

0 = No

1 = Yes

N4TASST—A graduate teaching assistantship

N4RASST—Graduate research assistantship

N4GFEL—Graduate fellowship

N4TRNSHP—Traineeship

N4GASST—Graduate assistantship

Applies to: Graduate respondents.

CATI Code: TSTAT=2

N4TASSM, N4RASSM, N4GFELM, N4TRNSM, N4GASSM

Teaching assistantship amount

For the 2003–2004 school year, which of the following did you have?

(Please check all that apply.)

(If you did not receive any of the following types of aid, choose None and then hit continue.)

N4TASSM—Graduate teaching assistantship amount

N4RASSM—Graduate research assistantship amount

N4GFELM—Graduate fellowship amount

N4TRNSM—Traineeship amount

N4GASSM—Other graduate assistantship amount

N4NONE

No graduate assistantship

For the 2003–2004 school year, which of the following did you have?

(Please check all that apply.)

(If you did not receive any of the following types of aid, choose None and then hit continue.)

None

0 = No

1 = Yes

Applies to: Graduate respondents.

CATI Code: TSTAT=2

N4TUITN

Tuition paid by assistantship

Did you receive a tuition waiver or any other form of full or partial tuition assistance through your assistantship?

0 = No

1 = Yes

Applies to: Graduate respondents with a teaching or research assistantship.

CATI Code: TSTAT=2 and N4TASST in (1,-9) or N4RASST in (1,-9)

N4HINS

Health insurance with assistantship

As part of your [teaching assistantship/research assistantship], did you receive health insurance?

0 = No

1 = Yes

Applies to: Graduate respondents with a teaching or research assistantship.

CATI Code: TSTAT=2 and N4TASST in (1,-9) or N4RASST in (1,-9)

N4CLSHRS, N4DISHRS, N4LABHRS, N4GRAHRS, N4MSGHRS, N4OFFHRS

TA duties

Which of the following activities did you perform as a teaching assistant during the 2003–2004 school year? (Please check all that apply.)

[If TCURENRL=1]

0 = No

1 = Yes

N4CLSHRS—Assumed teaching responsibility for one or more courses

N4DISHRS—Led discussion sections for faculty-taught courses

N4LABHRS—Supervised lab sections for faculty-taught courses

N4GRAHRS—Assisted faculty with grading or other instruction-related activities

N4MSGHRS—Assisted faculty with answering student e-mail messages

N4OFFHRS—Held office hours

Applies to: Graduate respondents with a teaching assistantship.

CATI Code: TSTAT=2 and N4TASST in (1,-9)

N4WKST

School job: work study

[If TCURENRL=1]

During the 2003–2004 school year, have you participated in either work study or a paid assistantship? (Please check all that apply.)

[else]

During the 2003–2004 school year, did you participate in either work study or a paid assistantship? (Please check all that apply.)

Work-study

0 = No

1 = Yes

Applies to: Undergraduate respondents.

CATI Code: TSTAT=1

N4ASST

School job: assistantship

[If TCURENRL=1]

During the 2003–2004 school year, have you participated in either work study or a paid assistantship? (Please check all that apply.)

[else]

During the 2003–2004 school year, did you participate in either work study or a paid assistantship? (Please check all that apply.)

Assistantship

0 = No

1 = Yes

Applies to: Undergraduate respondents.

CATI Code: TSTAT=1

N4JOBNON

School job: none

[If TCURENRL=1]

During the 2003–2004 school year, have you participated in either work study or a paid assistantship? (Please check all that apply.)

[else]

During the 2003–2004 school year, did you participate in either work study or a paid assistantship? (Please check all that apply.)

None of the above

0 = No

1 = Yes

Applies to: Undergraduate respondents.

CATI Code: TSTAT=1

N4WSMAJR

Work study: related to major

Would you say your [work study job/assistantship] was related to your major or field of study at [NPSAS]?

0 = No

1 = Yes

Applies to: Undergraduate respondents who had a work study job or assistantship.

CATI Code: TSTAT=1 and (N4WKST in (1,-9) or N4ASST in (1,-9))

Recode Note: If ((N4WKST in (1,-9) or N4ASST in (1,-9)) and N4DBLMAJ in (0, 3) then

N4WSMAJR=0.

N4WSONOF

Work study: on/off campus

Was your [work study job/assistantship] located primarily on or off campus?

1 = On campus

2 = Off campus

3 = Both on and off campus

Applies to: Undergraduate respondents who had a work study job or an assistantship.

CATI code: TSTAT=1 and (N4WKST in (1,-9) or N4ASST in (1,-9))

N4WSEMP

Work study: for school

Was your work study job for [NPSAS] or for another institution or organization?

1 = [NPSAS]

2 = Another institution or organization

Applies to: Undergraduate respondents who had a work study job or an assistantship.

CATI code: TSTAT=1 and (N4WKST in (1,-9) or N4ASST in (1,-9))

N4WSTDY

Work-study: community service

Was your work study job part of a community service project?

0 = No

1 = Yes

Applies to: Undergraduate respondent who had a work study job.

CATI Code: TSTAT=1 and N4WKST in (1,-9)

N4LTRCY

Work study: tutoring

Was your work study job involved with literacy education or tutoring?

0 = No

1 = Yes

Applies to: Undergraduate respondents who had a work study job.

CATI Code: TSTAT=1 and N4WKST in (1,-9)

N4WAAMT*Work study: earnings*

How much did you earn from your [assistantship/fellowship/traineeship/work study job] while you were enrolled during the 2003–2004 school year?

Applies to: All respondents.

Recode note: If TSTAT=1 and (n4wkst=0 and n4asst=0) then N4WAAMT=0.

If TSTAT=2 and (N4TASST=0 and N4RASST=0 and N4TRNSHP=0 and N4GASST=0) then N4WAAMT=0.

N4WAERNT*Work study: time period for earnings*

How much did you earn from your [assistantship/fellowship/traineeship/work study job] while you were enrolled during the 2003–2004 school year?

Per

- 1 = Year
- 2 = Term/semester
- 3 = Month
- 4 = Week

Applies to: All respondents.

Recode note: If TSTAT=1 and (n4WKST=0 and n4ASST=0) then N4WAERNT=1.

If TSTAT=2 and (N4TASST=0 and N4RASST=0 and N4TRNSHP=0 and N4GASST=0) then N4WAERNT=1.

N4WAERNS*Work study: number of terms/months/weeks/hours worked*

Between July 2003 and June 2004, how many [terms/months/weeks] will you have worked in your [assistantship/fellowship/traineeship/work study job]?

Applies to: All respondents.

Recode note: If TSTAT=1 and (N4WKST=0 and N4ASST=0) then N4WAERNS=0.

If TSTAT=2 and (N4TASSM gt 0 or N4RASSM gt 0 or N4TRNSM gt 0 or N4GASSM gt 0) then N4WAERNS=1.

N4WTOTEN*Work study: total earnings*

Derived variable

Total earnings for school jobs

N4WAAMT=work-study earnings

N4WAERNT=work-study time period for earnings

N4WAERNS=Number of terms/months/weeks/hrs worked

N4WTOTEN - combine and convert into amount per year N4WAAMT and N4WAERNT

if N4WAERNT=1 then

N4WTOTEN = N4WAAMT;

else if N4WAERNT gt 1 then do;

if N4WAAMT gt 0 and N4WAERNS gt 0 then

N4WTOTEN = N4WAAMT * N4WAERNS;

else if N4WAAMT in (-9,-6) then

N4WTOTEN = N4WAAMT;

else if N4WAERNS in (-9,-6) then

N4WTOTEN = N4WAERNS;

end;

else if N4WAERNT in (-3,-4,-9,-7,-6) then

N4WTOTEN = N4WAERNT;

Applies to: All respondents.

Recode note: If TSTAT=1 and (N4WKST=0 and N4ASST=0) then N4WTOTEN=0.

If TSTAT=2 and (N4TASST=0 and N4RASST=0 and N4TRNSHP=0 and N4GASST=0) then N4WTOTEN=0.

N4WAHRS*Work study: hours worked per week*

During the 2003–2004 school year, how many hours did you work per week in your [assistantship/fellowship/traineeship/work study job]?

Applies to: All respondents.

Recode note: If TSTAT=1 and (N4WKST=0 and N4ASST=0) then N4WAHRS=0.

If TSTAT=2 and (N4TASST=0 and N4RASST=0 and N4TRNSHP=0 and N4GASST=0) then N4WAHRS=0.

N4WAWEEK*Work study: weeks worked*

For your [assistantship/fellowship/traineeship/work study job], would you say you worked during all the weeks you were enrolled, most of them, half of them, or less than half?

0 = 0

1 = All

2 = Most

3 = Half

4 = Less than half

Applies to: Respondents except those who reported the number of weeks worked.

CATI Code: N4WAERNT not =4 and N4WAERNS gt 0

Recode note: If TSTAT=1 and (N4WKST=0 and N4ASST=0) then N4WAWEEK=0.

If TSTAT=2 and (N4TASST=0 and N4RASST=0 and N4TRNSHP=0 and N4GASST=0) then N4WAWEEK=0.

N4RCVAID

Received financial aid

[If N4WKST = 1 or N4ASST = 1 or N4TASST = 1 or N4RASST = 1 or N4GASST = 1]

Besides your [work study/assistantship] did you receive any other financial aid - such as grants, loans, or scholarships during the 2003–2004 school year? [else]

Did you receive financial aid - such as grants, loans, or scholarships during the 2003–2004 school year?

- 0 = No
- 1 = Yes

Applies to: All respondents.

N4APPAID

Applied for financial aid

Did you apply for financial aid for the 2003–2004 school year?

- 0 = No
- 1 = Yes

Applies to: All respondents.

Recode Note: If N4RCVAID=1 then N4APPAID=1.

N4FEDLN

Received federal loans

Did you receive a federal Stafford student loan for the 2003–2004 school year?

- 0 = No
- 1 = Yes

Applies to: Respondents who received financial aid.

CATI Code: N4RCVAID in (1,-9)

N4PELL

Received Pell grant

Did you receive a Pell grant for the 2003–2004 school year?

- 0 = No
- 1 = Yes

Applies to: Undergraduate respondents who received financial aid.

CATI Code: TSTAT=1 and N4RCVAID in (1,-9)

N4STGRT, N4INGRT

Received state/school grant/scholarship

Did you receive any scholarships or grants from your school or from a state grant program during the 2003–2004 school year?

- 0 = No
- 1 = Yes

N4STGRT—State grant or scholarship

N4INGRT—College grant or scholarship

Applies to: Respondents who received financial aid.

CATI Code: N4RCVAID in (1,-9)

N4STAMT, N4INAMT

State/school grant/scholarship amount

Did you receive any scholarships or grants from your school or from a state grant program during the 2003–2004 school year?

N4STAMT—State grant/scholarship amount

N4INAMT—School grant/scholarship amount

Applies to: Respondents who received financial aid.

CATI Code: N4RCVAID in (1,-9)

N4STNONE

Did not receive state or college aid

Did you receive any scholarships or grants from your school or from a state grant program during the 2003–2004 school year?

Did not receive state or college aid

- 0 = No
- 1 = Yes

Applies to: Respondents who received financial aid.

CATI Code: N4RCVAID in (1,-9)

N4ADNEMP, N4ADNPRV, N4ADNVET, N4ADNPMP

Did you receive any financial aid during the 2003–2004 school year that did not come from the financial aid office?

Did you receive...?

- 0 = No
- 1 = Yes

N4ADNEMP—Tuition reimbursement from your employer

N4ADNPRV—Grants or scholarships from a private organization

N4ADNVET—Veteran’s or DoD (Department of Defense) benefits

N4ADNPMP—Aid from your parent’s employer

Applies to: All respondents.

N4AMNEMP, N4AMNPRV, N4AMNVET, N4AMNPMP

Did you receive any financial aid during the 2003–2004 school year that did not come from the financial aid office?

Did you receive...?

N4AMNEMP—Amount of employer aid

N4AMNPRV—Amount of private organization aid

N4AMNVET—Amount of veteran’s benefits

N4AMNPMP—Amount of parent’s employer aid

Applies to: Respondents who received employer aid.

CATI code:

N4ADNON*No other aid*

Did you receive any financial aid during the 2003–2004 school year that did not come from the financial aid office?

Did you receive...?

None

0 = Had other aid

1 = No other aid

Applies to: All respondents.

N4PRVLN*Receive alternative loan*

Did you receive any type of commercial or private loan (such as TERI, Excel, or Access loans) from a bank or private organization for your enrollment during the 2003–2004 school year?

0 = No

1 = Yes

Applies to: All respondents.

N4PRVAMT*Amount of alternative loan*

How much did you borrow in commercial or private loans during the 2003–2004 school year?

Applies to: All respondents.

Recode Note: If N4PRVLN=0 then N4PRVAMT=0.

N4SCHRES*Residence while enrolled*

While you were enrolled during the 2003–2004 school year, did you live on campus, with your parents or guardians, or some place else?

(If you lived in more than one residence, choose the place where you lived for the longest period of time.)

1 = On-campus

2 = With parents or guardians

3 = Some place else (off campus)

Applies to: Undergraduate respondents.

CATI Code: TSTAT=1

N4PARPA–N4PARF*Help from parents*

Which of the following do your parents/guardians help you pay?

(Please check all that apply.)

0 = No

1 = Yes

N4PARPA—Tuition and fees

N4PARPB—Other educational expenses such as books and supplies

N4PARPC—Housing such as rent or dorm cost and utilities

N4PARPD—Other living expenses such as food and transportation

N4PARPE—None of the above - no financial assistance from parents

N4PARPF—Parents deceased

Applies to: Respondents under 30.

CATI Code: TAGE It 30

N4RNTAMT*Monthly mortgage/rent amount*

[If TCURENRL=1]

Since you have been enrolled during the 2003–2004 school year, how much (on average) have you paid in rent or mortgage payments each month?

[else]

While you were enrolled during the 2003–2004 school year, how much was your monthly rent or mortgage payment?

Applies to: Respondents under 30 who did not live with their parents/guardians during the 2003–2004 school year.

CATI Code: TAGE It 30 and N4SCHRES in (3, -9)

N4OTHRES*Lived with parents while not enrolled*

Did you live with your parents/guardians when you were not in school during the 2003–2004 school year?

0 = No

1 = Yes

Applies to: Undergraduate respondents under 30 except those who indicated their parents are deceased.

CATI Code: TSTAT=1 and TAGE It 30 and N4PARPF in (1, -9)

N4OUTST*Out-of-state tuition/fees*

[If TCURENRL = 1 then]

At [NPSAS], are you charged for out-of-state or out-of-district tuition or fees?

[else]

At [NPSAS], were you charged for out-of-state or out-of-district tuition or fees?

0 = No

1 = Yes

Applies to: Respondents who attended a public institution.

CATI Code: Y_NPCTRL=1

N4ALWNC

Received allowance

Did you receive a regular allowance from your parents/guardians while you were enrolled at [NPSAS] during the 2003–2004 school year?

- 0 = No
- 1 = Yes

Applies to: Undergraduate respondents under 30 except those who did not receive parental support or indicated their parents are deceased.

CATI Code: TSTAT=1 and TAGE lt 30 and N4PARPE not =1 and N4PARPF not =1.

N4ALWN2

Allowance amount

[If TCURENRL=1]

How much (on average) is your was your allowance? [else]

How much (on average) was your allowance?

Applies to: Undergraduate respondents under 30 except those who did not receive parental support or whose parents were deceased.

CATI Code: TSTAT=1 and TAGE lt 30 and N4PARPE not =1 and N4PARPF not =1.

Recode Note: If N4ALWNC=0 then N4ALWN2=0.

N4ALWN3

Time period for allowance

[If TCURENRL=1]

How much (on average) is your was your allowance? [else]

How much (on average) was your was your allowance?

- 1 = Week
- 2 = Month
- 3 = Semester/term
- 4 = Year

Applies to: Undergraduate respondents under 30 who received an allowance.

CATI Code: TSTAT=1 and TAGE lt 30 and N4ALWNC in (1,-9).

N4DEP03

Claimed as a dependent

Did anyone claim you as a dependent on their 2003 taxes?

- 0 = No
- 1 = Yes, parents/guardians
- 2 = Yes, another individual
- 3 = Don't know

Applies to: Respondents under 30.

CATI Code: TAGE lt 30

N4HOPE, N4DEDUCT, N4LFLNG

Claim Federal Hope scholarship

[If compdate < April 15, 2004 then]

[if TAGE >= 30 then]

When you file your 2003 taxes, will you claim any of the following federal education tax benefits?

[else if TAGE < 30 and (N4DEP03 = 1 or N4DEP03 = 3) then]

Will your parents/guardians claim any of the following federal education tax benefits when they file their 2003 taxes?

[else if TAGE < 30 and N4DEP03 = 2 then]

Earlier you said that you were claimed as a dependent by another individual. Will that person claim any of the following federal education tax benefits when they file their 2003 taxes?

[else if TAGE < 30 and (N4DEP03 = 0 or N4DEP03 = -9) then]

When you file your 2003 taxes, will you claim any of the following federal education tax benefits?

[If compdate > April 15, 2004 then]

[if TAGE >= 30 then]

When you filed your 2003 taxes, did you claim any of the following federal education tax benefits?

[else if TAGE < 30 and (N4DEP03 = 1 or N4DEP03 = 3) then]

Did your parents/guardians claim any of the following federal education tax benefits when they filed their 2003 taxes?

[else if TAGE < 30 and N4DEP03 = 2 then]

Earlier you said that you were claimed as a dependent by another individual. Did that person claim any of the following federal education tax benefits when they filed their 2003 taxes?

[else if TAGE < 30 and (N4DEP03 = 0 or N4DEP03 = -9) then]

When you filed your 2003 taxes, did you claim any of the following federal education tax benefits?

- 0 = No
- 1 = Yes
- 2 = Don't know

N4HOPE—Federal Hope scholarship tax credit

N4DEDUCT—Tax deduction for tuition

N4LFLNG—Lifetime learning tax credit

Applies to: All respondents.

N4UGLN

Amount borrowed for undergraduate loans

[If TSTAT=1]

How much have you already borrowed in student loans for your undergraduate education? (Please do not include any money borrowed from family or friends.)

[else]

How much did you borrow in student loans for your undergraduate education? (Please do not include any money borrowed from family or friends.)

Applies to: All respondents.

Recode Note: IF N4BPSELG in (1,2) and N4FEDLN=0 and N4PRVLN=0 then N4UGLN=0.

N4UGOWE

Amount owed for undergrad education

How much of that amount do you still owe?

Applies to: All respondents.

Recode Note: If N4UGLN=0 then N4UGOWE=0.

N4GRLN

Amount borrowed for graduate loan

How much did you borrow in student loans for your graduate education? (Please do not include any money borrowed from family or friends).

Applies to: Graduate respondents.

CATI Code: TSTAT=2

N4GROWE

Amount owed for graduate loan

How much of that amount do you still owe?

Applies to: Graduate respondents.

CATI Code: TSTAT=2

Recode Note: If N4GRLN=0 then N4GROWE=0.

Section C: Employment and Finances

N4NUMJOB

Number of jobs during NPSAS year

[If (N4TAASST = 0 and N4RASST = 0 and N4GASST = 0 and N4GFEL = 0 and N4TRNSHP = 0) then]

How many jobs for pay did you have while you were enrolled?

[else]

Earlier you told us about your [school job] at [NPSAS].

The next questions are about any other jobs you had while you were enrolled *during the 2003–2004 school year.*

How many other jobs for pay did you have while you were enrolled at [NPSAS] during the 2003–2004 school year?

Applies to: All respondents.

N4ONOFF

Job on or off campus

Was your job located primarily on or off campus?

(If you had more than one job, please refer to the one at which you worked the most hours when answering the next few questions.)

- 1 = On campus
- 2 = Off campus
- 3 = Both on and off campus

Applies to: Respondents who worked while enrolled.

CATI Code: N4NUMJOB in (gt 0, -9)

N4EMPTYP

Type of employer

In your job, did you work for...

- 1 = [NPSAS]
- 2 = A for-profit company
- 3 = A nonprofit organization
- 4 = A local, state, or federal government
- 5 = The military (including civilian employees of the military)
- 6 = Self-employed

Applies to: Respondents who worked while enrolled.

CATI Code: N4NUMJOB in (gt 0, -9)

N4RELMAJ

Job related to major

Would you say your job was related to your major or field of study at [NPSAS]?

- 0 = No
- 1 = Yes

Applies to: Respondents working on a degree, who have declared a major, and who worked while enrolled.

CATI Code: TDEGREN not = (4, 9) and N4DBLMAJ in (1, 2, -9) and N4NUMJOB in (gt 0, -9)

N4RELCRS

Job related to coursework

Would you say your job was related to your coursework at [NPSAS]?

- 0 = No
- 1 = Yes

Applies to: Respondents who worked while enrolled in classes but either had not declared a major or who were not enrolled in a degree program.

CATI Code: N4NUMJOB in (gt 0, -9) and N4DBLMAJ in (0, 3)

N4PREMP

Had job prior to enrollment at NPSAS

Did you have this job before you enrolled at [NPSAS]?

- 0 = No
- 1 = Yes

Applies to: Respondents who worked while enrolled.

CATI Code: N4NUMJOB in (gt 0, -9)

N4ERNAMT

Amount earned during school year

[Not including your [work study job/assistantship/fellowship/traineeship], how/How] much did you earn from [your job/all your jobs] you held while you were enrolled during the 2003–2004 school year? Please exclude summer earnings if you were not enrolled during the summer.

Applies to: All respondents.

Recode Note: If N4NUMJOB = 0 then N4ERNAMT=0.

N4EARNT

Time frame for school year earnings

[Not including your [work study job/assistantship/fellowship/traineeship], how/How] much did you earn from [your job/all your jobs] you held while you were enrolled during the 2003–2004 school year? Please exclude summer earnings if you were not enrolled during the summer.

- 1 = For the entire school year
- 2 = Per term/semester
- 3 = Per month
- 4 = Per week

Applies to: Respondents who worked while enrolled.

CATI Code: N4NUMJOB in (gt 0, -9)

N4EARN\$

Time frame for school year earnings other than yearly
 [If TCURENRL = 0 and (N4TAASST = 1 or N4RASST = 1 or N4GASST = 1 or N4GFEL = 1 or N4TRNSHP = 1) then]

Not including your work study/ assistantship/fellowship, how many terms/months/weeks did you work while you were enrolled during the 2003–2004 school year?

[If TCURENRL = 1 and (N4TAASST = 1 or N4RASST = 1 or N4GASST = 1 or N4GFEL = 1 or N4TRNSHP = 1) then]

Not including your work study/ assistantship/fellowship, how many terms/months/weeks will you have worked while you were enrolled during the 2003–2004 school year?

[If TCURENRL = 0 and (N4TAASST = 0 and N4RASST = 0 and N4GASST = 0 and N4GFEL = 0 and N4TRNSHP = 0) then]

How many terms/months/weeks did you work while you were enrolled during the 2003–2004 school year?

[If TCURENRL = 1 and (N4TAASST = 0 and N4RASST = 0 and N4GASST = 0 and N4GFEL = 0 and N4TRNSHP = 0) then]

How many terms/months/weeks will you have worked while you were enrolled during the 2003–2004 school year?

Applies to: All respondents.

Recode note: If N4NUMJOB = 0 then N4EARN\$=0.
 If N4EARNT = 1 then N4EARN\$=1.

N4TOTERN

Total amount earned during the school year

Derived variable

This is an internally derived variable of total amount earned during the school year. This variable was calculated based on earnings from other employment and the time frame associated with these reported earnings.

N4ERNAMT=Amount earned during school year

N4EARNT=Time frame for school year earnings

N4EARN\$=Time frame for school year earnings other than yearly

N4TOTERN=combine and convert into amount per year

N4ERNAMT and N4EARNT

If N4EARNT eq 1 then

N4TOTERN = N4ERNAMT;

else if N4EARNT gt 1 then do;

if N4ERNAMT gt 0 and N4EARN\$ gt 0 then

N4TOTERN = N4ERNAMT * N4EARN\$;

else if N4ERNAMT in (-9,-6,-7) then

N4TOTERN = N4ERNAMT;

else if N4EARN\$ in (-9,-6,-7) then

N4TOTERN = N4EARN\$;

end;

else if N4EARNT in (-3,-4,-9,-7,-6,-1) then

N4TOTERN = N4EARNT;

Applies to: All respondents.

Recode note: If N4NUMJOB = 0 then N4TOTERN=0.

N4HOURS

Hours worked weekly during the school year

[Not including your [work study job/assistantship/ fellowship/traineeship, how/How many hours did you work per week (on average) while you were enrolled during the 2003–2004 school year?

Please exclude summer hours if you were not enrolled during the summer.

Applies to: All respondents.

Recode note: If N4NUMJOB=0 then N4HOURS=0.

N4WKSWK

Weeks worked while enrolled

Would you say you worked during all the weeks you were enrolled, most of them, half of them, or less than half?

1 = All

2 = Most

3 = Half

4 = Less than half

Applies to: Respondents who worked while enrolled and did not provide weekly earnings, or respondents who worked while enrolled and provided a timeframe for weekly earnings less than or equal to 0 or greater than 52.

CATI Code: (N4NUMJOB in (gt 0, -9) and N4EARNT not = 4) or (N4NUMJOB in (gt 0, -9) and N4EARNT=4 and (N4EARN\$ in (0, -9) or N4EARN\$ gt 52)

N4ENRWRK

Working student/employee taking classes

While you were enrolled at [NPSAS] and working, would you say you were primarily...

1 = A student working to meet expenses

2 = An employee who decided to enroll in school

Applies to: Respondents who worked while enrolled.

CATI Code: N4NUMJOB in (gt 0, -9)

N4WRKRSN

Main reason for working

What was your main reason for working while you were enrolled? Was it to...

1 = Earn spending money

2 = Pay tuition, fees, or living expenses or

3 = Gain job experience

4 = Other

Applies to: Respondents who were primarily students who worked.

CATI Code: N4NUMJOB in (gt 0, -9) and N4ENRWRK in (1, -9)

N4EXPWRK

Parents expect you to have a job

[If TCURENRL=1]

Do your parents/guardians expect you to have a job for pay while you are enrolled?

[else]

Did your parents/guardians expect you to have a job for pay while you were enrolled during the 2003–2004 school year?

0 = No

1 = Yes

Applies to: Respondents who were primarily students who worked while enrolled and who were undergraduates under age 30 with parents/guardians.

CATI Code: N4NUMJOB in (gt 0, -9) and N4ENRWRK in (1, -9) and TSTAT=1 and TAGE lt 30 and N4PARPF not =1

N4AFFORD

Afford school without working

Could you have afforded to attend school if you had not worked?

0 = No

1 = Yes

Applies to: Respondents who were primarily students who worked.

CATI Code: N4NUMJOB in (gt 0, -9) and N4ENRWRK in (1, -9)

N4HLPCLS, N4HLPCAR, N4RSTRCT, N4LIMCLS, N4LIMSCH, N4LIMLIB, N4JOBSCX

Effect of job

Did having a job while you were going to school...

(Please check all that apply.)

0 = No

1 = Yes

N4HLPCLS—Help you with class work

N4HLPCAR—Help you with career preparation

N4RSTRCT—Restrict your choice of classes

N4LIMCLS—Limit the number of classes you could take

N4LIMSCH—Limit the class schedule you could have

N4LIMLIB—Limit your access to campus facilities or services

N4JOBSCX—None of the above

Applies to: Respondents who were primarily students who worked.

CATI Code: N4NUMJOB in (gt 0, -9) and N4ENRWRK in (1, -9)

N4EFFGRD

Effect of job on grades

Would you say that working while you were going to school had a positive effect, a negative effect, or no effect on the grades you earned?

1 = Positive effect

2 = Negative effect

3 = No effect

Applies to: Respondents who were primarily students who worked.

CATI Code: N4NUMJOB in (gt 0, -9) and N4ENRWRK in (1, -9)

N4CLSOUT, N4MODSCH, N4TKDIS, N4NOCOMB

Combine school and work

How did you combine school and work?

(Please check all that apply.)

0 = No

1 = Yes

N4CLSOUT—Took classes outside of work time

N4MODSCH—Modified work schedule

N4TKDIS—Took distance education courses

N4NOCOMB—None of the above

Applies to: Employees who decided to enroll in school.

CATI Code: N4NUMJOB in (gt 0, -9) and N4ENRWRK=2

N4SUMMR

Work during summer 2003

Did you work for pay during the summer of 2003?

0 = No

1 = Yes

Applies to: Undergraduate respondents under 30.

CATI Code: TAGE lt 30 and TSTAT=1

N4SMRSAV

Amount saved from summer earnings

In dollars, about how much of your summer earnings would you estimate you saved for the 2003–2004 school year?

Applies to: Undergraduate respondents under 30 who worked during the Summer of 2003.

CATI Code: TAGE lt 30 and TSTAT=1 and N4SUMMR in (1, -9)

N4INCOM*Earnings in 2003*

[If N4WAAMT > 0 or N4TASSM > 0 or N4RASSM > 0 or N4GFELM > 0 or N4TRNSM > 0 or N4GASSM > 0 then]

Earlier, you told us about the money you earned while you were enrolled. Now we need to find out about your income for the calendar year.

What was your income from all sources (including income from work, investment income, alimony, etc.) prior to taxes and deductions in 2003? [IF N4MARR=(2-5)(Please exclude spouse's income.)]

[else]

What was your income from all sources (including income from work, investment income, alimony, etc.) prior to taxes and deductions in calendar year 2003? [IF N4MARR=(2-5)(Please exclude spouse's income.)]

- 1 = No income
- 2 = Less than \$1,000
- 3 = \$1,000-\$2,499
- 4 = \$2,500-\$4,999
- 5 = \$5,000-\$9,999
- 6 = \$10,000-\$14,999
- 7 = \$15,000-\$19,999
- 8 = \$20,000-\$29,999
- 9 = \$30,000-\$49,999
- 10 = \$50,000 and above

Applies to: All respondents.

N4INCSP*Spouse's earnings in 2003*

How much would you estimate your spouse earned from all sources prior to taxes and deductions in 2003?

- 1 = No income
- 2 = Less than \$1,000
- 3 = \$1,000-\$2,499
- 4 = \$2,500-\$4,999
- 5 = \$5,000-\$9,999
- 6 = \$10,000-\$14,999
- 7 = \$15,000-\$19,999
- 8 = \$20,000-\$29,999
- 9 = \$30,000-\$49,999
- 10 = \$50,000 and above

Applies to: Married respondents.

CATI Code: N4MARR in (2, -9)

N4UNTAX*Received untaxed benefits in 2003*

[If N4MARR = 2 then]

Since July 1, 2003, have you or your spouse received any untaxed income or benefits, such as TANF (AFDC), Social Security, worker's compensation, disability payments, or child support?

[else]

Since July 1, 2003, have you received any untaxed income or benefits, such as TANF (AFDC), Social Security, worker's compensation, disability payments, or child support?

0 = No

1 = Yes

Applies to: All respondents.

**N4TANF, N4SOCSEC, N4WRKCMP,
N4DISAB, N4STMPs, N4CHILD,
N4TAXTYX**

Type of untaxed benefits

Since July 2003, which of the following did you receive? (Please check all that apply.)

0 = No

1 = Yes

N4TANF—TANF (AFDC)

N4SOCSEC—Social Security benefits

N4WRKCMP—Worker's compensation

N4DISAB—Disability payments

N4STMPs—Food stamps

N4CHILD—Child support

N4TAXTYX—None of the above

Applies to: Respondents who received untaxed benefits.

CATI Code: N4UNTAX in (1, -9)

N4HOME*Own home*

Do you own your home or pay a mortgage on a home?

0 = No

1 = Yes

Applies to: Respondents age 24 and over who lived off campus.

CATI Code: TAGE in (ge 24, -9) and N4SCHRES in (3, -9, -3, -8)

N4INVT*Own investments, business or farm over \$10,000*

Do you own a business, farm, or have other investments worth more than \$10,000 combined?

0 = No

1 = Yes

Applies to: Respondents 24 or older.

CATI Code: TAGE in (gt 24, -9)

N4PARNC

Parents income in 2003

What was your parents'/guardians' income in 2003?

- 1 = Under \$30,000
- 2 = \$30,000 to \$59,999
- 3 = \$60,000 to \$89,999
- 4 = \$90,000 and above
- 5 = Don't know

Applies to: Undergraduate respondents who were under 30 and have parents/guardians.

CATI Code: TSTAT=1 and TAGE lt 30 and N4PARPF in (0, -9)

N4PARHOM

Parents own home

Do your parents/guardians own their home or pay a mortgage on a home?

- 0 = No
- 1 = Yes

Applies to: Undergraduate respondents who were under 30 and have parents/guardians.

CATI Code: TSTAT=1 and TAGE lt 30 and N4PARPF in (0, -9)

N4PARNV

Parents own other real estate

Do your parents/guardians own a business, farm, or have other investments worth more than \$10,000 combined?

- 0 = No
- 1 = Yes

Applies to: Undergraduate respondents who were under 30 and have parents/guardians.

CATI Code: TSTAT=1 and TAGE lt 30 and N4PARPF in (0, -9)

N4NUMCRD

Number of credit cards in own name

How many credit cards do you have in your own name that are billed to you?

Applies to: Undergraduate respondents who were under 30.

CATI Code: TSTAT=1 and TAGE lt 30

N4CRDTUI

Use credit to pay for tuition

[If N4NUMCRD=1 then]

Did you use your credit card to pay any portion of your 2003–2004 tuition?

[else]

Did you use your credit cards to pay any portion of your 2003–2004 tuition?

0 = No

1 = Yes

Applies to: Undergraduate respondents under 30 with credit cards.

CATI Code: TSTAT=1 and TAGE lt 30 and N4NUMCRD in (gt 0, -9)

N4PAYOFF

Payoff or carry credit balance

[If N4NUMCRD=1]

Do you usually pay off your credit card balance each month, or carry the balance over from month to month? [else]

Do you usually pay off your credit card balances each month, or carry balances over from month to month?

- 1 = Payoff balances
- 2 = Carry balances

Applies to: Undergraduate respondents under 30 with credit cards.

CATI Code: TSTAT=1 and TAGE lt 30 and N4NUMCRD in (gt 0, -9)

N4CRDBAL

Balance due on all credit cards

What was the balance on your credit card according to your last statement?

Applies to: Undergraduate respondents under 30 with credit cards.

CATI Code: TSTAT=1 and TAGE lt 30 and N4NUMCRD gt 0

Recode note: If N4PAYOFF = 1 then N4CRDBAL in (0, -9)

N4CRDPAR

Parents help pay credit bills

[If N4NUMCRD=1]

Do your parents/guardians help you pay your credit card bill?

[else]

Do your parents/guardians help you pay your credit card bills?

- 0 = No
- 1 = Yes

Applies to: Undergraduate respondents under 30 who have parents/guardians and who have credit cards.

CATI Code: TSTAT=1 and TAGE lt 30 and N4PARPF in (0, -9) and N4NUMCRD in (gt 0, -9)

Section D: Education Experiences

N4REMEVR*Ever taken remedial courses*

Since you completed high school, have you taken remedial or developmental courses to improve your basic skills, such as in mathematics, reading, writing, or study skills?

0 = No

1 = Yes

Applies to: Undergraduate respondents.

CATI Code: TSTAT=1

N4REMSY*Took remedial courses this school year*

Did you take any remedial or developmental courses during the 2003–2004 school year?

0 = No

1 = Yes

Applies to: Undergraduate respondents in their first or second year who have taken remedial classes at some point.

CATI Code: TSTAT=1 and N4REMEVR in (1, -9) and N4UGYR in (1, 2, -3)

N4READ, N4WRITE, N4MATH, N4STUDY, N4ENGLIS*Took remedial course*

In what area(s) did you take remedial or developmental courses?

(Please check all that apply.)

0 = No

1 = Yes

N4READ—Reading**N4WRITE**—Writing**N4MATH**—Mathematics**N4STUDY**—Study skills**N4ENGLIS**—English language skills*Applies to: Undergraduate respondents in their first or second year who have taken remedial classes in the 2003–2004 school year.*

CATI Code: TSTAT=1 and N4REMEVR in (1, -9) and N4UGYR in 2 and N4REMSY in (1,-9)

N4ACTSAT*Took SAT or ACT college exams*

Did you take the SAT or ACT college entrance exam?

0 = No

1 = Yes, SAT

2 = Yes, ACT

3 = Yes, both the SAT and ACT

Applies to: BPS eligible respondents.

CATI Code: N4BPSELG in (1,2).

N4FRQGRA, N4FRQLEC, N4FRQESS, N4FRQWRI*Undergraduate experiences*

During the 2003–2004 school year at [NPSAS], please indicate whether you did the following never, sometimes or often?

Attend classes taught by graduate students

1 = Never

2 = Sometimes

3 = Often

N4FRQGRA—Attend classes taught by graduate students**N4FRQLEC**—Attend large lecture classes**N4FRQESS**—Write essay answers as part of exams**N4FRQWRI**—Write papers for courses*Applies to: BPS eligible respondents who were enrolled in a 4-year institution.*

CATI Code: N4BPSELG in (1,2) and Y_NPLEVL=1.

N4ADVSR, N4ACDMTG, N4SOCIAL, N4STDYGP, N4CLUBS, N4ARTS, N4VARSP*Undergraduate experiences - 2*

During the 2003–2004 school year at [NPSAS], please indicate whether you did the following never, sometimes or often.

1 = Never

2 = Sometimes

3 = Often

N4ADVSR—Talk with faculty about academic matters, outside of class time (including e-mail)**N4ACDMTG**—Meet with advisor concerning academic plans**N4SOCIAL**—Have informal or social contacts with faculty members outside of classrooms and offices**N4STDYGP**—Attend study groups outside of the classroom**N4CLUBS**—Participate in school clubs**N4ARTS**—Attend music, choir, drama, or other fine arts activities**N4VARSP**—Participate in varsity, intramural, or club sports*Applies to: BPS eligible respondents except those who attended a less-than-2-year institution.*

CATI Code: N4BPSELG in (1,2) and Y_NPLEVL not = 3.

N4DSTED

Distance education: took courses

During the 2003–2004 school year, did you take any courses for credit that were distance education courses? (Distance education courses are primarily delivered off campus using live, interactive TV or audio, pre-recorded TV or video, CD-ROM, or a computer-based system such as the Internet. Distance education does not include correspondence courses.)

- 0 = No
- 1 = Yes

Applies to: All respondents.

N4ENTPGM

Distance education: entire program

[If TCURENRL=1]

Is your entire program taught through distance education?

[else]

Was your entire program taught through distance education?

- 0 = No
- 1 = Yes

Applies to: Respondents who took distance education course(s) in the 2003–2004 school year.

CATI Code: N4DSTED in (1,-9)

N4NMDSER

Distance education: number of courses

During the 2003–2004 school year, how many distance education courses did you take?

Applies to: All respondents.

Recode Note: If N4DSTED=0 then N4NMDSER=0.

N4DSLOC

Distance education: location of course(s)

Was this course/Were these courses offered through [NPSAS], somewhere else, or both?

- 1 = NPSAS
- 2 = Somewhere else
- 3 = Both

Applies to: Respondents who took distance education course(s) in the 2003–2004 school year.

CATI Code: N4DSTED in (1,-9)

N4LIVE, N4RECORD, N4NET

Distance education

Did the distance education classes you took during the 2003–2004 school year use any of the following?

(Please check all that apply.)

- 0 = No
- 1 = Yes

- N4LIVE**—Live, interactive TV or audio
- N4RECORD**—Pre-recorded TV or audio
- N4NET**—The Internet

Applies to: Respondents who took distance education course(s) in the 2003–2004 school year.

CATI Code: N4DSTED in (1,-9)

N4CMPSAT

Distance education: satisfaction

Compared to other courses you have taken, are you more satisfied or less satisfied with the quality of instruction you received in your distance education courses?

- 1 = More satisfied with the distance education courses
- 2 = Liked both the same
- 3 = Less satisfied with the distance education courses

Applies to: Respondents who took distance education course(s) in the 2003–2004 school year.

CATI Code: N4DSTED in (1,-9)

N4GRDRAT, N4SAFETY, N4JOBRA, N4CONSN

School considerations

Before choosing [NPSAS], did you get information about any of the following?

(Please check all that apply.)

- 0 = No
- 1 = Yes

- N4GRDRAT**—The graduation rate
- N4SAFET**—Campus safety
- N4JOBRA**—The job placement rate
- N4CONSN**—None of the above

Applies to: Undergraduate respondents.

CATI Code: TSTAT=1

N4PUB

Selecting college from published list

Before selecting a college, did you consult a published list of college rankings?

- 0 = No
- 1 = Yes

Applies to: BPS eligible respondents.

CATI Code: N4BPSELG in (1, 2)

N4NUMAPP

Number of colleges applied to other than NPSAS

Other than [NPSAS], how many colleges, universities, and trade schools did you apply to?

Applies to: BPS eligible respondents.

CATI Code: N4BPSELG in (1, 2)

N4NUMACC

Number colleges of accepted to other than NPSAS

How many of those schools accepted you?

Applies to: BPS eligible respondents who applied to more than one institution.

CATI Code: N4BPSELG in (1, 2) and N4NUMAPP=-9 or gt 1

N4FIRST*NPSAS was first choice*

Was [NPSAS] your first choice?

- 0 = No
1 = Yes

Applies to: BPS eligible respondents except those who only applied to the NPSAS institution.

CATI Code: N4BPSELG in (1, 2) and N4NUMAPP in (-9 or gt 1)

N4NOFIRS*Accepted at first choice school*

Were you accepted at your first choice of schools?

- 0 = No
1 = Yes

Applies to: BPS eligible respondents who were admitted to fewer schools than they applied and indicated that the NPSAS school was not their first choice.

CATI Code: N4BPSELG in (1, 2) and N4NUMAPP not = 1 and N4FIRST=0 and (N4NUMACC le N4NUMAPP)

N4NOWHB–N4NOWHE, N4NOWHX*Did not attend first choice*

Why did you not attend the school that was your first choice?

(Please check all that apply.)

- 0 = No
1 = Yes

N4NOWHB—Too expensive**N4NOWHC**—Did not receive enough financial aid**N4NOWHD**—Location**N4NOWHE**—Personal reasons**N4NOWHX**—Other*Applies to: BPS eligible respondents for whom NPSAS was not their first choice, but were accepted at their first choice school and did not go there.*

CATI Code: N4BPSELG in (1, 2) and N4FIRST in (0, -9) and (N4NOFIRS in (1, -9, -3) or (N4NUMACC=N4NUMAPP))

N4ATTDA–N4ATTDE, N4ATTDX*Reason chose school*

Why did you decide to attend [NPSAS]?

(Please check all that apply.)

- 0 = No
1 = Yes

N4ATTDA—Program of study**N4ATTDB**—Reputation (of program, faculty, or school)**N4ATTDC**—Cost (affordability or other financial reasons)**N4ATTDD**—Location**N4ATTDE**—Personal or family reasons**N4ATTDX**—Other*Applies to: BPS eligible respondents.*

CATI Code: N4BPSELG in (1, 2)

N4COLLCR*During high school earned college credit*

While you were in high school, did you take any courses at a college or university for which you earned college credit?

- 0 = No
1 = Yes

Applies to: BPS eligible respondents.

CATI Code: N4BPSELG in (1, 2)

N4AP*Advanced placement credit*

When you first enrolled in college, did you have any advanced placement (AP) credits that were accepted by [NPSAS]?

- 0 = No
1 = Yes

Applies to: BPS eligible respondents.

CATI Code: N4BPSELG in (1, 2)

N4ENSOPH*Credit to enter as sophomore*

Did you earn enough credits to enter college as a sophomore?

- 0 = No
1 = Yes

Applies to: BPS eligible respondents who earned college credit before enrolling in NPSAS institution or who earned credit through AP classes.

CATI Code: N4BPSELG in (1, 2) and (N4AP in (1, -9) or N4COLLCR in (1,-9))

N4MATHA–N4MATHF*High school math*

Which of the following math courses did you complete while in high school?

(Please check all that apply.)

- 0 = No
1 = Yes

N4MATHA—Algebra 2**N4MATHB**—Algebra III/Trigonometry**N4MATHC**—Pre-calculus/analytic geometry**N4MATHD**—Calculus**N4MATHE**—Statistics**N4MATHF**—None of the above*Applies to: BPS eligible respondents.*

CATI Code: N4BPSELG in (1, 2)

N4POSTA–N4POSTE, N4POSTX

Post high school

What kinds of things did you do before you started your postsecondary education (after high school)? (Please check all that apply.)

0 = No

1 = Yes

N4POSTA—Worked

N4POSTB—Served in the military

N4POSTC—Got married or raised a family

N4POSTD—Cared for health of self or others

N4POSTE—Traveled or pursued other interests

N4POSTX—Other

Applies to: BPS eligible respondents who had at least a one year delay after high school and before enrolling at their first postsecondary institution.

CATI Code: N4BPSELG in (1, 2) and TDELAY=1

N4DROPA–N4DROPG, N4DROPX

Drop

You indicated earlier that you are no longer enrolled at [NPSAS].

Why did you decide to leave [NPSAS]?

(Please check all that apply.)

0 = No

1 = Yes

N4DROPA—Academic problems

N4DROPB—Classes not available/scheduling not convenient

N4DROPC—Dissatisfaction with program/school/campus/faculty

N4DROPD—Financial reasons

N4DROPE—Family responsibilities

N4DROPF—Personal reasons

N4DROPG—Finished taking desired classes

N4DROPX—Other

Applies to: BPS eligible respondents who were not currently enrolled, left NPSAS before the term ended, did not transfer away from NPSAS, did not plan to transfer, and did not plan on being enrolled in 2004-2005.

CATI Code: N4BPSELG in (1, 2) and TCURENRL=0 and N4DRTPM not =1 and N4TRNAWY not =1 and N4TRNPLN not =1 and N4ENRPLN not =1.

N4TRNRA– N4TRNRH, N4TRNRX

Transfer: academic problems

[If N4TRNPLN=1]

Earlier you indicated that you plan to transfer out of NPSAS.

What are your reasons for deciding to leave?

[if N4TRNSFR=1]

Earlier you indicated that you transferred to NPSAS.

What were your reasons for deciding to leave your first school?

[else if TRNAWY=1]

Earlier you indicated that you transferred out of NPSAS.

What were your reasons for deciding to leave?

(Please check all that apply.)

0 = No

1 = Yes

N4TRNRA—Academic problems

N4TRNRB—Classes not available /scheduling not convenient

N4TRNRC—Dissatisfaction with program/school/campus/faculty

N4TRNRD—Pursue Bachelor’s degree at a 4-year college

N4TRNRE—Financial reasons

N4TRNRF—Family responsibilities

N4TRNRG—Personal reasons

N4TRNRH—Finished taking desired classes

N4TRNRX—Other

Applies to: BPS eligible respondents who planned to transfer or did transfer either out of or to the NPSAS institution.

CATI Code: N4BPSELG in (1, 2) and (N4TRNPLN in (1, -9, -3) or N4TRNAWY in (1, -9, -3) or N4TRNSFR in (1, -9))

N4PLNTCH

Plan on teaching K-12

Do you plan on becoming a teacher at the K-12 (Kindergarten-grade 12) level?

1 = Definitely Yes

2 = Probably Yes

3 = Probably Not

4 = Definitely Not

Applies to: BPS eligible respondents.

CATI Code: N4BPSELG in (1, 2)

**N4PLINF, N4WLOFF, N4STEADY,
N4LEADR, N4CLSFAM, N4AREA,
N4LEISUR, N4KIDS**

Please indicate which of the following personal goals are very important to you.

(Please check all that apply.)

0 = No

1 = Yes

N4PLINF—Influencing the political structure

N4WLOFF—Being very well-off financially

N4STEADY—Being able to find steady work

N4LEADR—Being a leader in the community

N4CLSFAM—Living close to parents and relatives

N4AREA—Getting away from the area where you
grew up

N4LEISUR—Having leisure time to enjoy interests

N4KIDS—Having children

Applies to: BPS eligible respondents.

CATI Code: N4BPSELG in (1, 2)

Section E: Background

N4STATE*State of legal residence*

What is your state of legal residence?

- | | |
|-----------------------------|------------------------------|
| 1 = Alabama | 31 = New Jersey |
| 2 = Alaska | 32 = New Mexico |
| 3 = Arizona | 33 = New York |
| 4 = Arkansas | 34 = North Carolina |
| 5 = California | 35 = North Dakota |
| 6 = Colorado | 36 = Ohio |
| 7 = Connecticut | 37 = Oklahoma |
| 8 = Delaware | 38 = Oregon |
| 9 = District of
Columbia | 39 = Pennsylvania |
| 10 = Florida | 40 = Rhode Island |
| 11 = Georgia | 41 = South Carolina |
| 12 = Hawaii | 42 = South Dakota |
| 13 = Idaho | 43 = Tennessee |
| 14 = Illinois | 44 = Texas |
| 15 = Indiana | 45 = Utah |
| 16 = Iowa | 46 = Vermont |
| 17 = Kansas | 47 = Virginia |
| 18 = Kentucky | 48 = Washington |
| 19 = Louisiana | 49 = West Virginia |
| 20 = Maine | 50 = Wisconsin |
| 21 = Maryland | 51 = Wyoming |
| 22 = Massachusetts | 52 = Puerto Rico |
| 23 = Michigan | 54 = American Samoa |
| 24 = Minnesota | 55 = Guam |
| 25 = Mississippi | 56 = Fed State
Micronesia |
| 26 = Missouri | 57 = Marshall Islands |
| 27 = Montana | 58 = Northern Mariana Isl |
| 28 = Nebraska | 59 = Palau |
| 29 = Nevada | 60 = Virgin Islands |
| 30 = New Hampshire | 63 = FOREIGN
COUNTRY |

*Applies to: All respondents.***N4DISTNC***Distance from NPSAS school to home*

How far (in miles) is [NPSAS] from your permanent home?

*Applies to: All respondents.***N4HISP***Respondent of Hispanic/Latino origin*

Are you of either Hispanic or Latino origin?

- 0 = No
1 = Yes

*Applies to: All respondents.***N4HISA–N4HISD***Hispanic type*

Are you of...

(Please check all that apply.)

0 = No

1 = Yes

N4HISA—Cuban descent**N4HISB**—Mexican, Mexican-American, or Chicano descent**N4HISC**—Puerto Rican descent**N4HISD**—Some other Spanish, Hispanic or Latino origin*Applies to: Respondents of Hispanic or Latino origin.*

CATI Code: N4HISP in (1, -9)

N4RACEA–N4RACEE, N4RACEX*What is your race?*

Check all that apply.

0 = No

1 = Yes

N4RACEA—White**N4RACEB**—Black or African American**N4RACEC**—Asian**N4RACED**—American Indian or Alaska Native**N4RACEE**—Native Hawaiian or Other Pacific Islander**N4RACEX**—Other*Applies to: All respondents.***N4TRIBE***State/federally recognized tribe*

Are you enrolled in a state- or federally-recognized tribe?

0 = No

1 = Yes

Applies to: Respondents who were American Indian or Alaska Native.

CATI Code: N4RACED in (1, -9)

N4LANG*English as primary language*

When you were growing up, was English the language you spoke most often at home?

0 = No

1 = Yes

Applies to: All respondents.

N4DEPS

Has dependent children

[If TCURENRL=1 and N4MARR=2]

Do you or your spouse have any children that you support financially?

[If TCURENRL=1 and N4MARR not = 2]

Do you have any children that you support financially?

[If TCURENRL=0 and N4MARR=2]

While you were enrolled in the 2003–2004 school year, did you or your spouse have any children that you supported financially?

[If TCURENRL=0 and N4MARR not = 2]

While you were enrolled in the 2003–2004 school year, did you have any children that you supported financially?

0 = No

1 = Yes

Applies to: All respondents.

N4DEP2

Number of dependent children

How many?

Applies to: All respondents.

Recode note: If N4DEPS = 0 then N4DEP2=0.

N4DAGE01–N4DAGE10

Age of dependent child

[If N4DEP2 = 1 then]

How old is your child?

[else]

What are the ages of your children?

0–24 (corresponds to age of child)

N4DAGE01—Age of child 1

N4DAGE02—Age of child 2

N4DAGE03—Age of child 3

N4DAGE04—Age of child 4

N4DAGE05—Age of child 5

N4DAGE06—Age of child 6

N4DAGE07—Age of child 7

N4DAGE08—Age of child 8

N4DAGE09—Age of child 9

N4DAGE10—Age of child 10

Applies to: Respondents with at least one dependent child.

CATI Code: N4DEP2 in (ge 1, -9)

DEPAGE01– DEPAGE 10

Child age less than 12

Derived variable

This is a dichotomous variable used for analysis purposes which indicates if a dependent is less than 12 or 12 and older.

0 = Less than one year

1 = Less than 12

2 = 12 or older

DEPAGE01—Child 1

DEPAGE02—Child 2

DEPAGE03—Child 3

DEPAGE04—Child 4

DEPAGE05—Child 5

DEPAGE06—Child 6

DEPAGE07—Child 7

DEPAGE08—Child 8

DEPAGE09—Child 9

DEPAGE10—Child 10

Applies to: Respondents with at least one dependent child.

CATI Code: N4DEP2 in (ge 1, -9)

N4CARE1

Number of children in daycare

How many of your dependent children are in daycare?

Observed range: 1 - 10

Applies to: Respondents with dependents under 12.

CATI Code: N4DEPS=1 and N4DEP2 gt 0 and

(N4DAGE01<12 or N4DAGE02<12 or N4DAGE03<12

or N4DAGE04<12 or N4DAGE05<12 or

N4DAGE06<12 or N4DAGE07<12 or N4DAGE08<12

or N4DAGE09<12 or N4DAGE10<12).

N4DAYCST

Monthly daycare costs

During the most recent term you were enrolled in the 2003–2004 school year, how much (on average) did you pay each month for childcare?

Applies to: Respondents who had dependents enrolled in daycare during the 2003–2004 school year.

CATI Code: N4CARE1 in (ge 0, -9)

N4OTDEPS

Supporting anyone else

[If N4MARR = 2 or N4DEP2 >= 1 then]

Other than

[if N4MARR = 2 then]

your spouse

[if N4MARR = 2 then]

[if N4DEP2 = 1 then]

and your child

[else if N4DEP2 > 1 then]

and your children

[else]

[if N4DEP2 = 1 then]

your child

[else if N4DEP2 > 1 then]

your children

[if TCURENRL = 1 and (N4MARR = 2 or N4DEP2 >= 1) then], have you been supporting anyone else while enrolled in the 2003–2004 school year?

[else if TCURENRL <> 1 and (N4MARR = 2 or N4DEP2 >= 1) then], were you supporting anyone else while enrolled in the 2003–2004 school year?

[else if TCURENRL = 1 and N4MARR <> 2 and N4DEP2 < 1 then]

Have you been supporting anyone else while enrolled in the 2003–2004 school year?

[else if TCURENRL <> 1 and N4MARR <> 2 and N4DEP2 < 1 then]

Were you supporting anyone else while enrolled in the 2003–2004 school year?

0 = No

1 = Yes

Applies to: All respondents.

N4PARST

Parents marital status

What is your parents' marital status?

(See help text for additional information)

1 = Married/remarried

2 = Single

3 = Divorced/separated

4 = Widowed

Applies to: Undergraduates under 30 with parent/guardians.

CATI Code: TSTAT=1 and TAGE in (lt 30, -9) and N4PARPF in (ne 1, -9)

N4PRHSD

Number of people supported by parents

[If TCURENRL=1]

Not including yourself, how many people have your parents/guardians been supporting financially during the 2003–2004 school year?

[else]

Not including yourself, how many people did your parents/guardians support financially during the 2003–2004 school year?

Applies to: Undergraduates under 30 with parent/guardians.

CATI Code: TSTAT=1 and TAGE in (lt 30, -9) and N4PARPF in (ne 1, -9)

N4DPNUM

Number of other dependents in college

Not including yourself, how many of those people were enrolled in college or trade school during 2003–2004 school year?

Observed range: 1 - 10

Applies to: Undergraduates under 30 with parent/guardians.

CATI Code: TSTAT=1 and TAGE in (lt 30, -9) and N4PARPF in (ne 1, -9)

Recode note: If N4PRHSD = 0 then N4DPNUM=0.

N4SIBCOL

Siblings in college

Do you have any brothers or sisters in college now?

0 = No

1 = Yes

Applies to: Undergraduates under age 30.

CATI Code: TSTAT=1 and TAGE in (lt 30, -9)

N4SIBCL

Siblings in college before respondent

Did any of your brothers and sisters go to college before you did?

0 = No

1 = Yes

Applies to: Undergraduates under age 30.

CATI Code: TSTAT=1 and TAGE in (lt 30, -9)

N4PRCOL

Parents taking college courses in 2003-2004

Were your parents/guardians taking any courses at a postsecondary institution (college, university, or trade school) during the 2003–2004 school year?

0 = No

1 = Yes, full-time

2 = Yes, part-time

Applies to: Undergraduates under 30 with parent/guardians.

CATI Code: TSTAT=1 and TAGE in (lt 30, -9) and N4PARPF in (ne 1, -9)

N4SPCOL*Spouse in college*

Did your spouse attend college or graduate school during the 2003–2004 school year?

- 0 = No
- 1 = Yes, full-time
- 2 = Yes, part-time

Applies to: Married respondents.

CATI Code: N4MARR in (2, -9)

N4KIDCOL*Dependent children in college*

How many of your children were in college during the 2003–2004 school year?

Applies to: Respondents with dependent children over 16.

CATI Code: N4DAGE01 in (gt 16, -9) or N4DAGE02 in (gt 16, -9) or N4DAGE03 in (gt 16, -9) or N4DAGE04 in (gt 16, -9) or N4DAGE05 in (gt 16, -9) or N4DAGE06 in (gt 16, -9) or N4DAGE07 in (gt 16, -9) or N4DAGE08 in (gt 16, -9) or N4DAGE09 in (gt 16, -9) or N4DAGE10 in (gt 16, -9)

N4DADED*Father's education*

What is the highest level of education your father completed?

- 1 = Did not complete high school
- 2 = High school diploma or equivalent
- 3 = Vocational/technical training
- 4 = Less than 2 years of college
- 5 = Associate's degree
- 6 = 2 or more years of college but no degree
- 7 = Bachelor's degree
- 8 = Master's degree or equivalent
- 9 = Professional degree (only includes the following degree programs: chiropractic, dentistry, law, medicine, optometry, osteopathic medicine, pharmacy, podiatry, divinity/theology, or veterinary medicine)
- 10 = Doctoral degree (PhD, EdD, etc) or equivalent
- 11 = Don't know

Applies to: All respondents.

N4MOMED*Mother's education*

What is the highest level of education your mother completed?

- 1 = Did not complete high school
- 2 = High school diploma or equivalent
- 3 = Vocational/technical training
- 4 = Less than 2 years of college
- 5 = Associate's degree
- 6 = 2 or more years of college but no degree
- 7 = Bachelor's degree

8 = Master's degree or equivalent

9 = Professional degree (only includes the following degree programs: chiropractic, dentistry, law, medicine, optometry, osteopathic medicine, pharmacy, podiatry, divinity/theology, or veterinary medicine)

10 = Doctoral Degree (PhD, EdD, etc) or equivalent

11 = Don't know

Applies to: All respondents.

N4USBORN*Respondent born in the U.S.*

Were you born in the United States?

- 0 = No
- 1 = Yes

Applies to: All respondents.

N4PARUS*Parents born in the U.S.*

Were your parents born in the United States?

- 0 = No
- 1 = Yes, one parent
- 2 = Yes, both parents

Applies to: All respondents.

N4CITZN*Citizenship status*

Are you a U.S. citizen?

- 1 = Yes
- 2 = No - Resident alien, permanent resident, or other eligible non-citizen; hold a temporary resident's card or other eligible non-citizen temporary resident's card
- 3 = No - Student visa, in the country on an F1 or F2 visa, or on a J1 or J2 exchange visitor visa

Applies to: All respondents.

Recode note: If N4USBORN=1 then N4CITZN=1.

N4SCHUS*Ever attended elementary or secondary school outside the U.S.*

Did you ever attend elementary or secondary school outside of the United States?

- 0 = No
- 1 = Yes

Applies to: All respondents.

Recode note: If N4DIPL=4 or N4HSTYP=3 or Y_NPSTAT=52 then N4SCHUS=1.

N4VOTE

Registered to vote

Are you registered to vote in U.S. elections?

- 0 = No
- 1 = Yes

Applies to: Respondents who were at least 18 years of age, and were US citizens.

CATI Code: TAGE in (ge 18, -9) and N4CITZN in (1, -9)

N4EVRVT

Ever vote

Have you ever voted in any national, state, or local election?

- 0 = No
- 1 = Yes

Applies to: Respondents who were at least 18 years of age, and were US citizens.

CATI Code: TAGE in (ge 18, -9) and N4CITZN in (1, -9)

N4MILA–N4MILC, N4MILN

Military status: veteran

Are you a veteran of the U.S. Armed Forces, or are you currently serving in the Armed Forces either on active duty or in the reserves?

(Please check all that apply.)

N4MILA—Veteran

- 0 = No
- 1 = Veteran

N4MILB—Active duty

- 0 = No
- 1 = Active duty

N4MILC—Reserves

- 0 = No
- 1 = Reserves

N4MILN—None of the above

- 0 = No
- 1 = None of the above

Applies to: All respondents.

N4COMSRV

Community service/volunteer in last year

Did you perform any community service or volunteer work during the past year?

Please exclude charitable donations (such as food, clothing, money, etc.), paid community service, and court-ordered service.

- 0 = No
- 1 = Yes

Applies to: All respondents.

N4VLTA–N4VLTG, N4VLTX

Volunteer

What type of community service or volunteer work did you perform?

(Please check all that apply.)

- 0 = No
- 1 = Yes

N4VLTA—Tutoring, other education-related work with kids

N4VLTB—Other work with kids (coaching, sports, Big Brother/Big Sister etc.)

N4VLTC—Fundraising (political and non-political)

N4VLTD—Homeless shelter/Soup kitchen

N4VLTE—Neighborhood improvement/clean-up/Habitat for Humanity

N4VLTF—Health services/hospital, nursing home, group home

N4VLTG—Service to the church

N4VLTX—Other

Applies to: Respondents who volunteered in the past year.

CATI Code: N4COMSRV in (1, -9)

N4VLHRS

Number of hours volunteered per month

In the last 12 months, how many hours per month (on average) did you volunteer?

Applies to: Respondents who volunteered in the past year more than one time.

CATI Code: N4COMSRV in (1, -9) and N4VLONE in (0, -9)

N4VLONE

One time event

In the last 12 months, how many hours per month (on average) did you volunteer?

One time event

- 0 = No
- 1 = Yes

Applies to: Respondents who volunteered in the past year.

CATI Code: N4COMSRV in (1, -9) and N4VLHRS in (-3, -9)

Recode note: If N4VLHRS > 0 then N4VLONE = 0.

N4VLGRAD

Volunteer work required for graduation/class

Was any of your community service or volunteer work part of your undergraduate program or required for graduation?

- 0 = No
- 1 = Yes

Applies to: Undergraduates who volunteered in the past year.

CATI Code: TSTAT=1 and N4COMSRV in (1, -9)

N4DISSEN*Have a long-lasting sensory condition*

The next few questions will help us better understand the educational services available for people with disabilities.

Do you have a long-lasting condition (6 months or more) such as blindness, deafness, or a severe vision or hearing impairment?

0 = No

1 = Yes

Applies to: All respondents.

N4DISMOB*Condition that limits physical activities*

Do you have a long-lasting (6 months or more) condition that substantially limits one or more basic physical activities such as walking, climbing stairs, reaching, lifting, or carrying?

0 = No

1 = Yes

Applies to: All respondents.

N4DISOTH*Other condition lasting six months or more*

Excluding any conditions already mentioned, do you have any other physical, mental, emotional, or learning condition that has lasted six months or more?

0 = No

1 = Yes

Applies to: All respondents.

N4DIFLRN, N4DIFDRS, N4DIFSCH, N4DIFWRK, N4DIFNON

Because of that long-lasting (6 months or more) condition, do you have any difficulty doing any of the following:

(Please check all that apply.)

0 = No

1 = Yes

N4DIFLRN—Learning, remembering, or concentrating

N4DIFDRS—Dressing, bathing, or getting around inside your home or dormitory

N4DIFSCH—Getting to school to attend class

N4DIFWRK—Working at a job

N4DIFNON—None of the above

Applies to: Respondents who reported some other type of disability.

CATI Code: N4DISOTH in (1, -9)

TDISABL*Disability Flag*

TDISABL indicates respondents with any disability

If N4DISSEN=1 or N4DISMOB=1 or [N4DISOTH=1 and (N4DIFLRN=1 or N4DIFDRS=1 or N4DIFSCH=1 or N4DIFWRK=1)] then TDISABL=1
else TDISABL=0

0 = No

1 = Yes

Applies to: All respondents.

N4MAIN*Main limiting condition*

What is the main type of condition or impairment you have?

(Please choose only one.)

1 = Hearing impairment (i.e., deaf or hard of hearing)

2 = Blindness or visual impairment that cannot be corrected by wearing glasses

3 = Speech or language impairment

4 = Orthopedic or mobility impairment

5 = Specific learning disability/dyslexia

6 = Attention deficit disorder (ADD)

7 = Health impairment/problem

8 = Mental, emotional or psychiatric condition

9 = Depression

10 = Developmental disability

11 = Brain injury

12 = Other, please specify

Applies to: Respondents who reported a disability.

CATI Code: TDISABL=1

N4SERCA–N4SERCG, N4SERCX, N4SERCN*Services received*

What disability-related services or accommodations have you received to assist you with your schooling in the last 12 months?

(Please check all that apply.)

0 = No

1 = Yes

N4SERCA—Alternative exam formats or additional time

N4SERCB—Tutors to assist with ongoing homework

N4SERCC—Readers, classroom note takers, or scribes

N4SERCD—Registration assistance or priority class registration

N4SERCE—Sign language or oral interpreters

N4SERCF—Adaptive equipment and technology (e.g., assistive listening devices talking computers)

N4SERCG—Course substitution or waiver

N4SERCX—Other, please specify

N4SERCN—None of the above

Applies to: Respondents who reported a disability.

CATI Code: TDISABL=1

**N4NEEDA–N4NEEDG, N4NEEDX,
N4NEEDN**

Services needed

What disability-related services or accommodations have you received to assist you with your schooling in the last 12 months?

(Please check all that apply.)

0 = No

1 = Yes

N4NEEDA—Alternative exam formats or additional time

N4NEEDB—Tutors to assist with ongoing homework

N4NEEDC—Readers, classroom note takers, or scribes

N4NEEDD—Registration assistance or priority class registration

N4NEEDE—Sign language or oral interpreters

N4NEEDF—Adaptive equipment and technology (e.g., assistive listening devices talking computers)

N4NEEDG—Course substitution or waiver

N4NEEDX—Other, please specify

N4NEEDN—None of the above

Applies to: Respondents who reported a disability.

CATI Code: TDISABL=1

N4VOCREC

Ever received Voc Rehab services

Have you received Vocational Rehabilitation services?

0 = No

1 = Yes

Applies to: Respondents who reported a disability.

CATI Code: TDISABL=1

N4VOCAPP

Ever applied for Voc Rehab services

Have you applied for Vocational Rehabilitation services?

0 = No

1 = Yes

Applies to: Respondents who reported a disability and who did not receive Vocational Rehabilitation services.

CATI Code: TDISABL=1 and N4VOCREC in (0, -9)

N4SSI

Receive SSI/SSDI

Are you currently receiving Supplemental Security Income (SSI) or Social Security Disability Insurance (SSDI)?

0 = No

1 = Yes, Supplemental Security Income (SSI)

3 = Yes, Social Security Disability Insurance (SSDI)

4 = Both SSI and SSDI

Applies to: Respondents who reported a disability.

CATI Code: TDISABL=1

Student Interview–Abbreviated Version

OMB No. 1850-0666

Expires: 02/28/2006

**NATIONAL
POSTSECONDARY
STUDENT
AID
STUDY**

**Abbreviated Interview
(NPSAS:2004)**

Instructions: Please answer each question by placing a check (Y) in the box next to the appropriate response or filling in the information requested. The **NPSAS School** referenced is the school shown on the label on this page. The study period of interest is the **2003-2004 school year (between July 1, 2003 and June 30, 2004)**. If you do not know an exact dollar amount for an item, please try to estimate the amount.

Your participation in this study is completely voluntary and your decision to participate will not affect any financial aid or other benefits you are receiving. You may decline to answer any question. All information you provide is confidential.

When you have completed your self-administered interview, please return it within 2 weeks in the self-addressed, postage-paid return envelope provided. Thank you for participating in this very important study.

Affix NPSAS label here

N4ELIG

1. Were you enrolled at *the NPSAS school* at **any time between July 1, 2003 and June 30, 2004**?
 - Yes, was enrolled and left at the end of the term, or was still enrolled as of June 30, 2004 → *Go to Question 4*
 - Yes, was enrolled but left before the term ended → *Go to Question 2*
 - Have been enrolled, but still enrolled in high school → *Go to end*
 - No → *Go to end*

N4DRPRF

2. Did you receive a full refund of your tuition when you left?
 - Yes → *Go to Question 3*
 - No → *Go to Question 4*

N4DRPCMP

3. Did you complete a course or term at *the NPSAS school* at **any time between July 1, 2003 and June 30, 2004**?
 - Yes → *Go to Question 4*
 - No → *Go to end*

N4STAT

4. For all questions about your 2003–2004 enrollment at *the NPSAS school*, please refer to your most recent term of enrollment at the school.

In your most recent term at the NPSAS school, have you been enrolled as an undergraduate or graduate student, or have you been taking courses without being enrolled in a degree program?

- Undergraduate student (includes associate's and bachelor's degrees, postsecondary diplomas and certificates at the undergraduate level, as well as professional degrees that do not require a bachelor's degree) → *Go to Question 5*
- Graduate student (includes master's and doctoral degrees, and post-baccalaureate and post-master's certificates, as well as professional degrees that may be pursued after obtaining a bachelor's degree) → *Go to Question 6*
- Taking classes without being enrolled in a degree program → *Go to Question 7*

N4DGUG

5. What undergraduate degree or certificate were you working on at *the NPSAS school* during the 2003–2004 school year?
 - Bachelor's degree → *Go to Question 14*
 - Associate's degree → *Go to Question 14*
 - Undergraduate certificate or diploma (occupational or technical program) → *Go to Question 8*
 - Undergraduate student, not in a degree program → *Go to Question 13*
 - Professional degree (only includes the following degree programs: chiropractic, dentistry, law, medicine, optometry, osteopathic medicine, pharmacy, podiatry, divinity/theology, or veterinary medicine) → *Go to Question 11*
 - Post-baccalaureate certificate → *Go to Question 14*

N4DGGR

6. What graduate degree or certificate were you working on at *the NPSAS school* during the 2003-2004 school year?

If you are enrolled in more than one program, enter the highest. For example, if you are working on both a doctoral degree and a professional degree, enter a doctoral degree.

- Master's degree →Go to *Question 10*
- Doctoral degree →Go to *Question 9*
- Post-baccalaureate certificate →Go to *Question 14*
- Graduate student, not in a degree program →Go to *Question 13*
- Post-master's certificate →Go to *Question 14*
- Professional degree (only includes the following degree programs: chiropractic, dentistry, law, medicine, optometry, osteopathic medicine, pharmacy, podiatry, divinity/theology, or veterinary medicine) →Go to *Question 11*

N4CLSLV

7. During the 2003-2004 school year, were you taking mainly undergraduate or graduate classes at the NPSAS school?

- Mainly undergraduate classes
- Mainly graduate classes
- An equal mix of undergraduate and graduate classes

Go to Question 13

N4CKHOUR

8. Did your program of study require at least 3 months or 300 clock hours of instruction in order for a certificate to be awarded?

- Yes →Go to *Question 14*
- No →Go to *End*

N4DGD

9. What specific doctoral degree were you working toward in your most recent term in the 2003-2004 school year?

- Doctor of Philosophy (PhD)
- Doctor of Education (EdD)
- Doctor of Science (DSc/ScD) or Engineering (DEng)
- Doctor of Psychology (PsyD)
- Doctor of Business or Public Administration (DBA/DPA)
- Doctor of Fine Arts (DFA)
- Doctor of Divinity/Theology (ThD)
- Other doctoral degree not listed

Go to Question 14

N4DGMS

10. What specific master's degree were you working toward in your most recent term in the 2003-2004 school year?

- Master of Science (MS)
- Master of Arts (MA)
- Master of Education (MEd) or Teaching (MAT)
- Master of Business Administration (MBA)
- Public administration (MPA)
- Master of Social Work (MSW)
- Master of Fine Arts (MFA)
- Master of Public Health (MPH)
- Master of Divinity (MDiv)
- Other master's degree program not listed

Go to Question 14

N4DGPR

11. What specific professional degree were you working toward in your most recent term in the 2003–2004 school year?

- Ministry or Divinity (MDiv/DMin/MHL/BD/ordination)
- Law (JD/LLB)
- Medicine (MD) or Osteopathic medicine (DO)
- Dentistry (DDS/DMD)
- Chiropractic (DC/DCM)
- Pharmacy (PharmD)
- Optometry (OD)
- Podiatry (DPM/DP/PodD)
- Veterinary medicine (DVM)
- Other undergraduate degree not listed
- Other graduate degree not listed

Go to Question 12

N4PRBA

12. Which of the following describes your most recent enrollment at *the NPSAS school*?

- Enrolled in a professional degree program, but have not yet earned a bachelor's degree
- Have already earned a bachelor's degree and was/now enrolled for a professional degree at the graduate level

Go to Question 14

N4ELCRD

13. For all questions about your 2003–2004 enrollment at *the NPSAS school*, please refer to your most recent term of enrollment at the school.

In your most recent term at the NPSAS school, were you enrolled in a course for credit that could be transferred to another school?

- Yes → ***Go to Question 14***
- No → ***Go to End***

N4NENRL

14. We'd like to know about your enrollment at *the NPSAS school* during the academic year. Please indicate **all of** the months you have been enrolled **between July 2003 June 2004**. If you plan to be enrolled for any portion of a month, please include that month.

2003

- July
 August
 September
 October
 November
 December

2004

- January
 February
 March
 April
 May
 June

Go to Question 15

N4SCHSTR

15. In what month and year did you first attend *the NPSAS school* after completing high school requirements?

__ __ / __ __ __ __

Month / Year

Go to Question 16

N4CMPDGN

16. Have you completed all the requirements for your degree?

- Yes
 No, have not completed requirements
 No, not in a degree program

Go to Question 17

N4EXPNP

17. What is the highest level of education you expect to complete at *the NPSAS school*?

- Bachelor's degree
 Associate's degree
 Undergraduate certificate or diploma (occupational or technical program)
 Master's degree
 Doctoral degree (such as the Ph.D., Ed.D., etc.)
 Post-baccalaureate certificate
 Post-master's certificate
 Professional degree (only includes the following degree programs: chiropractic, dentistry, law, medicine, optometry, osteopathic medicine, pharmacy, podiatry, divinity/theology, or veterinary medicine)
 No degree/certificate

Go to Question 18

N4NEW1

18. Did you attend any other schools besides *the NPSAS school* any time between July 1, 2003 and June 30, 2004?

- Yes
- No

Go to Instruction Box

If the respondent is an undergraduate student (a student working on an undergraduate degree, a student taking mainly undergraduate classes, or a student taking an equal mix of undergraduate and graduate classes) go to Question 19.

If the respondent is a graduate student (a student working on a graduate degree or a student taking mainly graduate classes), go to Question 26.

N4NFST

19. Was *the NPSAS school* the first college or trade school you enrolled in after completing your high school requirements?

- Yes → *Go to Question 21*
- No → *Go to Question 20*

N4FSTSTR

20. In what month and year did you first attend any college, university, or trade school after high school?

__ __ / __ __ __ __

Month / Year

Go to Question 21

N4CMPCLS

21. Did you complete one or more postsecondary classes (at a college or trade school) toward a degree or formal award between the time you completed high school and July 1, 2003?

- Yes
- No

Go to Instruction Box

If the respondent attended a school other than the NPSAS school between July 1, 2003 and June 30, 2004 go to Question 22. Else go to Question 26.

N4TRNSFR

22. Did you transfer to *the NPSAS school* from another school at any time during 2003-2004?

- Yes → *Go to Question 23*
- No → *Go to Question 24*

N4TRNCRD

23. Did *the NPSAS school* accept all, some, or none of the credits you wanted to transfer?

- All
- Some
- None

Go to Question 25

N4TRNAWY

24. Did you transfer from *the NPSAS school* to another school at any point during 2003–2004?

- Yes → *Go to Question 26*
- No → *Go to Question 25*

N4TRNPLN

25. Do you plan to transfer from *the NPSAS school* to another school?

- Yes
- No

Go to Question 26

N4PRDG

26. Have you earned any degrees or certificates since you left high school?

- Yes
- No

Go to Instruction Box

*Is the respondent an undergraduate student (a student working on an undergraduate degree, a student taking mainly undergraduate classes, or a student taking an equal mix of undergraduate and graduate classes)?
If YES, go to Question 27. Else skip to Question 28.*

N4REASON

27. What were your main reasons for enrolling at *the NPSAS school*? (Please check all that apply.)

- Learn job skills/prepare for job
- Transfer to a 2-year school
- Transfer to a 4-year school
- Transfer but not known where
- Personal interest or enrichment
- Complete an undergraduate certificate or diploma

Go to Question 28

N4EVR4YR

28. Have you ever attended a 4-year school?

- Yes
- No

Go to Question 29

N4GENDR

29. So that the rest of this interview may be customized for you, please answer the following questions. What is your gender?

- Male
- Female

Go to Question 30

N4DOB

30. In what month and year were you born?

__ __ / __ __ __ __

Month / Year

Go to Question 31

N4MARR

31. What is your current marital status?

- Single, never married
- Married
- Separated
- Divorced
- Widowed

Go to Question 32

If the respondent is an undergraduate student (a student working on an undergraduate degree, a student taking mainly undergraduate classes, or a student taking an equal mix of undergraduate and graduate classes), go to Question 32.

If the respondent is a graduate student (a student working on a graduate degree or a student taking mainly graduate classes), go to instruction box after Question 34.

N4DIPL

32. Which of the following best describes your high school completion?

- Received a high school diploma → *Go to Question 33*
- Passed a GED (General Educational Development) test → *Go to Question 33*
- Received a high school completion certificate → *Go to Question 33*
- Attended a foreign high school → *Go to Question 33*
- Did not complete high school or a high school equivalency program → *Go to Question 34*
- Home schooled → *Go to Question 33*

N4HSYR

33. When did you last attend high school or receive your high school diploma/GED?

Year: __ __ __ __

If N4HSYR = 2004 or blank, go to Question 34. Else go to Instruction Box after Question 34.

N4CMP

34. Were you completing high school requirements for the entire time you were enrolled at *the NPSAS school* between July 1, 2003 and June 30, 2004?
- Yes → *Go to End*
- No → *Go to Instruction Box*

If the respondent is an undergraduate student (a student working on an undergraduate degree, a student taking mainly undergraduate classes, or a student taking an equal mix of undergraduate and graduate classes), go to Question 36.

If the respondent is a graduate student (a student working on a graduate degree or a student taking mainly graduate classes), go to Question 35.

N4GRAID

35. For the 2003-2004 school year, which of the following did you have? (Please check all that apply and fill in the amount of each type of aid received.)

- Teaching assistantship Amount \$ _____
- Research assistantship Amount \$ _____
- Graduate fellowship Amount \$ _____
- Traineeship Amount \$ _____
- Graduate assistantship Amount \$ _____
- None

Go to Question 37

N4SCHJOB

36. During the 2003-2004 school year, did you participate in either work study or a paid assistantship? (Please check all that apply.)

- Work Study
- Assistantship
- None of the above

Go to Question 37

N4RCVAID

37. Did you receive financial aid—such as grants, loans, or scholarships—during the 2003-2004 school year?

- Yes → *Go to Question 39*
- No → *Go to Question 38*

N4APPAID

38. Did you apply for financial aid for the 2003–2004 school year?

- Yes
- No

Go to Question 40

N4STAID

39. Did you receive any scholarships or grants from your school or from a state grant program during the 2003-2004 school year? (Please check all that apply and fill in the amount of each type of aid received.)

- State grant or scholarship Amount \$ _____
- College grant or scholarships Amount \$ _____
- None

Go to Question 40

N4OTAID

40. Did you receive any financial aid during the 2003–2004 school year that **did not** come from the financial aid office? (Please check all that apply and fill in the amount of each type of aid received.)

- Tuition reimbursement from your employer Amount \$ _____
- Grants or scholarships from a private organization Amount \$ _____
- Veteran’s or DoD (Department of Defense) benefits Amount \$ _____
- Aid from your parent’s employer Amount \$ _____
- None

Go to Question 41

N4PRVLN

41. Did you receive any type of commercial or private loan (such as TERI, Excel, or Access loans) from a bank or private organization for your enrollment during the 2003–2004 school year?

- Yes → *Go to Question 42*
- No → *Go to Question 43*

N4PRVAMT

42. How much did you borrow in commercial or private loans during the 2003–2004 school year?

- Amount \$ _____

Go to Instruction Box

If the respondent is an undergraduate student (a student working on an undergraduate degree, a student taking mainly undergraduate classes, or a student taking an equal mix of undergraduate and graduate classes), go to Question 43.

If the respondent is a graduate student (a student working on a graduate degree or a student taking mainly graduate classes), go to Question 44.

N4SCHRES

43. While you were enrolled during the 2003–2004 school year, did you live on campus, with your parents or guardians, or some place else? (If you lived in more than one residence, choose the place where you lived for the longest period of time.)

- On-campus
- With parents or guardians
- Some place else (off campus)

Go to Question 44

N4NUMJOB

44. The next questions have to do with jobs **other** than any work study or assistantships you might have held while you were enrolled at *the NPSAS school* during the 2003–2004 school year.

How many jobs for pay did you have while you were enrolled during the 2003–2004 school year? _____

If response is 0, go to Question 49. Else go to Question 45.

N4EARN

45. How much did you earn from all the jobs you held [excluding work study or assistantships] **while you were enrolled** during the 2003–2004 school year? Please exclude summer earnings if you were not enrolled during the summer.

Amount \$ _____

- For the entire school year → *Go to Question 47*
- Per term/semester → *Go to Question 46*
- Per month → *Go to Question 46*
- Per week → *Go to Question 46*

N4EARN\$

46. How many terms/months/weeks will you have worked **while you were enrolled** during the 2003–2004 school year? _____

Go to Question 47

N4HOURS

47. Not including any work study job/assistantship/fellowship or traineeship, how many hours did you work per week (on average) **while you were enrolled** during the 2003–2004 school year? (Please exclude summer hours if you were not enrolled during the summer.)

Go to Question 48

N4ENRWRK

48. While you were enrolled at *the NPSAS school* and working, would you say you were primarily...

- A student working to meet expenses or
- An employee who decided to enroll in school

Go to Question 49

N4INCOM

49. What was your income from all sources (including income from work, investment income, alimony, etc.) prior to taxes and deductions in **calendar year 2003 (January 1st to December 31st)**? If you are married, please exclude spouse's income.

- No income
- Less than \$1,000
- \$1,000-\$2,499
- \$2,500-\$4,999
- \$5,000-\$9,999
- \$10,000-\$14,999
- \$15,000-\$19,999
- \$20,000-\$29,999
- \$30,000-\$49,999
- \$50,000 and above

If respondent is not married, go to Question 51. Else go to Question 50.

N4INCSP

50. How much would you estimate your spouse earned from all sources prior to taxes and deductions in 2003?

- No income
- Less than \$1,000
- \$1,000-\$2,499
- \$2,500-\$4,999
- \$5,000-\$9,999
- \$10,000-\$14,999
- \$15,000-\$19,999
- \$20,000-\$29,999
- \$30,000-\$49,999
- \$50,000 and above

Go to Question 51

N4UNTAX

51. Between July 1, 2003 and June 30, 2004, did you [or your spouse] receive any untaxed income or benefits, such as TANF (AFDC), Social Security, worker's compensation, disability payments, or child support?

- Yes → *Go to Question 52*
- No → *Go to Question 53*

N4TAXTYP

52. Between July 1, 2003 and June 30, 2004, which of the following did you receive? (Please check all that apply.)

- TANF (AFDC)
- Social Security benefits
- Worker's compensation
- Disability payments
- Food stamps
- Child support
- None

Go to Instruction Box

If the respondent is an undergraduate student (a student working on an undergraduate degree, a student taking mainly undergraduate classes, or a student taking an equal mix of undergraduate and graduate classes), go to Question 53.

If the respondent is a graduate student (a student working on a graduate degree or a student taking mainly graduate classes), go to Question 58.

N4PARNC

53. What was your parents'/guardians' income in 2003?

- Under \$30,000
- \$30,000 to \$59,999
- \$60,000 to \$89,999
- \$90,000 and above
- Don't know

Go to Question 54

N4REMEVER

54. Since you completed high school, have you taken remedial or developmental courses to improve your basic skills—such as in mathematics, reading, writing, or study skills?

- Yes → *Go to Question 55*
- No → *Go to Question 56*

N4REMSY

55. Did you take any remedial or developmental courses during the 2003-2004 school year?

- Yes
- No

Go to Question 56

N4ACTSAT

56. Did you take the SAT or ACT college entrance exam?

- Yes, SAT
- Yes, ACT
- Yes, both the SAT and ACT
- No

Go to Question 57

N4UGEXP

57. During the 2003-2004 school year at *the NPSAS school*, please indicate whether you did the following never, sometimes, or often?

	Never	Sometimes	Often
Attend classes taught by graduate students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attend large lecture classes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Write essay answers as part of exams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Write papers for courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Go to Question 58

N4HISP

58. Are you of either Hispanic or Latino origin?

- Yes → *Go to Question 59*
- No → *Go to Question 60*

N4HISTYP

59. Are you of... (Please check all that apply.)

- Cuban descent
- Mexican, Mexican-American, or Chicano descent
- Puerto Rican descent
- Some other Spanish, Hispanic or Latino origin

Go to Question 60

N4RAC1

60. What is your race? (Please check all that apply.)

- White
- Black or African American
- Asian
- American Indian or Alaska Native
- Native Hawaiian or Other Pacific Islander
- Other, specify _____

Go to Question 61

N4DEPS

61. While you were enrolled in the 2003-2004 school year, did you [or your spouse] have any children under age 25 that you supported financially?

- Yes → *Go to Question 62*
- No → *Go to Question 63*

N4DEP2

62. How many? _____

Go to Question 63

N4OTDEPS

63. Were you supporting anyone else **while enrolled** in the 2003-2004 school year?

- Yes
 No

Go to Question 64

If the respondent is an undergraduate student (a student working on an undergraduate degree, a student taking mainly undergraduate classes, or a student taking an equal mix of undergraduate and graduate classes), go to Question 64.

If the respondent is a graduate student (a student working on a graduate degree or a student taking mainly graduate classes), go to Question 66.

N4PARST

64. What is your parents' marital status?

- Married/remarried
 Single
 Divorced/separated
 Widowed

Go to Question 65

N4PRHSD

65. **Not including yourself**, how many people did your parents/guardians support financially during the 2003–2004 school year? _____

Go to Question 66

N4DADED

66. What is the highest level of education your father completed?

- Did not complete high school
 High school diploma or equivalent
 Vocational/technical training
 Less than 2 years of college
 Associate's degree
 2 or more years of college but not degree
 Bachelor's degree
 Master's degree or equivalent
 Professional degree (only includes the following degree programs: chiropractic, law, optometry, pharmacy, podiatry, or divinity/theology)
 Doctoral degree (PhD, EdD, etc) or equivalent
 Don't know

Go to Question 67

N4MOMED

67. What is the highest level of education your mother completed?

- Did not complete high school
- High school diploma or equivalent
- Vocational/technical training
- Less than 2 years of college
- Associate's degree
- 2 or more years of college but not degree
- Bachelor's degree
- Master's degree or equivalent
- Professional degree (only includes the following degree programs: chiropractic, law, optometry, pharmacy, podiatry, or divinity/theology)
- Doctoral degree (PhD, EdD, etc) or equivalent
- Don't know

Go to Question 68

N4DISSEN

The next few questions will help us better understand the educational services available for people with disabilities.

68. Do you have a long-lasting condition (6 months or more) such as blindness, deafness, or a severe vision or hearing impairment?

- Yes
- No

Go to Question 69

N4DISMOB

69. Do you have a long-lasting (6 months or more) condition that substantially limits one or more basic physical activities such as walking, climbing stairs, reaching, lifting, or carrying?

- Yes
- No

Go to Question 70

N4DISOTH

70. Excluding any conditions already mentioned, do you have any other physical, mental, emotional, or learning condition that has lasted six months or more?

- Yes
- No

Go to Instruction Box

If answers to Questions 67, 68, and 69 are all NO, go to end. Else to go Question 71.

N4DIFLRN

71. Because of that long-lasting (6 months or more) condition, do you have any difficulty doing any of the following: (Please check all that apply.)

- Learning, remembering, or concentrating?
- Dressing, bathing, or getting around inside your home or dormitory?
- Getting to school to attend class?
- Working at a job?
- None

Go to Question 72

N4MAIN

72. What is the **main** type of condition or impairment you have? (Please choose only one.)

- Hearing impairment (i.e., deaf or hard of hearing)
- Developmental disability
- Brain injury
- Other, please specify
- Blindness or visual impairment that cannot be corrected by wearing glasses
- Speech or language impairment
- Orthopedic or mobility impairment
- Specific learning disability/dyslexia
- Attention deficit disorder (ADD)
- Health impairment/problem
- Mental, emotional or psychiatric condition
- Depression
- Other, specify _____

END

The interview is now complete.

Thank you for taking the time to participate in this important study for the U.S. Department of Education.

Appendix F

Call Center Services (CCS) Training Materials

CCS Institutional Contractor Training	F-3
CCS Institutional Contractor Training Manual Table of Contents.....	F-9
Field Data Collection Training	F-15
Field Data Collection Training Table of Contents.....	F-25
CCS Help Desk/Telephone Interviewer Training	F-37
CCS Help Desk/Telephone Interviewer Training Table of Contents	F-41

Call Center Services (CCS) Institutional Contractor Training Agenda

**CCS Institutional Contactor
TRAINING AGENDA
National Study of Faculty and Students (NSoFaS)
Coordinator Prompting (IQ, Faculty List, Student List)**

~
~
Day One
~
~

- 8:30 – 10:00** **CALL CENTER TRAINING IF NEEDED**
- 10:00-10:15** **INTRODUCTION TO NSoFaS:04**
- Institutional Contacting Team
 - Project Staff
- 10:15-10:45** **NSOFAS: THE STUDY OVERVIEW**
- 10:45-11:00** **KEY RESULTS FROM PREVIOUS NSOFAS STUDIES**
- NSOPF—Faculty Component
 - NPSAS—Student Component
- 11:00-11:30** **EARLY NOTIFICATION STRATEGY AND STUDY TIMELINE**
- 11:30-12:00** **THE NSoFaS INSTITUTIONAL WEB SITE**
- 12:00-12:45** **CA PROMPTING PROCEDURES/ QUESTIONS AND ANSWERS**
- Receipt of Packet
 - Completion of the Designating a Coordinator Form
- 12:45-1:30** **LUNCH**
- 1:00-1:30** **OVERVIEW OF COORDINATOR PROMPTING**
- Receipt of Packet
 - Completing the Coordinator Response Form (CRF)
- 1:30-2:30** **USING THE ICS**
- Selecting Institutions
 - Sorting Institutions/User
 - Contact Info
 - Adding a Contact
 - Institute Info
 - Eligibility Criteria
 - Appointments
 - Comments/Record of Calls (ROC)
 - Refusal Conversion
- 2:30—3:00** **CURRENT STAGES & READING THE ICS**
- Previous Stages
 - Current Stages
 - Current Stages Tasks
 - Faculty and Student List Acquisition
 - Institution Questionnaire
 - webCADE
- 3:00– 3:15** **BREAK**
- 3:15 – 4:30** **FACULTY LIST PROMPTING**

4:30—5:00 **SUMMARY EVALUATION OF TRAINING**

~~~~~

~

**Day Two**

~~~~~

~

9:00—9:15 **BREAKFAST/INFORMAL Q & A**

9:15 – 10:00 **UPDATE ON STAGES COMPLETED**

- Mailing of binders in two waves
- % Completed CRF
- #/% Refused
- # Multi-campus INST

9:00 – 9:30 **OVER SAMPLE OF TWELVE STATES**

9:30-10:15 **LIST PROCEDURES FOR NSOPF/ FREQUENTLY ASKED QUESTIONS**

- Review of relevant binder tabs
- Sampling and eligibility issues
- Field Test ICs most frequently answered questions

10:15-10:30 **BREAK**

10:30 -- 11:15 **LIST PROCEDURES FOR NPSAS/ FREQUENTLY ASKED QUESTIONS**

- Review of relevant binder tabs
- Sampling and eligibility issues
- Field Test ICs most frequently answered questions

11:00-12:00 **ICS: PROBLEM RESOLUTION FORMS/WRITING THOROUGH COMMENTS**

- Tackling Respondent Refusal
- Reporting ICS functionality

12:00-1:00 **LUNCH**

1:30-2:30 **USING REPORTS AND STAGES/STATUS CODES**

2:30 – 3:30 **THE INSTITUTION QUESTIONNAIRE**

- Round robin on-line

3:30 – 3:45 **BREAK**

3:45—4:15 **OVERVIEW OF NPSAS webCADE CONTENT**

- Student record abstraction options
- Updating the ICS due dates page

4:15 -- 4:45 **ROLE-PLAY EXERCISES ON IQ COMPLETION AND FACULTY LIST**

4:45 -- 5:00 **REVIEW/EXPLAIN HOME STUDY PACKET**

- Instructions
- ~~~~~

Day Three

~~~~~  
~

- 9:00—9:15**      **BREAKFAST/INFORMAL Q & A**
- 9:15 – 9:30**      **BINDER MAILING: STAGE 41 & 43**
  - Review Binder Content Teams:  
NSoFaS (3)                      NSOPF (3)                      NPSAS(3)
- 9:30 – 10:30**      **PROMPTING COORDINATOR FOR RECEIPT OF BINDER NPSAS ONLY (JAN)**
  - Role-play
  - Mocks
- 10:30 – 10:45**      **BREAK**
- 10:45 – 12:00**      **PROMPTING COORDINATOR FOR COMPLETION OF IQ (JAN-MAR)**
  - Role-play
  - Mocks
- 12:00 – 1:00**      **LUNCH**
- 1:00 – 1:30**      **PROMPTING COORDINATOR FOR FACULTY LIST (JAN-MAR)**
- 1:30—2:00**      **PROMPTING COORDINATOR FOR STUDENT LIST (JAN-MAY)**
  - Getting a webCADE method and due date(FEB-JUNE)
- 2:00 – 2:30**      **ICS CASE ASSIGNMENTS**
  - Review cases assigned to ICs
  - Practice sorting assignment
  - Review report
  - QC Faculty and Student List resolution
- 2:30 – 3:00**      **Bonus Structure REVIEW HOME STUDY**
- 3:00 – 3:15**      **Break**
- 3:15 – 5:00**      **Paired-calls (Vet w/New) on the floor**



**Call Center Services (CCS)  
Institutional Contractor Training Manual Table of Contents**

---



**Full Scale – CCS Training Manual**  
**2004 National Study of Faculty and Students (NSoFaS:04)**  
**Institutional Contacting**

**Table of Contents**

- Chapter 1** NSoFaS Overview
  - 1.1 Purpose and Goals of NSOFAS:04
    - 1.1.1 Sponsorship
    - 1.1.2 Legislation Authorizing
    - 1.1.3 Endorsements
  - 1.2 Description of NSoFaS & Components
  - 1.3 Special Issues for the 12 "Oversample" States
  - 1.4 Project Staff Organization
  - 1.5 Overview of NSoFaS Components
    - 1.5.1 NSOPF Background
    - 1.5.2 Faculty comp Goals
    - 1.5.3 NPSAS Background
    - 1.5.4 NPSAS Goals
    - 1.5.5 Examples of NSOPF & NPSAS Data
  - 1.6 Importance of School Participation
- Chapter 2** Institutional Contactors' Role in NSOFAS
  - 2.1 Institutional Contactors' Duties
  - 2.2 Professionalism
    - 2.2.1 The Importance of Accuracy
    - 2.2.2 Confidentiality
  - 2.3 The Sample
    - 2.3.1 Verification of Institution Address and Chief Administrator
    - 2.3.2 Early Notification: Contacting the Chief Administrator
    - 2.3.3 Early Notification: Contacting the Primary Coordinator
    - 2.3.4 Early Notification: Completing the Coordinator Response Form (CRF)
    - 2.3.5 Data Collection Phase: Completing the Institution Questionnaire
    - 2.3.6 Data Collection Phase: Obtaining a Faculty List
    - 2.3.7 Data Collection Phase: Obtaining a Student Enrollment File
    - 2.3.8 Data Collection Phase: Completing Student Record Abstractions
  - 2.4 Handling Difficult Institutional Questions
    - 2.4.1 Roadblocks
  - 2.5 Documentation/Commenting
- Chapter 3** Contacting Institutions Chief Administrator (CA)
  - 3.1 Institutional Culture
  - 3.2 Timeline
  - 3.3 Verification call
  - 3.4 Initial Mailing to the CA
    - 3.4.1 Initial Follow-up Call to the CA
  - 3.5 Potential Refusals
  - 3.6 FAQs and Frequent Situations
    - 3.6.1 Help Needed: Supplemental Call Info; Problem and Refusal Reporting

**Full Scale – CCS Training Manual**  
**2004 National Study of Faculty and Students (NSoFaS:04)**  
**Institutional Contacting**

**Table of Contents (continued)**

- Chapter 4**      Contacting the Institutional Coordinator
  - 4.1 Role of the Institutional Coordinator
  - 4.2 Institution Coordinator Mailings (Packet and Binder)
    - 4.2.1 Coordinator Packet
    - 4.2.2 Coordinator Binder
    - 4.2.3 Contacting the Institutional Coordinator - Coordinator Response Form (CRF)
  - 4.3 Helping Coordinators with Faculty Lists
    - 4.3.1 Instructions for Completing Faculty Lists
    - 4.3.2 File Format - Faculty
    - 4.3.3 Instructions for Uploading Faculty List
    - 4.3.4 Instructions for Data Submitted via e-mail or other e-format--Faculty
    - 4.3.5 Paper List - Faculty
  - 4.4 Completing the Institution Quex - Faculty
    - 4.4.1 Prompting for a Phone Interview
    - 4.4.2 An Overview of the Institution Questionnaire
  - 4.5 Helping ICs with Student Lists
    - 4.5.1 Specifications for Student Enrollment Lists
    - 4.5.2 Contact Information and File Layout for Creating the List of Enrolled Students
  - 4.6 Handling Special Requests for Reimbursement
  - 4.7 E-mail Communication with Coordinators
  - 4.8 Forms Available on the Web
- Chapter 5**      Additional Follow-up
  - 5.1 Faculty List Follow-up
  - 5.2 Retrieval of Institution Questionnaire Counts
  - 5.3 Questionnaire/List Discrepancy Calls
  - 5.4 Unreadable Lists
  - 5.5 Overview/Content of CADE (Computer Assisted Data Entry)
  - 5.6 Combining Prompts
  - 5.7 Overlapping tasks for the full-scale study
  - 5.8 Steps in Refusal Conversion Process
    - 5.8.1 Dead-ended: Who Else Can Help?
    - 5.8.2 Which Calls to Refer to Project Staff
- Chapter 6**      The Institutional Contacting System (ICS)
- Chapter 7**      The Who, What, When, Where, and How of webCADE?
  - 7.1 Who Completes webCADE?
  - 7.2 What is webCADE?
  - 7.3 When is webCADE to be completed?
  - 7.4 Where is webCADE? For Coordinators...for CCS?
  - 7.5 How can Institutional Staff Complete webCADE?



**Full Scale – CCS Training Manual  
2004 National Study of Faculty and Students (NSoFaS:04)  
Institutional Contacting**

**Table of Contents (Continued)**

- 7.5.1 Completion using Field Data Collectors (FDCs) for fieldCADE
- 7.5.2 Prioritizing Method of webCADE Completion
- 7.6 What is CCS's role in tracking webCADE completions?

**Appendices**

- A** Contents of CA Packet
- B** Contents of IC Packet
- C** Institution Questionnaire Screens and Help Text
- D** FAQs
- E** Glossary of Terms
- F** Problem Sheets and Refusal Forms
- G** Contents of CADE
- H** NSoFaS Stage Flow Overview
- I** QC Meeting Notes



**Field Data Collection Training Agenda**

---

---



**2004 National Study of Faculty and Students  
National Postsecondary Student Aid Study  
Field Data Collector Training**

**AGENDA**





**Day One**

**Hotel, 8:00 pm - 5:00 pm**

Entire Group

**REGISTRATION/Breakfast**

7:00a – 8:30a

- Complete I-9
- RTI Identification photos

**Topic 1 Welcome and Introduction to NSoFaS: 2004**

8:30a – 9:00a

- NSoFaS project teams: Who's on first?

**Topic 2 Background and purpose of NSoFaS:2004**

9:00a – 9:20a

- Study design

**Topic 3 Historical Perspective on Student Record Abstraction**

9:20a – 9:45a

**Topic 4 Uses of the data (NPSAS specific)**

9:45a – 10:30a

- Findings from NPSAS 2000

**Break**

**10:30a – 10:45a**

**Topic 5 Student Financial Aid Process and Practice**

10:45a – 11:45p

- Loans, Grants and other Federal Aid programs
- FAFSA—the application

**Topic 6 Update on Institutional Contacting Task (webCADE)**

11:45a – 12:15a

- Student List
- Faculty Lists
- webCADE (self)

**LUNCH**

**12:15p - 1:15p**

**Day Two**

|                 |                                                                                                                                                                                                                              |                      |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| <b>Topic 7</b>  | <b>Confidentiality</b> <ul style="list-style-type: none"><li>• Headway Procedures</li><li>• Affidavits of Non-Disclosure/Confidentiality Agreements Notarized</li></ul>                                                      | 1:15p – 2:15p        |
| <b>Topic 8</b>  | <b>Overview of the Training Session/FDC Responsibilities</b> <ul style="list-style-type: none"><li>• Training agenda and rules</li><li>• FDC responsibilities</li><li>• Content of Case Studies Binder</li></ul>             | 2:15p - 2:45p        |
| <b>Topic 9</b>  | <b>Introduction to the Laptop Computer</b> <ul style="list-style-type: none"><li>• Assign computers/Complete Inventory Sheets</li><li>• Review Hardware</li><li>• Intro to Case Management System (CMS)</li></ul>            | 2:45p - 3:15p        |
|                 | <b>Break</b>                                                                                                                                                                                                                 | <b>3:15p – 3:30p</b> |
| <b>Topic 10</b> | <b>webCADE Demonstration Financial Aid Module (Case # 1)</b> <ul style="list-style-type: none"><li>• Institutional Defaults</li><li>• Financial Aid Section</li><li>• Need Analysis Section</li><li>• ISIR Section</li></ul> | 3:30p – 4:15p        |
| <b>Topic 11</b> | <b>webCADE Demonstration Registration/Admissions Module (Case # 1)</b> <ul style="list-style-type: none"><li>• Locating Section</li><li>• Characteristics Section</li><li>• Admissions Section</li></ul>                     | 4:15p – 4:30p        |
| <b>Topic 12</b> | <b>webCADE Demonstration Enrollment/Tuition Module (Case #1)</b> <ul style="list-style-type: none"><li>• Enrollment Section</li><li>• Tuition Section</li></ul>                                                              | 4:30p – 4:45p        |
|                 | <b>Q&amp;A/Adjournment</b> <ul style="list-style-type: none"><li>• Study Hall</li><li>• Break out rooms for remainder of training</li></ul>                                                                                  | 4:45p – 5:00p        |



**Day Three**

**Hotel, 9:00 am - 5:00 pm**

By FS Grouping

|                 |                                                                                                                                                                                                                                    |                        |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
|                 | <b>Continental Breakfast</b>                                                                                                                                                                                                       | 8:00a - 9:00a          |
| <b>Topic 13</b> | <b>Agenda overview and goals of training</b>                                                                                                                                                                                       | 9:00a – 9:15a          |
| <b>Topic 14</b> | <b>Document Search by CADE: Module: Financial Aid Info (Case #10)</b> <ul style="list-style-type: none"> <li>• Financial Aid: Subsection</li> <li>• Need Analysis Subsection</li> <li>• ISIR Subsection</li> </ul>                 | 9:15a – 10:00a         |
| <b>Topic 15</b> | <b>Document Search by CADE Module: Registration/Admission (Case #10)</b> <ul style="list-style-type: none"> <li>• Locating Subsection</li> <li>• Characteristics</li> <li>• Admissions</li> </ul>                                  | 10:00a – 10:30a        |
| <b>Topic 16</b> | <b>Document Search CADE Module: ISIR (Case #10)</b>                                                                                                                                                                                | 10:30a – 10:45a        |
|                 | <b>BREAK</b>                                                                                                                                                                                                                       | <b>10:45a – 11:00a</b> |
| <b>Topic 17</b> | <b>Case Management System (CMS)</b> <ul style="list-style-type: none"> <li>• Training Cases versus the REAL thing</li> <li>• Transmitting Completed Cases</li> </ul>                                                               | 11:00a –11:15a         |
| <b>Topic 18</b> | <b>Keying the Data in webCADE (Case #10)</b>                                                                                                                                                                                       | 11:15a –12:00p         |
| <b>Topic 19</b> | <b>Observations/Questions</b>                                                                                                                                                                                                      | 12:00p – 12:15p        |
|                 | <b>Lunch</b>                                                                                                                                                                                                                       | <b>12:00p – 1:00p</b>  |
| <b>Topic 20</b> | <b>Postsecondary Institution Environment</b> <ul style="list-style-type: none"> <li>• The Faculty/Student studies</li> <li>• Web site review</li> <li>• Course Catalogs/COA</li> <li>• Directories/E-mails for students</li> </ul> | 1:00p – 1:30p          |
| <b>Topic 21</b> | <b>Contacting Institutional Coordinators</b> <ul style="list-style-type: none"> <li>• The “Appointment Call”</li> <li>• The “Kick-Off Meeting”</li> <li>• Role-Play Vignette</li> </ul>                                            | 1:30:p – 2:30p         |
| <b>Topic 22</b> | <b>Round Robin Case #3</b>                                                                                                                                                                                                         | 2:30p – 3:30p          |
|                 | <b>Break</b>                                                                                                                                                                                                                       | <b>3:30p – 3:45p</b>   |

**Day Four**

|                 |                                                              |                                             |
|-----------------|--------------------------------------------------------------|---------------------------------------------|
| <b>Topic 23</b> | <b>Paired Practice Case # 6</b>                              | 3:45 – 4:30p                                |
| <b>Topic 24</b> | <b>Observations/Questions/Adjournment</b>                    | 4:30 – 4:45p                                |
|                 | <ul style="list-style-type: none"><li>• Study Hall</li></ul> | Transmit Cases 1, 10, 3, 6<br>6:00p – 7:00p |

**Day Five**

**Hotel, 8:30 am - 5:00 pm**

By FS Grouping

|                 |                                                                                                                                                                                                                                                                                                                                                                            |                        |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
|                 | <b>Continental Breakfast</b>                                                                                                                                                                                                                                                                                                                                               | 8:00a - 9:00a          |
| <b>Topic 25</b> | <b>Case Management System</b> <ul style="list-style-type: none"> <li>• Overview of Case Management System</li> <li>• Instrument/Update Abstraction Codes</li> <li>• Accessing cases</li> <li>• Reviewing institutional histories</li> <li>• Training cases vs. real cases</li> <li>• Overview of electronic PT&amp;E (ePT&amp;E)</li> <li>• Other CMS Functions</li> </ul> | 9:00a -10:00a          |
| <b>Topic 26</b> | <b>Eudora Mail: Practice</b>                                                                                                                                                                                                                                                                                                                                               | 10:00a – 10:30         |
|                 | <b>Break</b>                                                                                                                                                                                                                                                                                                                                                               | <b>10:30a – 10:45a</b> |
| <b>Topic 27</b> | <b>Round Robin Case #8</b>                                                                                                                                                                                                                                                                                                                                                 | 10:45a – 11:45a        |
| <b>Topic 28</b> | <b>Review Transmission of Data</b> <ul style="list-style-type: none"> <li>• <b>Transmit Case #8</b></li> <li>• <b>Changing "calling from</b></li> </ul>                                                                                                                                                                                                                    | 11:45a – 12:15a        |
|                 | <b>Lunch</b>                                                                                                                                                                                                                                                                                                                                                               | <b>12:15p – 1:15p</b>  |
| <b>Topic 29</b> | <b>Individual Practice # 9</b>                                                                                                                                                                                                                                                                                                                                             | 1:15p – 2:00p          |
| <b>Topic 30</b> | <b>Role Play (The IC Call)</b> <ul style="list-style-type: none"> <li>• Institutional Fact Sheet Case #2</li> <li>• Web site review of Western Business School</li> </ul>                                                                                                                                                                                                  | 2:00p – 2:30p          |
|                 | <b>Break</b>                                                                                                                                                                                                                                                                                                                                                               | 2:45p – 3:00p          |
| <b>Topic 31</b> | <b>Round-Robin Case # 2</b>                                                                                                                                                                                                                                                                                                                                                | 3:00p – 4:00p          |
| <b>Topic32</b>  | <b>Homework Assignment Case# 7</b> <ul style="list-style-type: none"> <li>• Complete/Transmit from hotel</li> </ul>                                                                                                                                                                                                                                                        | 4:00p – 4:05p          |
| <b>Topic 33</b> | <b>Questions/Adjournment</b>                                                                                                                                                                                                                                                                                                                                               | 4:05p – 4:15p          |
| Study Hall      |                                                                                                                                                                                                                                                                                                                                                                            | 6:00p – 7:00p          |

**Day Six**

**Hotel, 8:30 am - 5:00 pm**

By FS Grouping

|                 |                                                                                                                                                                               |                        |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
|                 | <b>Continental Breakfast /Check-out</b>                                                                                                                                       | 8:00a - 9:00a          |
| <b>Topic 34</b> | <b>Review of Homework</b>                                                                                                                                                     | 9:00a - 9:15a          |
| <b>Topic 35</b> | <b>IRB and Confidentiality</b>                                                                                                                                                | 9:15 – 10:00           |
| <b>Topic 36</b> | <b>Assignments/Administrative Procedures</b> <ul style="list-style-type: none"><li>• Cost reporting</li><li>• Returning hardcopy vs shredding</li><li>• Assignments</li></ul> | 10:00 a – 10:30a       |
|                 | <b>Break</b>                                                                                                                                                                  | <b>10:30a – 10:45a</b> |
| <b>Topic 37</b> | <b>Quality Control Measures</b> <ul style="list-style-type: none"><li>• Verification</li><li>• Data quality review</li></ul>                                                  | 10:15a - 10:45a        |
| <b>Topic 38</b> | <b>Round-Robin Case # 4</b>                                                                                                                                                   | 10:45a – 11:45p        |
|                 | <b>Lunch</b>                                                                                                                                                                  | <b>11:45p – 1:00p</b>  |
| <b>Topic 39</b> | <b>Certification Protocol</b> <ul style="list-style-type: none"><li>• Successful Completion/Transmission of Cases #5 &amp; #7</li></ul>                                       | 1:00p – 1:30p          |
| <b>Topic 40</b> | <b>Training Evaluation</b>                                                                                                                                                    | 1:30p – 1:45p          |
| <b>Topic 41</b> | <b>Conference Time with FSs</b>                                                                                                                                               | 1:45p – 2:30p          |
| <b>Topic 42</b> | <b>Adjournment/Packing materials to ship</b>                                                                                                                                  | 2:30p – 3:00p          |

**Call Center Services (CCS)  
Field Data Collection Training Table of Contents**

---



Field Data Collection  
Table of Contents

| Section                                                          | Page |
|------------------------------------------------------------------|------|
| 1.0 INTRODUCTION .....                                           | 1-1  |
| 1.1 Study Background .....                                       | 1-1  |
| 1.1.1 Overview.....                                              | 1-1  |
| 1.1.2 RTI International.....                                     | 1-2  |
| 1.1.3 Type of Data Collected .....                               | 1-3  |
| 1.1.4 Use of the Data.....                                       | 1-4  |
| 1.1.5 Methodology .....                                          | 1-5  |
| 1.2 NPSAS:04 Progress to Date .....                              | 1-8  |
| 1.3 Data Collection Schedule .....                               | 1-9  |
| 1.4 Role and Responsibilities of NPSAS Field Data Collector..... | 1-9  |
| 1.5 Importance of Confidentiality .....                          | 1-10 |
| 1.6 Use of this Manual .....                                     | 1-10 |
| 1.7 NPSAS Materials and Supplies.....                            | 1-10 |
| 1.8 Endorsements .....                                           | 1-11 |
| 1.9 Abbreviations .....                                          | 1-12 |
| 1.10 Calendar of Events .....                                    | 1-12 |
| 2.0 CONDUCTING THE INSTITUTION VISIT .....                       | 2-1  |
| 2.1 Data Collection in Institution Settings .....                | 2-1  |
| 2.1.1 Representation, Professionalism, Accountability .....      | 2-1  |
| 2.1.2 Confidentiality Issues .....                               | 2-2  |
| 2.1.3 Preparing for the Institution Visit .....                  | 2-4  |
| 2.1.4 Field Forms and Materials .....                            | 2-4  |
| 2.1.5 Data Collector Materials Packet .....                      | 2-8  |
| 2.1.6 webCADE Preload for Institution Visit.....                 | 2-9  |
| 2.2 The IC Call .....                                            | 2-9  |
| 2.3 Conducting the Institution Visit .....                       | 2-11 |
| 2.4 Institution IC Kickoff Meeting.....                          | 2-11 |
| 2.4.1 Institution Fact Sheet .....                               | 2-12 |
| 2.4.2 FDC Checklist.....                                         | 2-12 |
| 2.5 Abstracting and webCADE Data Entry.....                      | 2-13 |
| 2.6 Concluding the Institution Visit .....                       | 2-13 |
| 2.6.1 Exit Interview .....                                       | 2-14 |
| 2.6.2 Post-Visit webCADE Procedures .....                        | 2-14 |
| 2.7 Post-Abstraction FS Verification .....                       | 2-14 |

Table of Contents (continued)

| Section | Page                                                         |
|---------|--------------------------------------------------------------|
| 3.0     | STUDENT FINANCIAL AID PROCESS ..... 3-1                      |
| 3.1     | Overview ..... 3-1                                           |
| 3.2     | Understanding the Application Processing System ..... 3-2    |
| 3.3     | The ISIR/SAR and NPSAS webCADE..... 3-3                      |
| 3.3.1   | Understanding the ISIR/SAR Sections ..... 3-3                |
| 3.4     | Financial Aid Terms ..... 3-5                                |
| 3.5     | Financial Aid Programs..... 3-5                              |
| 3.6     | Graduate and First-Professional Awards..... 3-6              |
| 4.0     | THE LAPTOP COMPUTER ..... 4-1                                |
| 4.1     | Overview ..... 4-1                                           |
| 4.2     | Computer Components..... 4-1                                 |
| 4.3     | Opening the Computer ..... 4-2                               |
| 4.4     | The Front with the Display Open..... 4-2                     |
| 4.5     | The Right Side View ..... 4-4                                |
| 4.6     | The Left Side ..... 4-5                                      |
| 4.7     | The Back..... 4-6                                            |
| 4.8     | Powering the Computer..... 4-5                               |
| 4.8.1   | Using Electricity/Adapter ..... 4-6                          |
| 4.8.2   | Using Battery Power ..... 4-7                                |
| 4.9     | Turning the Computer On ..... 4-8                            |
| 4.10    | Using the Mouse and the Touchpad ..... 4-8                   |
| 4.10.1  | Using the Mouse ..... 4-8                                    |
| 4.10.2  | The Touchpad Buttons..... 4-9                                |
| 4.11    | Keyboard ..... 4-9                                           |
| 4.12    | Preparing to Transmit (Telephone RTI) on the Laptop..... 4-9 |
| 4.13    | Troubleshooting..... 4-10                                    |
| 5.0     | webCADE and the Record Abstraction Process..... 5-1          |
| 5.1     | Introduction to Record Abstracting..... 5-1                  |
| 5.1.1   | Overview of the Modules in webCADE..... 5-1                  |
| 5.2     | webCADE Terms/Concepts ..... 5-4                             |
| 5.3     | Instructions for Starting webCADE ..... 5-8                  |
| 5.3.1   | Result Codes ..... 5-10                                      |
| 5.4     | Transmitting Data..... 5-12                                  |
| 5.5     | Unlock Cases..... 5-14                                       |
| 5.6     | Navigating webCADE..... 5-14                                 |



Table of Contents (continued)

| Section                                                                    | Page |
|----------------------------------------------------------------------------|------|
| 6.0 ELECTRONIC MAIL—EUDORA LIGHT MAIL.....                                 | 6-1  |
| 6.1 Overview .....                                                         | 6-1  |
| 6.2 Main Screen.....                                                       | 6-2  |
| 6.3 Accessing Your E-mail Address Book and Setting Up “Nicknames” .....    | 6-4  |
| 6.4 Writing an E-mail Message.....                                         | 6-6  |
| 6.5 Sending and Receiving New E-Mail .....                                 | 6-8  |
| 6.6 Reading an E-mail Message .....                                        | 6-9  |
| 6.7 Replying to an E-mail Message.....                                     | 6-11 |
| 6.8 Forwarding an E-mail Message to Another Person.....                    | 6-12 |
| 6.9 Storing an E-mail Message.....                                         | 6-13 |
| 6.10 Deleting an E-mail Message.....                                       | 6-14 |
| 6.11 Moving Messages Between Mailboxes and Folders/Setting Up Folders..... | 6-15 |
| 6.12 Exiting E-mail .....                                                  | 6-17 |
| 7.0 RTI ADMINISTRATIVE PROCEDURES .....                                    | 7-1  |
| 7.1 Introduction .....                                                     | 7-1  |
| 7.2 Terms of Employment.....                                               | 7-1  |
| 7.3 Authorization for Expenditures .....                                   | 7-2  |
| 7.4 Communications.....                                                    | 7-2  |
| 7.5 Supplies and Equipment.....                                            | 7-3  |
| 7.6 Production, Time, and Expense (PT&E) Reporting.....                    | 7-4  |
| 7.6.1 Reporting Production.....                                            | 7-4  |
| 7.6.2 Reporting Time .....                                                 | 7-4  |
| 7.6.3 Reporting Expenses .....                                             | 7-4  |
| 7.6.4 Allowable Time and Expense Charges .....                             | 7-4  |
| 7.6.5 Other Time and Expense Considerations.....                           | 7-6  |
| 7.6.6 Procedures for Paying FDCs.....                                      | 7-6  |
| 7.7 The ePT&E System.....                                                  | 7-7  |
| 7.7.1 Default Value Settings .....                                         | 7-7  |
| 7.7.2 Entry Form .....                                                     | 7-9  |
| 7.7.3 Detail Form .....                                                    | 7-10 |
| 7.8 Hard-Copy PTE.....                                                     | 7-14 |
| 7.9 Telephone Charges .....                                                | 7-17 |
| 7.10 Expense Advances.....                                                 | 7-17 |
| 7.11 Payroll Processing .....                                              | 7-18 |
| 7.12 Total Costs by Institution .....                                      | 7-19 |
| 7.13 Work Absences Caused by Sickness and Vacation.....                    | 7-19 |
| 7.14 Field Accidents and Injuries.....                                     | 7-19 |
| 7.15 Performance Evaluation .....                                          | 7-20 |
| 7.16 Mailing Procedures.....                                               | 7-20 |

Table of Contents (continued)

| Section | Page                                                          |
|---------|---------------------------------------------------------------|
| 8.0     | FIELD SUPERVISOR PROCEDURES..... 8-1                          |
| 8.1     | Overview ..... 8-1                                            |
| 8.2     | Overview of Field Supervisor’s Duties ..... 8-1               |
| 8.3     | Recruiting ..... 8-2                                          |
| 8.3.1   | Identifying Field Data Collector Candidates ..... 8-2         |
| 8.3.2   | Interviewing Field Data Collector Candidates..... 8-4         |
| 8.3.3   | Hiring Field Data Collectors ..... 8-7                        |
| 8.4     | Field Management..... 8-8                                     |
| 8.4.1   | Web Assignment Transfer System (WEBATS)..... 8-9              |
| 8.4.2   | Using the WEB Assignment Transfer System (WEBATS)..... 8-9    |
| 8.4.3   | Assignment/Transfre System ..... 8-16                         |
| 8.4.4   | Assigning New Cases ..... 8-18                                |
| 8.4.5   | Transferring Cases ..... 8-20                                 |
| 8.4.6   | Transferring Cases to Yourself ..... 8-22                     |
| 8.4.7   | Viewing All Cases ..... 8-24                                  |
| 8.4.8   | Reviewing Orders ..... 8-25                                   |
| 8.4.9   | WEBATS Reports..... 8-26                                      |
| 8.5     | Finalizing Case Assignment Folders..... 8-32                  |
| 8.6     | Monitoring Field Activity ..... 8-32                          |
| 8.6.1   | Supervisor/FDC Telephone Conference ..... 8-33                |
| 8.6.2   | Potential Non-record Abstractions..... 8-34                   |
| 8.6.3   | Approval Production, Time & Expense Reports (ePT&E)..... 8-35 |
| 8.6.4   | Problem Solving: The Supervisor as Manager ..... 8-48         |
| 8.6.5   | Reporting Progress to RTI ..... 8-51                          |
| 8.6.6   | Ordering Supplies ..... 8-51                                  |

Table of Contents (continued)

Appendices

|   |                                                                       |
|---|-----------------------------------------------------------------------|
| A | Institutional Contacting Letters: Chief Administrator and Coordinator |
| B | webCADE Data Elements                                                 |
| C | Glossary of Financial Aid Terms                                       |
| D | Free Application for Federal Student Aid (hard-copy)                  |
| E | State Financial Aid Awards                                            |
| F | Computer Troubleshooting Guide                                        |

List of Exhibits

| Exhibit |                                                          | Page |
|---------|----------------------------------------------------------|------|
| 1-1     | Coordinator Response Form Facsimile (CRF) .....          | 1-13 |
| 1-2     | Field Data Collector Responsibilities .....              | 1-20 |
| 1-3     | Confidentiality Agreement .....                          | 1-21 |
| 1-4     | Affidavit of Nondisclosure .....                         | 1-22 |
| 1-5     | List of Abbreviations .....                              | 1-23 |
| 1-6     | NPSAS:04 Field Test Calendar .....                       | 1-24 |
| 2-1     | Disclosure Notice.....                                   | 2-15 |
| 2-2     | Field Data Collector Checklist.....                      | 2-16 |
| 2-3     | Script for the IC Call.....                              | 2-18 |
| 2-4     | IC Call Script Aid .....                                 | 2-21 |
| 2-5     | NPSAS:04 Scheduling Calendar .....                       | 2-23 |
| 2-6     | NPSAS:04 Materials Transmittal Form.....                 | 2-27 |
| 2-7     | Record of Contacts Form .....                            | 2-28 |
| 2-8     | Problem/Comments Log .....                               | 2-29 |
| 2-9     | Institution Fact Sheet .....                             | 2-30 |
| 2-10    | List of Sampled Students .....                           | 2-32 |
| 2-11    | Post-Abstraction Field Supervisor Verification Form..... | 2-33 |
| 3-1     | FAFSA Web Site Home Page.....                            | 3-8  |
| 3-2     | Flowchart of Financial Aid Process.....                  | 3-9  |
| 7-1     | Headway Discipline Policy.....                           | 7-21 |
| 7-2     | Data Collection Agreement .....                          | 7-23 |
| 7-3     | Project Staff Information .....                          | 7-24 |
| 7-4     | Equipment Receipt and Agreement Form.....                | 7-25 |
| 7-5     | RTI ePT&E System Default Value Setting Screen .....      | 7-26 |
| 7-6     | ePT&E Application—Entry Form—Completed.....              | 7-27 |
| 7-7     | ePT&E Application—Detail Form .....                      | 7-28 |
| 7-8     | ePT&E Application—Detail Form—Completed.....             | 7-29 |
| 7-9     | Production, Time, and Expense Report .....               | 7-30 |
| 7-10    | Production, Time, and Expenses Report—Completed .....    | 7-31 |
| 7-11    | Advance Balance Sheet .....                              | 7-32 |
| 7-12    | NPSAS Field Data Collector Evaluation .....              | 7-33 |
| 7-13    | Federal Express Airbill .....                            | 7-35 |
| 7-14    | Headway Expense Report.....                              | 7-36 |
| 8-1     | Field Supervisor Evaluation Form.....                    | 8-53 |
| 8-2     | Field Data Collector Evaluation Form.....                | 8-55 |
| 8-3     | Field Data Collector Example News Ad.....                | 8-57 |
| 8-4     | NSoFaS:04 Recruiting Letter.....                         | 8-58 |
| 8-5     | Field Data Collector Job Description.....                | 8-59 |

List of Exhibits (continued)

| Exhibit |                                                        | Page |
|---------|--------------------------------------------------------|------|
| 8-6     | NSoFaS:04 Field Data Collector Appointment Letter..... | 8-60 |
| 8-7     | Field Data Collector Personal Data Sheet.....          | 8-16 |
| 8-8     | Field Data Collector Applicant Interview Summary ..... | 8-65 |
| 8-9     | Federal W-4 Form.....                                  | 8-67 |
| 8-10    | Employment Eligibility Verification, Form I-9.....     | 8-68 |
| 8-11    | Hire Letter.....                                       | 8-69 |
| 8-12    | Electronic Mail Request for Travel Advance .....       | 8-70 |
| 8-13    | Headway Expense/ePT&E/Travel Advance Log .....         | 8-72 |
| 8-14    | Electronic Request for Materials and Supplies.....     | 8-74 |

List of Figures

| Figure |                                                | Page |
|--------|------------------------------------------------|------|
| 5-1    | Case Management Password.....                  | 5-8  |
| 5-2    | Case Management System: Main Menu.....         | 5-9  |
| 5-3    | School Name List.....                          | 5-9  |
| 5-4    | Case Selection by Group.....                   | 5-10 |
| 5-5    | Update Event.....                              | 5-10 |
| 5-6    | Update Event Code .....                        | 5-11 |
| 5-7    | Transmission .....                             | 5-13 |
| 5-8    | Transmission Results .....                     | 5-14 |
|        |                                                |      |
| 6-1    | Eudora: Main Screen Menu Bar .....             | 6-2  |
| 6-2    | Eudora: Adding Names to Address Book.....      | 6-4  |
| 6-3    | Eudora: Creating Nicknames .....               | 6-5  |
| 6-4    | Eudora: Creating an E-mail Message .....       | 6-6  |
| 6-5    | Eudora: Checking for E-mail Received.....      | 6-8  |
| 6-6    | Eudora: Selecting E-mail to Read.....          | 6-9  |
| 6-7    | Eudora: Closing an E-mail Window .....         | 6-10 |
| 6-8    | Eudora: Responding to an E-mail Message.....   | 6-11 |
| 6-9    | Eudora: Forwarding an E-mail Message .....     | 6-12 |
| 6-10   | Eudora: Moving Messages to Folders .....       | 6-13 |
| 6-11   | Eudora: Deleting Messages .....                | 6-14 |
| 6-12   | Eudora: Setting up Folders .....               | 6-15 |
|        |                                                |      |
| 8-1    | Main Selection Page .....                      | 8-10 |
| 8-2    | Recruiting Main Page .....                     | 8-11 |
| 8-3    | Recruiting SSN Screen .....                    | 8-12 |
| 8-4    | New SSN Screen.....                            | 8-13 |
| 8-5    | FDC Information Screen.....                    | 8-14 |
| 8-6    | Hire Log.....                                  | 8-15 |
| 8-7    | Recruiting Reports Page .....                  | 8-16 |
| 8-8    | Assignment Transfer Main Selection Screen..... | 8-17 |
| 8-9    | Views in WEBATS .....                          | 8-18 |
| 8-10   | Assign New Cases View.....                     | 8-19 |
| 8-11   | Transfer Cases View .....                      | 8-21 |
| 8-12   | Send Cases to Other FS .....                   | 8-23 |
| 8-13   | View All Cases .....                           | 8-24 |
| 8-14   | Review Orders Page.....                        | 8-25 |
| 8-15   | List of WEBATS Reports .....                   | 8-26 |
| 8-16   | Transmission Log Report.....                   | 8-27 |
| 8-17   | Case Detail Report Selection Screen .....      | 8-28 |
| 8-18   | Case Detail Report .....                       | 8-29 |
| 8-19   | Individual Interview Status Report.....        | 8-30 |
| 8-20   | Summary Interview Status Report.....           | 8-31 |
| 8-21   | Description of FS ePT&E Links.....             | 8-39 |

List of Figures (continued)

| Figure |                                                     | Page |
|--------|-----------------------------------------------------|------|
| 8-22   | ePT&E Forms for Approval Link .....                 | 8-40 |
| 8-23   | Production, Time, and Expense Report .....          | 8-42 |
| 8-24   | Approved Electronic PTE Forms.....                  | 8-45 |
| 8-25   | Completed Production, Time, and Expense Report..... | 8-47 |





**Call Center Services (CCS)  
Help Desk/Telephone Interviewer Training Agenda**

---



**NPSAS 2004  
Help Desk  
2 Day training**

| <i>HD Day 1</i>      | <i>9:00 a.m.–5:00 p.m.</i>                                                                                                    |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <i>9:00a–9:30a</i>   | <i>Welcome and Introduction (30 min)</i><br>-Introduction of HD and Project Staff<br>-Overview of the Study                   |
| <i>9:30a-9:45a</i>   | Confidentiality (15 min)<br>-Sign/notarize confidentiality agreements                                                         |
| <i>9:45a-9:55a</i>   | Your Role as a Help Desk Operator (10 min)                                                                                    |
| <i>9:55a-10:05a</i>  | Telephone Routing System (10 min)                                                                                             |
| <i>10:05a-11:05a</i> | Help Desk FAQs (60 min)<br>-Basic FAQs, Security Issues, Computer Capability Requirements, Display Settings, Browser Settings |
| <i>11:05a-11:20a</i> | <i>Break (15 min)</i>                                                                                                         |
| <i>11:20a-12:20p</i> | Intro to Help Desk Application (60 min)                                                                                       |
| <i>12:20p-12:50p</i> | Lunch (30 minutes)                                                                                                            |
| <i>12:50p-1:50p</i>  | Help Desk Application Round Robin #1 (60 min)                                                                                 |
| <i>1:50p-2:05p</i>   | Help Desk FAQ Review (Oral Quiz) (15 min)                                                                                     |
| <i>2:05p-2:35p</i>   | Demonstration Mock (30 min)<br>-Audiotaped with dataview projection of screens                                                |
| <i>2:35p-2:50p</i>   | FAQ Review (15 min)                                                                                                           |
| <i>2:50p-3:05p</i>   | <i>Break (15 min)</i>                                                                                                         |
| <i>3:05p-4:55p</i>   | Q x Q Review (110 min)<br>-Review sections and important questions                                                            |
| <i>4:55p-5:00p</i>   | Wrap-up/questions                                                                                                             |

**HD Day 2**

**9:00 a.m.–5:00 p.m.**

|               |                                                     |
|---------------|-----------------------------------------------------|
| 9:00a         | Welcome trainees & begin training session           |
| 9:00a-9:15a   | FAQ Review (Oral Quiz) (15 min)                     |
| 9:15a-10:00a  | Round Robin Mock #1 (45 min)                        |
| 10:00a-10:20a | Open-Ended Coding Practice (20 min)                 |
| 10:20a-11:05a | Refusal Avoidance/Conversion (45 min)               |
| 11:05a-11:20a | <i>Break</i>                                        |
| 11:20a-12:20p | Front-End Practice (60 min)                         |
| 12:20p-12:50p | Lunch                                               |
| 12:50p-1:50p  | Paired Mock (60 min)                                |
| 1:50p-2:05p   | FAQ Review (Oral Quiz) (15 min)                     |
| 2:05p-2:35p   | Help Desk Application Review (30 min)               |
| 2:35p-3:05p   | Front End Review (30 min)                           |
| 3:05p-3:20p   | <i>Break</i>                                        |
| 3:20p-4:35p   | Certification Interviews/FAQ Certification (75 min) |
| 4:35p-5:00p   | Wrap-up, questions, lag time etc. (25 min)          |

**Additional Training (or first shift after training) – 2 hrs**

- Individual Mock Interview
- Paired Mock Interview
- Coding Exercise
- Written Exercise

**Call Center Services (CCS)  
Help Desk/Telephone Interviewer Training Table of Contents**

---



**Table of Contents**

|                                                                                       | <i>Page</i> |
|---------------------------------------------------------------------------------------|-------------|
| 1.0 INTRODUCTION .....                                                                | 1-1         |
| 1.1 What is the 2004 National Postsecondary Study Aid Study?<br>(NPSAS:04)? .....     | 1-1         |
| 1.1.1 Overview of NPSAS:04.....                                                       | 1-1         |
| 1.1.2 What is the Purpose of NPSAS:04?.....                                           | 1-2         |
| 1.1.3 What Are the Goals of NPSAS:04? .....                                           | 1-2         |
| 1.2 Methodology .....                                                                 | 1-3         |
| 1.2.1 How were Students Selected?.....                                                | 1-3         |
| 1.2.2 How will the Interviews Be Conducted? .....                                     | 1-5         |
| 1.2.3 The Use of Incentives .....                                                     | 1-6         |
| 1.3 Beginning Postsecondary Students Longitudinal Study<br>BPS:04/06 & BPS:04/09..... | 1-7         |
| 1.4 Data Collection Schedule.....                                                     | 1-7         |
| 1.5 Project Staff .....                                                               | 1-8         |
| 2.0 GENERAL INTERVIEWING TECHNIQUES.....                                              | 2-1         |
| 2.1 Overview.....                                                                     | 2-1         |
| 2.2 Sample Members' Rights.....                                                       | 2-3         |
| 2.2.1 Right To Accurate Presentation.....                                             | 2-3         |
| 2.2.2 Right of Informed Consent .....                                                 | 2-4         |
| 2.2.3 Right to Refuse .....                                                           | 2-4         |
| 2.2.4 Right of Privacy .....                                                          | 2-4         |
| 2.3 Confidentiality .....                                                             | 2-5         |
| 2.4 Obtaining Cooperation.....                                                        | 2-8         |
| 2.5 Refusals.....                                                                     | 2-10        |
| 2.6 Best Practices in Conducting the Interview .....                                  | 2-10        |
| 2.6.1 Asking the Questions .....                                                      | 2-10        |
| 2.6.2 Using Feedback.....                                                             | 2-13        |
| 2.6.3 Recording Responses Accurately .....                                            | 2-14        |
| 2.6.4 Use of Judgment in Coding.....                                                  | 2-15        |
| 2.7 Answers to Questions .....                                                        | 2-17        |
| 3.0 LOCATING AND CONTACTING SAMPLE MEMBERS .....                                      | 3-1         |
| 3.1 Pre-CATI Tracing Activities .....                                                 | 3-1         |
| 3.2 CATI Locating Procedures .....                                                    | 3-1         |
| 3.3 CCS Tracing Procedures.....                                                       | 3-2         |
| 3.4 Initial Contact .....                                                             | 3-3         |
| 3.5 Scheduling a Callback .....                                                       | 3-5         |
| 3.6 Telephone Answering Machine Message Protocol .....                                | 3-6         |
| 3.7 Status Codes.....                                                                 | 3-7         |

**Table of Contents (continued)**

|                                                                  | <u>Page</u> |
|------------------------------------------------------------------|-------------|
| 4.0 CATI DATA COLLECTION .....                                   | 4-1         |
| 4.1 Web-Based Instrumentation/Self Administered Instrument ..... | 4-1         |
| 4.1.1 Using a Windows-based system .....                         | 4-1         |
| 4.1.2 Getting around: Using a mouse .....                        | 4-1         |
| 4.1.3 Sizing/Moving Windows .....                                | 4-1         |
| 4.1.4 Working with web questions .....                           | 4-4         |
| 4.2 Overview of the Questionnaire .....                          | 4-6         |
| 5.0 QUALITY CONTROL .....                                        | 5-1         |
| 5.1 Assuring Quality in the Interview .....                      | 5-1         |
| 5.1.1 Performance Monitoring .....                               | 5-1         |
| 5.2 Electronic Problem Reports .....                             | 5-7         |
| 5.3 Quality Circles .....                                        | 5-13        |
| 5.4 Conclusion .....                                             | 5-13        |
| 6.0 HELP DESK AGENT SUPPLEMENT .....                             | 6-1         |
| 6.1 Training .....                                               | 6-1         |
| 6.2 Help Desk Objectives .....                                   | 6-1         |
| 6.3 Help Desk Agent Responsibilities .....                       | 6-2         |
| 6.4 Toll-free Telephone Number and Routing System .....          | 6-3         |
| 6.5 Types of Questions You Will Encounter .....                  | 6-4         |
| 6.6 Help Desk Call-Tracking Module .....                         | 6-5         |
| 6.6.1 Logging in to the Help Desk Call-Tracking Module .....     | 6-5         |
| 6.6.2 Logging a Call .....                                       | 6-7         |
| 6.6.3 Search Incidents .....                                     | 6-13        |
| 6.6.4 Reviewing Pending Incidents .....                          | 6-15        |
| 6.6.5 Exiting the application .....                              | 6-17        |
| 6.7 Conclusion .....                                             | 6-17        |



**Table of Contents (continued)**

**List of Exhibits**

|           |                                                                              |      |
|-----------|------------------------------------------------------------------------------|------|
| Exhibit 1 | Steps in the NPSAS:04 data collection effort.....                            | 1-4  |
| Exhibit 2 | NPSAS:04 calendar .....                                                      | 1-7  |
| Exhibit 3 | Confidentiality agreement.....                                               | 2-6  |
| Exhibit 4 | Affidavit of nondisclosure .....                                             | 2-7  |
| Exhibit 5 | Answering questions and dealing with Reluctant<br>NPSAS Sample Members ..... | 2-18 |
| Exhibit 6 | Glossary of Windows terms.....                                               | 4-3  |
| Exhibit 7 | NPSAS:04 monitoring form .....                                               | 5-3  |
| Exhibit 8 | NPSAS:04 problem reporting system.....                                       | 5-9  |

**List of Appendices**

|                                                           |     |
|-----------------------------------------------------------|-----|
| Appendix A – Prenotification Letter .....                 | A-1 |
| Appendix B – NPSAS:04 Trace Review Procedures .....       | B-1 |
| Appendix C – NPSAS:04 Refusal Conversion Procedures ..... | C-1 |
| Appendix D – Event Codes.....                             | D-1 |
| Appendix E – Help Desk Issues/Resolutions .....           | E-1 |



# **Appendix G**

## **Data-CADE Specifications**

---



Sample School

Your IPEDS UNITID:  
000000

## Data Import Specifications for NPSAS

### Overview

The data we require for the study consists of approximately 200 data elements for each student in the sample. To simplify the data collection as much as possible, we have separated the data into eight files, each having related data.

It is very important that you prepare your data exactly as specified in this document. There is no way that we will be able to modify our programs to load the data any other way than that which is specified in this document.

| Data file             | File description                                                                                                                                                                                                                           |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General.txt</b>    | Consists of general student characteristics type data such as name, birthday, race and gender for the students in the sample.                                                                                                              |
| <b>Locating.txt</b>   | Consists of names and addresses of any contacts you might have for the students including the students themselves.                                                                                                                         |
| <b>Tests.txt</b>      | Consists of the standardized tests and scores for the students.                                                                                                                                                                            |
| <b>Terms.txt</b>      | Consists of the terms, enrollment status and tuition amount paid by the students for the terms between July 1, 2003 and June 30th, 2004.                                                                                                   |
| <b>Budget.txt</b>     | Contains yes/no type answers regarding whether the students received different types of financial aid, and also the prospective budget information for the students in the sample.                                                         |
| <b>Enrollment.txt</b> | Consists of information regarding the sample student's last enrollment status: class level, whether or not they were in a Masters or Doctorate program, whether they have completed their degree requirements, etc.                        |
| <b>Aid.txt</b>        | Contains financial aid info for federal loans and grants, veterans' benefits, research assistantships, Institution based financial aid or state based financial aid the sample students received between July 1st 2003 and June 30th 2004. |
| <b>Other_Aid.txt</b>  | Contains financial aid info for awards and grants received by the student that are not listed in the Aids.txt file.                                                                                                                        |

**Data File Name: General.txt**

Consists of general student characteristics type data such as name, birthday, race, and gender for the students in the sample.

This file should be made up of 1 row per student.

| Sequence | Length | Start pos | Type | Field description        | Valid values                                                                                                                                          |
|----------|--------|-----------|------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1        | 8      | 1         | I    | NPSAS identifier         | 8 digit study ID, provided by RTI in the student sample file.                                                                                         |
| 2        | 9      | 9         | A    | Social security number   | 9 digit social security number of the student. No hyphens.                                                                                            |
| 3        | 20     | 18        | A    | Student's first name     | First name of the student                                                                                                                             |
| 4        | 1      | 38        | A    | Student's middle initial | Middle initial of the student                                                                                                                         |
| 5        | 20     | 39        | A    | Student's last name      | Last name of the student                                                                                                                              |
| 6        | 3      | 59        | A    | Student's name suffix    | Jr., III, etc....                                                                                                                                     |
| 7        | 2      | 62        | I    | BirthMonth               | 2 digit number for the month of birth                                                                                                                 |
| 8        | 2      | 64        | I    | BirthDay                 | 2 digit number for the day of birth                                                                                                                   |
| 9        | 4      | 66        | I    | BirthYear                | YYYY (Years MUST be represented in 4 digit format). The allowable range is 1916 - 1991                                                                |
| 10       | 1      | 70        | I    | Gender                   | 1=Male 2=Female                                                                                                                                       |
| 11       | 1      | 71        | I    | Marital status           | 1=unmarried (single, widowed, divorced)<br>2=married 3=separated                                                                                      |
| 12       | 20     | 72        | A    | Maiden last name         | Answer only if the student is female AND is either married or separated                                                                               |
| 13       | 20     | 92        | A    | Spouse's first name      | Answer only if the student is either married or separated                                                                                             |
| 14       | 2      | 112       | A    | Spouse's middle initial  | Answer only if the student is either married or separated.                                                                                            |
| 15       | 20     | 114       | A    | Spouse's last name       | Answer only if the student is either married or separated.                                                                                            |
| 16       | 20     | 134       | A    | Driver's license number  | Student's drivers license number                                                                                                                      |
| 17       | 2      | 154       | A    | Driver's license state   | 2 letter postal code for the issuing State                                                                                                            |
| 18       | 1      | 156       | I    | High school degree       | 1=High School Diploma 2=GED or other equivalency 3=Certificate of High School completion 4=Foreign high school 5=No High School degree or certificate |

| Sequence | Length | Start pos | Type | Field description                        | Valid values                                                                                          |
|----------|--------|-----------|------|------------------------------------------|-------------------------------------------------------------------------------------------------------|
| 19       | 4      | 157       | A    | Year of high school degree               | Years MUST be represented in 4 digit format. The allowable range is 1936 - the current year           |
| 20       | 2      | 161       | A    | State where the High School is located   | 2 letter postal code of the state where the high school is located                                    |
| 21       | 1      | 163       | I    | Hispanic status/ethnicity                | 1=of Hispanic origins 2=Not of Hispanic origins                                                       |
| 22       | 1      | 164       | I    | Race: white                              | 1=yes 0=no                                                                                            |
| 23       | 1      | 165       | I    | Race: African American                   | 1=yes 0=no                                                                                            |
| 24       | 1      | 166       | I    | Race: American Indian                    | 1=yes 0=no                                                                                            |
| 25       | 1      | 167       | I    | Race: Hawaiian or other Pacific Islander | 1=yes 0=no                                                                                            |
| 26       | 1      | 168       | I    | Race: Asian                              | 1=yes 0=no                                                                                            |
| 27       | 1      | 169       | I    | Veteran status                           | 1=Veteran 2=not a Veteran                                                                             |
| 28       | 1      | 170       | I    | Visa Status                              | 1=U.S Citizen or U.S. National 2=Resident Alien 3=Foreign/International Student or Non-resident Alien |
| 29       | 1      | 171       | I    | ISIR available                           | 1=Yes 0=No Does the school have an ISIR on file for the student?                                      |
| 30       | 20     | 172       | A    | ISIR last name                           | Last name as it appears on the ISIR form (if available)                                               |
| 31       | 9      | 192       | A    | ISIR social security number              | SSN as it appears on the ISIR form                                                                    |
| 32       | 2      | 201       | I    | Is the student a permanent resident of ? | Please say 1=Yes 0=No -1=Don't know                                                                   |

**Data File Name: Locating.txt**

Consists of names and addresses of any contacts you might have for the students including the students themselves.

This file should contain up to four rows per student, one for each address type (student local, student permanent, primary parent, other parent/other).

| Sequence | Length | Start pos | Type | Field description                                            | Valid values                                                                               |
|----------|--------|-----------|------|--------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| 1        | 8      | 1         | I    | NPSAS identifier                                             | 8 digit study ID, provided by RTI in the student sample file.                              |
| 2        | 3      | 9         | I    | Relationship code of contact to the student                  | * See Relationship Codes table                                                             |
| 3        | 50     | 12        | A    | Relationship description                                     | Contact's relationship to the student if relationship code specified is 'other(90)'        |
| 4        | 25     | 62        | A    | Phone number                                                 | Contact's phone number                                                                     |
| 5        | 1      | 87        | I    | Is the phone number specified an International Phone number? | Please say 1=Yes if the specified phone number is an international phone number else 0=No  |
| 6        | 25     | 88        | A    | First name                                                   | Contact's first name                                                                       |
| 7        | 1      | 113       | A    | Middle initial                                               | Contact's middle initial                                                                   |
| 8        | 25     | 114       | A    | Last name                                                    | Contact's last name                                                                        |
| 9        | 10     | 139       | A    | Suffix                                                       | Suffix of the contact / student (e.g. Jr., III)                                            |
| 10       | 40     | 149       | A    | Address line 1                                               | Contact's address field 1                                                                  |
| 11       | 40     | 189       | A    | Address line 2                                               | Contact's address field 2                                                                  |
| 12       | 40     | 229       | A    | City                                                         | Contact's city of residence                                                                |
| 13       | 2      | 269       | A    | State                                                        | Contact's 2 letter postal code                                                             |
| 14       | 5      | 271       | A    | Zip                                                          | Contact's 5 digit zip code                                                                 |
| 15       | 4      | 276       | A    | 4 digit zip code extension                                   | Contact's 4 digit zip code                                                                 |
| 16       | 50     | 280       | A    | Country                                                      | Contact's country of residence                                                             |
| 17       | 1      | 330       | I    | Address type                                                 | 1=Permanent 2=Local 3=Primary parent 4=Other parent/guardian                               |
| 18       | 50     | 331       | A    | The student email address                                    | This applies to the rows where the relationship code is 0 and can be left blank for others |



\* Relationship codes table    Download the relationship codes file [here](#).

| Relationship code | Relationship description |
|-------------------|--------------------------|
| -1                | Don't know               |
| 0                 | self                     |
| 1                 | Father                   |
| 2                 | Mother                   |
| 3                 | Spouse                   |
| 4                 | Brother                  |
| 5                 | Sister                   |
| 6                 | Uncle                    |
| 7                 | Aunt                     |
| 8                 | Grandfather              |
| 9                 | Grandmother              |
| 10                | Friend                   |
| 11                | Co-Worker                |
| 90                | Other                    |
| 100               | Parent                   |

**Data File Name: Tests.txt**

Consists of the standardized tests and results for the students.

This file should contain multiple rows per student. If the student is an undergraduate, record rows for SAT and ACT. If the student is a graduate or first professional student include a row for GRE.

| Sequence | Length | Start pos | Type | Field description         | Valid values                                                  |
|----------|--------|-----------|------|---------------------------|---------------------------------------------------------------|
| 1        | 8      | 1         | I    | NPSAS identifier          | 8 digit study ID, provided by RTI in the student sample file. |
| 2        | 1      | 9         | I    | Exam type                 | 1=SAT 2=ACT 3=GRE                                             |
| 3        | 3      | 10        | I    | Verbal score              | SAT=200-800 GRE=200-800                                       |
| 4        | 3      | 13        | I    | Quantitative / Math score | SAT=200-800 GRE=200-800                                       |
| 5        | 3      | 16        | I    | Analytic score            | GRE=0-6                                                       |
| 6        | 4      | 19        | I    | Comprehensive score       | ACT=0-36                                                      |

**Data File Name: Terms.txt**

Consists of the terms, enrollment status and tuition amount paid by the students for the terms between July 1, 2003 and June 30th, 2004.

This file should include one row for EACH term the student was enrolled

| Sequence | Length | Start pos | Type | Field description      | Valid values                                                           |
|----------|--------|-----------|------|------------------------|------------------------------------------------------------------------|
| 1        | 8      | 1         | I    | NPSAS identifier       | 8 digit study ID, provided by RTI in the student sample file.          |
| 2        | 50     | 9         | A    | Term Name              | Term Name (e.g. Fall 2003, Spring 2004)                                |
| 3        | 8      | 59        | I    | Date term begins       | MMDDYYYY                                                               |
| 4        | 8      | 67        | I    | Date term ends         | MMDDYYYY                                                               |
| 5        | 2      | 75        | I    | Term attendance status | -1=Not Declared 1=Full-time 2=Half-time 3=< Half-time                  |
| 6        | 3      | 77        | I    | Enrolled hours         | Number of hours student enrolled, this term. If this school is a clock |
| 7        | 8      | 80        | N    | Tuition amount         | Tuition amount for this term                                           |

**Data File Name: Budget.txt**

Contains yes/no type answers regarding whether the students received different types of financial aid, and also the prospective budget information for the students in the sample.

This file should be made up of 1 row per student.

| Sequence | Length | Start pos | Type | Field description                                       | Valid values                                                                                                          |
|----------|--------|-----------|------|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| 1        | 8      | 1         | I    | NPSAS identifier                                        | 8 digit study ID, provided by RTI in the student sample file.                                                         |
| 2        | 1      | 9         | I    | Financial aid budget / EFC information available        | 1=Yes 0=No                                                                                                            |
| 3        | 1      | 10        | I    | Dependency status                                       | 1=Dependent 2=Independent                                                                                             |
| 4        | 1      | 11        | I    | Local residence                                         | 1=On-Campus or school-owned housing<br>2=Off-Campus without parents 3=Off-Campus with parents                         |
| 5        | 8      | 12        | N    | EFC amount                                              | Enter the amount of the Expected Family Contribution                                                                  |
| 6        | 1      | 20        | I    | Cost of attendance budget available                     | 1=Yes 0=No                                                                                                            |
| 7        | 1      | 21        | I    | Budget period                                           | 1=Full time, full year 2=Full time, one term 3=Part time, full year 4=Part time, one term 5=Other                     |
| 8        | 1      | 22        | A    | Line-item or total budget amount                        | 1 = line item budget 2 = total budget amount only. If 2, enter amount in item #15, else list amounts in items 9 - 14. |
| 9        | 8      | 23        | N    | Budget amount for tuition                               | Please enter the TUITION amount for the budget period                                                                 |
| 10       | 8      | 31        | N    | Budget amount for books                                 | Please enter the budgeted amount for BOOKS/SUPPLIES for the budget period                                             |
| 11       | 8      | 39        | N    | Budget amount for room and board                        | Please enter budgeted ROOM and BOARD totals for the budget period                                                     |
| 12       | 8      | 47        | N    | Budget amount for transportation                        | Please enter any budgeted TRANSPORTATION amounts for the budget period                                                |
| 13       | 8      | 55        | N    | Budget amount for computer technology                   | Please enter any COMPUTER FEES for the budget period                                                                  |
| 14       | 8      | 63        | N    | Budget amount for other expenses                        | Please enter any OTHER expenditures for the budget period                                                             |
| 15       | 8      | 71        | N    | Total cost of attendance                                | Please enter the TOTAL budget amount for the budget period                                                            |
| 16       | 8      | 79        | I    | State EFC Amount for the state EFC name mentioned below | Please enter this amount here if applicable and the student is an undergraduate                                       |

|                             |             |
|-----------------------------|-------------|
| + State EFC programs        |             |
| State                       | EFC program |
| State EFC Programs go here. |             |

**Data File Name: Enrollment.txt**

Consists of information regarding the sample student's last enrollment status: class level, whether or not they were in a Masters or Doctorate program, whether they have completed their degree requirements, etc. This file should be made up of 1 row per student.

| Sequence | Length | Start pos | Type | Field description                                    | Valid values                                                                                                                                                                                                                                                                                                                                                                                           |
|----------|--------|-----------|------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1        | 8      | 1         | I    | NPSAS identifier                                     | 8 digit study ID, provided by RTI in the student sample file.                                                                                                                                                                                                                                                                                                                                          |
| 2        | 8      | 9         | I    | Term Start date for the student's LAST enrolled term | MMDDYYYY                                                                                                                                                                                                                                                                                                                                                                                               |
| 3        | 8      | 17        | I    | Term End date for the student's LAST enrolled term   | MMDDYYYY                                                                                                                                                                                                                                                                                                                                                                                               |
| 4        | 1      | 25        | I    | Type of degree program during the last enrolled term | + See Degree program code table                                                                                                                                                                                                                                                                                                                                                                        |
| 5        | 1      | 26        | I    | Associates degree program                            | This applies only if the student is enrolled in an Associates degree.<br>1=AA, AS, general education or transfer program.<br>2=AAS Occupational or technical program.                                                                                                                                                                                                                                  |
| 6        | 2      | 27        | I    | Master's degree program                              | * See Masters degree code table - applies only if student is enrolled in a Master's program                                                                                                                                                                                                                                                                                                            |
| 7        | 2      | 29        | I    | Doctoral or first professional degree program        | ** See Doctoral/First professional degree code table - applies only if student is enrolled in a Doctoral or First professional program                                                                                                                                                                                                                                                                 |
| 8        | 2      | 31        | I    | Student's class level during the last enrolled term  | 1=1st Year / Freshman<br>2=2nd Year / Sophomore<br>3=3rd Year / Junior<br>4=4th Year / Senior<br>5=5th Year or Higher Undergraduate<br>6=Undergraduate (unclassified)<br>7=Student with Advanced Degree taking Undergraduate Courses<br>8=First Yr Graduate / professional<br>9=Second Yr Graduate / professional<br>10=Third Yr Graduate / professional<br>11=Beyond Third Yr Graduate / professional |
| 9        | 6      | 33        | N    | Cumulative GPA                                       | 0.00 - 4.00 if the Institution is on a 4 point scale<br>0-100 if the Institution is on a 100-point scale                                                                                                                                                                                                                                                                                               |
| 10       | 40     | 39        | A    | Current major                                        | Enter the student's current major                                                                                                                                                                                                                                                                                                                                                                      |
| 11       | 1      | 79        | I    | Received baccalaureate degree                        | 1=Yes 0=No This applies to students who are graduates or first professionals                                                                                                                                                                                                                                                                                                                           |

| Sequence | Length | Start pos | Type | Field description                                                                           | Valid values                                                                                                               |
|----------|--------|-----------|------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 12       | 2      | 110       | I    | Month the student received the baccalaureate degree                                         | MM - 2 digit number for the month                                                                                          |
| 13       | 4      | 112       | I    | Year the student received the baccalaureate degree                                          | YYYY - 4 digit year                                                                                                        |
| 14       | 1      | 116       | I    | Ever enrolled in this institution prior to July 1, 2003                                     | 1=Yes 0=No . This applies to only to undergraduate students and graduate students that do not have a baccalaureate degree. |
| 15       | 2      | 117       | I    | First enrolled Month if prior to July 1, 2003                                               | MM - 2 digit number                                                                                                        |
| 16       | 4      | 119       | I    | First enrolled Year if prior to July 1, 2003                                                | YYYY - 4 digit year                                                                                                        |
| 17       | 1      | 123       | I    | Transferred any credits from another postsecondary institution                              | 1=Yes 0=No This applies to only to undergraduate students and graduate students that do not have a baccalaureate degree.   |
| 18       | 1      | 124       | I    | Classified as a first-time, first-year degree-seeking student for IPEDS reporting purposes? | 1=Yes 0=No This applies to only to undergraduate students and graduate students that do not have a baccalaureate degree.   |
| 19       | 1      | 125       | I    | Expected to Complete degree requirements on or before June 30, 2004                         | 1=Yes 0=No                                                                                                                 |
| 20       | 4      | 126       | I    | Total clock hours in program - if this is a clock hour only school                          | Total clock hours in program                                                                                               |
| 21       | 2      | 130       | I    | Clock hours per week required - if this is a clock hour only school                         | Enter the number of hours (lab and classroom) required per week                                                            |
| 22       | 8      | 132       | N    | Tuition total for all terms                                                                 | If available, enter the total amount of tuition for all terms that the student was enrolled                                |
| 23       | 1      | 140       | I    | Jurisdiction classification for tuition purposes                                            | 1=In jurisdiction (e.g., in-state, in-district, etc.) 2=Out-of-jurisdiction (e.g., out-of-state, out-of-district, etc.)    |
| 24       | 1      | 141       | I    | Tuition paid by a state prepaid or savings plan?                                            | 1=Yes 0=No ++See the applicable State prepaid or savings plans listed                                                      |
| 25       | 2      | 142       | I    | Tuition paid by a state prepaid or savings plan code 1                                      | #See Tuition Savings Plan code table                                                                                       |
| 26       | 8      | 144       | N    | Tuition paid by a state prepaid or savings plan 1 amount                                    | Enter amount received, if applicable                                                                                       |

| Sequence | Length | Start pos | Type | Field description                                                         | Valid values                         |
|----------|--------|-----------|------|---------------------------------------------------------------------------|--------------------------------------|
| 27       | 2      | 152       | I    | Tuition paid by a state prepaid or savings plan code 2                    | #See Tuition Savings Plan code table |
| 28       | 8      | 154       | N    | Tuition paid by a state prepaid or savings plan 2 amount                  | Enter amount received, if applicable |
| 29       | 8      | 162       | N    | Tuition amount paid by a state prepaid or savings plan from another state | Enter amount received, if applicable |

| + Degree Program code table    Download the degree program codes file <a href="#">here</a> . |                                                                                                                                                       |
|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Degree code</b>                                                                           | <b>Degree program</b>                                                                                                                                 |
| 1                                                                                            | Bachelor's degree                                                                                                                                     |
| 2                                                                                            | Associate's Degree                                                                                                                                    |
| 3                                                                                            | Undergraduate certificate or diploma (occupational or technical program)                                                                              |
| 4                                                                                            | Undergraduate, not in a degree program                                                                                                                |
| 5                                                                                            | Master's degree program                                                                                                                               |
| 6                                                                                            | First professional degree (includes the following degree programs: Chiropractic, Dentistry, Law, Medicine, Optometry, Osteopathic Medicine, Pharmacy, |
| 7                                                                                            | Doctoral degree program                                                                                                                               |
| 8                                                                                            | Post-baccalaureate certificate program (including teaching credential)                                                                                |
| 9                                                                                            | Graduate, not in a degree program                                                                                                                     |
| * Masters degree code table    Download the Masters codes file <a href="#">here</a> .        |                                                                                                                                                       |
| <b>Masters code</b>                                                                          | <b>Masters degree program</b>                                                                                                                         |
| 1                                                                                            | Master of Science (MS)                                                                                                                                |
| 2                                                                                            | Master of Arts (MA)                                                                                                                                   |
| 3                                                                                            | Master of Education (MEd) or Teaching (MAT)                                                                                                           |
| 4                                                                                            | Master of Business Administration (MBA)                                                                                                               |
| 5                                                                                            | Master of Public Administration (MPA) or Public Policy (MPP)                                                                                          |
| 6                                                                                            | Master of Social Work (MSW)                                                                                                                           |
| 7                                                                                            | Master of Fine Arts (MFA)                                                                                                                             |
| 8                                                                                            | Master of Public Health (MPH)                                                                                                                         |
| 10                                                                                           | Other Master's Degree Not Listed Above                                                                                                                |
| 19                                                                                           | Master of Divinity (MDiv)                                                                                                                             |

| ** Doctoral degree code table    Download the Doctoral codes file <a href="#">here</a> . |                                                        |
|------------------------------------------------------------------------------------------|--------------------------------------------------------|
| Doctoral code                                                                            | Doctoral degree Program                                |
| 11                                                                                       | Doctor of Philosophy (PhD)                             |
| 12                                                                                       | Doctor of Education (EdD)                              |
| 13                                                                                       | Doctor of Science (Dsc/ScD) or Engineering (DEng)      |
| 14                                                                                       | Doctor of Psychology (PsyD)                            |
| 15                                                                                       | Doctor of Business or Public Administration (DBA, DPA) |
| 16                                                                                       | Doctor of Fine Arts (DFA)                              |
| 17                                                                                       | Doctor of Theology (ThD)                               |
| 18                                                                                       | Other Doctoral Degree                                  |
| 19                                                                                       | Ministry or Divinity (MDiv, DMin, MHL, BD, ordination) |
| 20                                                                                       | Law (LLB or JD)                                        |
| 21                                                                                       | Medicine (MD) or Osteopathic Medicine (DO)             |
| 22                                                                                       | Dentistry (DDS or DMD)                                 |
| 23                                                                                       | Chiropractic (DC or DCM)                               |
| 24                                                                                       | Pharmacy (Pharm. D.)                                   |
| 25                                                                                       | Optometry (OD)                                         |
| 26                                                                                       | Podiatry (DPM, DP, PodD)                               |
| 27                                                                                       | Veterinary Medicine (DVM)                              |
| # Tuition Savings Plan code table                                                        |                                                        |
|                                                                                          |                                                        |
| Plan code                                                                                | Plan description                                       |
| Customized Tuition Savings plan goes here.                                               |                                                        |



**Data File Name: Aid.txt**

Contains financial aid info for federal loans and grants, veterans benefits, research assistantships, Institution based financial aid or state based financial aid the sample students received between July 1st 2003 and June 30th 2004.

This file can contain multiple rows per student.

| Sequence | Length | Start pos | Type | Field description       | Valid values                                                                                                                                                                                                                                                                                                              |
|----------|--------|-----------|------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1        | 8      | 1         | I    | NPSAS identifier        | 8 digit study ID, provided by RTI in the student sample file.                                                                                                                                                                                                                                                             |
| 2        | 1      | 9         | N    | Specify the type of aid | 1=Federal Aid 2=State Aid<br>3=Institutional Aid 4=Graduate Aid<br>5=Other Aid                                                                                                                                                                                                                                            |
| 3        | 8      | 10        | N    | Aid code                | If Aid type is 1 then -<br>*See the Federal Aid Code Table<br><br>If Aid type is 2 then -<br>**See State Aid Code Table.<br><br>If Aid type is 3 then -<br>***See Institute Aid Code Table.<br><br>If Aid type is 4 then -<br>+See Graduate Aid Code Table.<br><br>If Aid type is 5 then -<br>++See Other Aid Code Table. |
| 4        | 8      | 18        | N    | Aid amount              | Enter the amount received. This field should contain no dollar sign, no commas, and no decimals.                                                                                                                                                                                                                          |

| * Federal Aid code table    Download the Federal Aid codes file <a href="#">here</a> . |                                                                             |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| <b>Federal Aid code</b>                                                                | <b>Federal Aid Program</b>                                                  |
| 1                                                                                      | Pell grant                                                                  |
| 2                                                                                      | Stafford loan - subsidized (FFEL or Direct )                                |
| 3                                                                                      | Stafford loan - unsubsidized (FFEL or Direct )                              |
| 4                                                                                      | PLUS parent loan (FFEL or Direct )                                          |
| 5                                                                                      | Perkins loan                                                                |
| 6                                                                                      | Federal SEOG grant                                                          |
| 7                                                                                      | Federal work-study (FWS)                                                    |
| 8                                                                                      | Robert Byrd honors scholarship                                              |
| 9                                                                                      | Federal health professions loan(Nursing, HPSL, Primary Care, Disadvantaged) |
| 10                                                                                     | Federal health professions disadvantaged student scholarships (SDS)         |
| ** State Aid code table                                                                |                                                                             |
| <b>State Aid code</b>                                                                  | <b>State Aid Program</b>                                                    |
| Customized state aids go here.                                                         |                                                                             |

| *** Institute Aid code table             |                                                                |
|------------------------------------------|----------------------------------------------------------------|
| Institute Aid code                       | Institute Aid Program                                          |
| Institute provide Aids / Grants go here. |                                                                |
| 1                                        | Grants/scholarships : need based                               |
| 2                                        | Grants/scholarships : merit based                              |
| 3                                        | Grants/scholarships : both need and merit                      |
| 4                                        | Athletic scholarship                                           |
| 5                                        | UG Tuition waivers for faculty/staff, family                   |
| 6                                        | Tuition waivers and discounts for other undergraduates         |
| 7                                        | Undergraduate Institutional loan                               |
| 8                                        | Undergraduate Institutional work-study                         |
| 9                                        | Undergraduate resident assistants, tutors, or advisor stipends |

| + Graduate Aid code table    Download the Graduate aid codes file <a href="#">here</a> . |                                                              |
|------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| Graduate Aid code                                                                        | Graduate Aid Program                                         |
| 10                                                                                       | Graduate fellowship or scholarship                           |
| 11                                                                                       | Federal fellowship (NSF, NASA, NIH, USDA, etc.)              |
| 12                                                                                       | Federal traineeship                                          |
| 13                                                                                       | Teaching assistantships/stipends                             |
| 14                                                                                       | Research assistantships/stipends                             |
| 15                                                                                       | Other graduate assistants, tutors, or readers stipends       |
| 16                                                                                       | Tuition waivers for graduate students (including assistants) |
| 17                                                                                       | Tuitions waivers for faculty/staff, spouse or children       |
| 18                                                                                       | Institutional work-study                                     |
| 19                                                                                       | Institutional loan                                           |

++ Other Aid code table    Download the Other aid codes file [here](#).

| Other Aid code | Other Aid Program                                                                             |
|----------------|-----------------------------------------------------------------------------------------------|
| 20             | Scholarships/grants from private organizations, foundations, unions                           |
| 21             | Employer paid tuition                                                                         |
| 22             | Veterans benefits                                                                             |
| 23             | ROTC and other grants for Armed Forces personnel                                              |
| 24             | WIA, other job training, vocational rehabilitation                                            |
| 25             | Bureau of Indian Affairs grants                                                               |
| 26             | Scholarships/grants from state agencies in other states                                       |
| 27             | Private or commercial loans (including TERI, Citi-Assist, Access, Sallie-Mae Signature, etc.) |
| 28             | District of Columbia Tuition Assistance Grants (DCTAG or DCCAP)                               |

**Data File Name: OtherAid.txt**

Contains financial aid info for awards and grants received by the student that are not listed in the Aids.txt file.

This file can contain multiple rows per student.

| Sequence | Length | Start pos | Type | Field description         | Valid values                                                                                 |
|----------|--------|-----------|------|---------------------------|----------------------------------------------------------------------------------------------|
| 1        | 8      | 1         | I    | NPSAS identifier          | 8 digit study ID, provided by RTI in the student sample file.                                |
| 2        | 40     | 9         | A    | Name of the other award   | Please provide the name of the Aid Award - only aids not listed in the Aid.txt file          |
| 3        | 2      | 49        | I    | Type of other award       | * See Other Award Type Table                                                                 |
| 4        | 1      | 50        | I    | Source of the other award | 1=Institution 2=State 3=Federal 4=Other 5=Other_G 6=Other_UG                                 |
| 5        | 8      | 51        | N    | Amount of other award     | Enter amount received. This field should contain no dollar sign, no commas, and no decimals. |

\* Other Award Type table. Download the award codes file [here](#).

| Award Type code | Award Type Description                  |
|-----------------|-----------------------------------------|
| 1               | Grant/scholarship : need-based          |
| 2               | Grant/scholarship : merit-based         |
| 3               | Grant/scholarship : both need and merit |
| 4               | Tuition waiver                          |
| 5               | Loan                                    |
| 6               | Work-study or assistantship             |
| 7               | Other                                   |

# **Appendix H**

## **Imputations**

---





Table H-1. Rate of missing data before imputation for all variables: 2004

| Variable description                         | Variable name | Percent missing data rate |                        |                                      |
|----------------------------------------------|---------------|---------------------------|------------------------|--------------------------------------|
|                                              |               | All students              | Undergraduate students | Graduate/first-professional students |
| Carnegie code (2000) for NPSAS institution   | CC2000        | 0.0                       | 0.0                    | 0.0                                  |
| NPSAS institution control                    | CONTROL       | 0.0                       | 0.0                    | 0.0                                  |
| CADE record available                        | INCADE        | 0.0                       | 0.0                    | 0.0                                  |
| CATI record available                        | INCATI        | 0.0                       | 0.0                    | 0.0                                  |
| CPS record available                         | INCPS         | 0.0                       | 0.0                    | 0.0                                  |
| NPSAS institution state                      | INSTSTAT      | 0.0                       | 0.0                    | 0.0                                  |
| NPSAS institution level                      | LEVEL         | 0.0                       | 0.0                    | 0.0                                  |
| NPSAS institution region                     | OBereg        | 0.0                       | 0.0                    | 0.0                                  |
| NPSAS institution type                       | SECTOR9       | 0.0                       | 0.0                    | 0.0                                  |
| Student type                                 | STYPELST      | 0.0                       | 0.0                    | 0.0                                  |
| Age groups as of 12/31/03                    | AGEGROUP      | 0.0                       | 0.0                    | 0.0                                  |
| Gender                                       | GENDER        | 0.0                       | 0.0                    | 0.0                                  |
| Age as of 12/31/03                           | AGE           | 0.1                       | 0.1                    | 0.1                                  |
| Veteran status                               | VETERAN       | 3.4                       | 2.9                    | 6.9                                  |
| Dependency status                            | DEPEND        | 4.9                       | 5.5                    | 0.0                                  |
| Student's marital status                     | SMARITAL      | 6.2                       | 5.9                    | 8.2                                  |
| Orphan or ward of court                      | ORPHAN        | 5.7                       | 6.4                    | 1.2                                  |
| Dependents—has dependents                    | DEPANY        | 10.7                      | 10.2                   | 14.5                                 |
| Number in college (independent students)     | SINCOL        | 11.7                      | 11.2                   | 15.5                                 |
| Dependents—has dependent children            | DEPCHILD      | 14.2                      | 14.1                   | 15.0                                 |
| Dependents—has dependent other than children | DEPOTHER      | 14.3                      | 14.2                   | 15.0                                 |
| Dependents—number of dependent children      | DEPNUMCH      | 17.4                      | 17.5                   | 16.5                                 |
| Dependent children—age of oldest             | DEPOLD        | 18.2                      | 18.4                   | 17.1                                 |
| Dependent children—age of youngest           | DEPYNG        | 18.2                      | 18.4                   | 17.1                                 |
| Citizenship (max non-citizen)                | CITIZEN2      | 1.9                       | 1.9                    | 1.7                                  |
| Race-ethnicity: Hispanic or Latino origin    | HISPANIC      | 8.6                       | 9.1                    | 5.0                                  |
| Race—Asian                                   | RAASIAN       | 9.4                       | 9.9                    | 6.0                                  |
| Race—Black or African-American               | RABLACK       | 9.4                       | 9.9                    | 6.0                                  |
| Race—American Indian or Alaska Native        | RAINDIAN      | 9.4                       | 9.9                    | 6.0                                  |
| Race—Native Hawaiian/other Pacific Islander  | RAISLAND      | 9.4                       | 9.9                    | 6.0                                  |
| Race—Other                                   | RAOTHER       | 9.4                       | 9.9                    | 6.0                                  |
| Race—White                                   | RAWHITE       | 9.4                       | 9.9                    | 6.0                                  |
| Race—ethnicity: type of Hispanic origin      | HISPTYPE      | 12.7                      | 13.6                   | 6.4                                  |
| Monthly enrollment status 2003/07            | ENR01         | 1.2                       | 1.2                    | 0.6                                  |
| Monthly enrollment status 2003/08            | ENR02         | 1.2                       | 1.2                    | 0.6                                  |
| Monthly enrollment status 2003/09            | ENR03         | 1.2                       | 1.2                    | 0.6                                  |
| Monthly enrollment status 2003/10            | ENR04         | 1.2                       | 1.2                    | 0.6                                  |
| Monthly enrollment status 2003/11            | ENR05         | 1.2                       | 1.2                    | 0.6                                  |
| Monthly enrollment status 2003/12            | ENR06         | 1.2                       | 1.2                    | 0.6                                  |
| Monthly enrollment status 2004/01            | ENR07         | 1.2                       | 1.2                    | 0.6                                  |
| Monthly enrollment status 2004/02            | ENR08         | 1.2                       | 1.2                    | 0.6                                  |
| Monthly enrollment status 2004/03            | ENR09         | 1.2                       | 1.2                    | 0.6                                  |
| Monthly enrollment status 2004/04            | ENR10         | 1.2                       | 1.2                    | 0.6                                  |
| Monthly enrollment status 2004/05            | ENR11         | 1.2                       | 1.2                    | 0.6                                  |
| Monthly enrollment status 2004/06            | ENR12         | 1.2                       | 1.2                    | 0.6                                  |
| Number of institutions attended              | STUDMULT      | 13.9                      | 13.8                   | 14.3                                 |
| Mothers highest education level              | PMOMED        | 13.3                      | 13.1                   | 14.9                                 |
| Father's highest education level             | PDADED        | 13.3                      | 13.1                   | 14.8                                 |
| Parent's marital status                      | PMARITAL      | 5.6                       | 6.3                    | 0.0                                  |
| Dependent student's parent's family size     | PFAMNUM       | 5.8                       | 6.6                    | 0.0                                  |
| Parent's children in college                 | PINCOL        | 6.0                       | 6.8                    | 0.0                                  |

See notes at end of table.

## Appendix H. Imputations

**Table H-1. Rate of missing data before imputation for all variables: 2004—Continued**

| Variable description                           | Variable name | Percent missing data rate |                        |                                      |
|------------------------------------------------|---------------|---------------------------|------------------------|--------------------------------------|
|                                                |               | All students              | Undergraduate students | Graduate/first-professional students |
| Dependent parent income derived                | DEPINC        | 33.1                      | 33.1                   | 0.0                                  |
| Dependent student earnings derived             | DSTUINC       | 33.3                      | 33.3                   | 0.0                                  |
| Independent student & spouse income derived    | INDEPINC      | 46.3                      | 41.5                   | 64.5                                 |
| Spouse of student earnings derived             | SPSINC        | 62.6                      | 58.1                   | 77.9                                 |
| Institutional graduate fellowships             | GRINFEL       | 0.1                       | 0.0                    | 0.9                                  |
| Federal veteran's and military aid             | VADODAMT      | 0.0                       | 0.0                    | 0.0                                  |
| Institutional work-study                       | INSTWRK       | 2.8                       | 3.1                    | 0.8                                  |
| Institutional tuition and fee waivers          | INSWAIV       | 7.7                       | 8.1                    | 4.2                                  |
| Tuition waivers for faculty/staff              | EMPLWAIV      | 7.7                       | 8.2                    | 4.2                                  |
| Total graduate fellowships/grants/traineeships | GRFELAMT      | 0.1                       | 0.0                    | 0.8                                  |
| Graduate other assistantship amount            | GRGRDAMT      | 0.1                       | 0.0                    | 0.9                                  |
| Research assistantship amount                  | GRRESAMT      | 0.1                       | 0.0                    | 1.0                                  |
| Teaching assistantship amount                  | GRTEAMT       | 0.1                       | 0.0                    | 1.0                                  |
| Federal traineeships                           | GRTRNAMT      | 0.1                       | 0.0                    | 0.9                                  |
| Federal veteran's benefits                     | VETBEN        | 0.0                       | 0.0                    | 0.0                                  |
| Pell grant amount                              | PELLAMT       | 0.2                       | 0.2                    | 0.0                                  |
| Applied for aid                                | AIDAPP        | 0.4                       | 0.4                    | 0.4                                  |
| PLUS loan amount                               | PLUSAMT       | 0.4                       | 0.4                    | 0.0                                  |
| Stafford loan subsidized amount                | STAFSUB       | 0.4                       | 0.4                    | 0.3                                  |
| Stafford loan unsubsidized amount              | STAFUNSB      | 0.4                       | 0.4                    | 0.3                                  |
| Perkins loan amount                            | PERKAMT       | 1.8                       | 1.8                    | 2.0                                  |
| Applied for federal aid                        | FEDAPP        | 3.3                       | 3.1                    | 4.7                                  |
| Employer tuition aid (excl staff)              | EMPLYAM1      | 2.8                       | 3.1                    | 0.9                                  |
| Private sources (alternative) loans            | PRIVLOAN      | 2.9                       | 3.2                    | 0.9                                  |
| State work-study total                         | STWKAMT       | 3.4                       | 3.3                    | 4.2                                  |
| Total federal work-study                       | TFEDWRK       | 3.4                       | 3.3                    | 4.2                                  |
| Institutional loan                             | INLNAMT       | 7.7                       | 8.1                    | 4.2                                  |
| Institutional merit grants                     | INSMERIT      | 7.2                       | 8.1                    | 0.0                                  |
| Institutional need-based grant                 | INSTNEED      | 7.2                       | 8.1                    | 0.0                                  |
| Other federal grants                           | OTHFDGRT      | 7.7                       | 8.1                    | 4.2                                  |
| State need-based grants                        | STATNEED      | 7.7                       | 8.1                    | 4.2                                  |
| State loan total                               | STLNAMT       | 7.7                       | 8.1                    | 4.2                                  |
| State merit only grants                        | STMERIT       | 7.7                       | 8.1                    | 4.2                                  |
| State non-need grants                          | STNOND1       | 7.7                       | 8.1                    | 4.2                                  |
| State voc rehab and job training (WIA)         | VOHELP        | 7.7                       | 8.1                    | 4.2                                  |
| FSEOG amount                                   | SEOGAMT       | 7.2                       | 8.2                    | 0.0                                  |
| Athletic scholarship                           | INATHAMT      | 7.2                       | 8.2                    | 0.0                                  |
| Employer (parents) tuition aid                 | EMPLYAM2      | 32.3                      | 33.6                   | 22.3                                 |
| Degree program                                 | DEGFIRST      | 0.0                       | 0.0                    | 0.0                                  |
| Military service type                          | MILTYPE       | 11.7                      | 11.3                   | 15.1                                 |
| Housing                                        | LOCALRES      | 15.2                      | 17.3                   | 0.0                                  |
| Carnegie code (2000) with control              | CC2000A       | 0.0                       | 0.0                    | 0.0                                  |
| Data sources [1=cati 2=cade 4=cps]             | DATASRC       | 0.0                       | 0.0                    | 0.0                                  |
| Offered first-professional degree              | FPOFFER       | 0.0                       | 0.0                    | 0.0                                  |
| Historical Black college indicator             | HBCU          | 0.0                       | 0.0                    | 0.0                                  |
| Highest level of offering at NPSAS institution | HLOFFER       | 0.0                       | 0.0                    | 0.0                                  |
| Positive value in NSLDS 2003–2004 data         | INNSLDS       | 0.0                       | 0.0                    | 0.0                                  |
| Positive value in Pell data                    | INPELL        | 0.0                       | 0.0                    | 0.0                                  |
| NPSAS institution sector                       | SECTOR1       | 0.0                       | 0.0                    | 0.0                                  |
| Comparable to 1987 NPSAS                       | COMPTO87      | 1.2                       | 1.2                    | 0.6                                  |
| Reason enrolled: complete associate's degree   | ATTENDA       | 40.0                      | 39.9                   | 44.6                                 |

See notes at end of table.

Table H-1. Rate of missing data before imputation for all variables: 2004—Continued

| Variable description                                                      | Variable name | Percent missing data rate |                        |                                      |
|---------------------------------------------------------------------------|---------------|---------------------------|------------------------|--------------------------------------|
|                                                                           |               | All students              | Undergraduate students | Graduate/first-professional students |
| Reason enrolled: complete certificate                                     | ATTENDB       | 40.0                      | 39.9                   | 44.6                                 |
| Reason enrolled: job skills                                               | ATTENDC       | 40.0                      | 39.9                   | 44.6                                 |
| Reason enrolled: personal interest                                        | ATTENDD       | 40.0                      | 39.9                   | 44.6                                 |
| Reason enrolled: transfer to a 2-year college                             | ATTENDE       | 40.0                      | 39.9                   | 44.6                                 |
| Reason enrolled: transfer to a 4-year college                             | ATTENDF       | 40.0                      | 39.9                   | 44.6                                 |
| Reason enrolled: transfer to another college                              | ATTENDG       | 40.0                      | 39.9                   | 44.6                                 |
| Average hours per month performing community service                      | COMHOUR       | 63.1                      | 65.3                   | 46.3                                 |
| Performed a one time event community service                              | COMONE        | 58.2                      | 60.3                   | 41.6                                 |
| Part of undergraduate program or required for graduation                  | COMREQ        | 59.7                      | 59.7                   | 0.0                                  |
| Community service performed last year                                     | COMSERV       | 35.9                      | 37.4                   | 24.6                                 |
| Community service performed: fundraising                                  | COMSERVA      | 57.0                      | 59.1                   | 40.7                                 |
| Community service performed: homeless shelter/soup kitchen                | COMSERVB      | 57.0                      | 59.1                   | 40.7                                 |
| Community service performed: hospital/nursing home                        | COMSERVC      | 57.0                      | 59.1                   | 40.7                                 |
| Community service performed: neighborhood improvement                     | COMSERVD      | 57.0                      | 59.1                   | 40.7                                 |
| Community service performed: service to church                            | COMSERVE      | 57.0                      | 59.1                   | 40.7                                 |
| Community service performed: tutoring/mentoring                           | COMSERVF      | 57.0                      | 59.1                   | 40.7                                 |
| Community service performed: work with kids other than tutoring/mentoring | COMSERVG      | 57.0                      | 59.1                   | 40.7                                 |
| Community service performed: other                                        | COMSERVX      | 57.0                      | 59.1                   | 40.7                                 |
| Considered campus safety before choosing NPSAS                            | CONSIDRA      | 38.6                      | 38.6                   | 0.0                                  |
| Considered graduation rate before choosing NPSAS                          | CONSIDRB      | 38.6                      | 38.6                   | 0.0                                  |
| Considered job placement rate before choosing NPSAS                       | CONSIDRC      | 59.3                      | 59.3                   | 0.0                                  |
| Degree already earned since high school                                   | DEGEARN       | 31.5                      | 32.8                   | 21.6                                 |
| Degree already earned: bachelor's degree                                  | DEGEARNA      | 62.1                      | 72.2                   | 27.3                                 |
| Degree already earned: associate's degree                                 | DEGEARNB      | 62.1                      | 72.2                   | 27.3                                 |
| Degree already earned: undergraduate certificate/diploma                  | DEGEARNC      | 62.1                      | 72.2                   | 27.3                                 |
| Degree already earned: post-BA certificate                                | DEGEARND      | 62.1                      | 72.2                   | 27.3                                 |
| Degree already earned: master's degree                                    | DEGEARNE      | 62.1                      | 72.2                   | 27.3                                 |
| Degree already earned: post-MA certificate                                | DEGEARNF      | 62.1                      | 72.2                   | 27.3                                 |
| Degree already earned: first professional degree                          | DEGEARNG      | 62.1                      | 72.2                   | 27.3                                 |
| Degree already earned: doctoral degree                                    | DEGEARNH      | 62.1                      | 72.2                   | 27.3                                 |
| Distance education used: live, interactive TV or audio                    | DELIVE        | 81.6                      | 82.4                   | 73.1                                 |
| Distance education used: pre-recorded TV or audio                         | DERECR        | 81.6                      | 82.4                   | 73.1                                 |
| Distance education used: the internet                                     | DEWWW         | 81.6                      | 82.4                   | 73.1                                 |
| Disability indicator                                                      | DISABLE       | 35.2                      | 36.6                   | 24.7                                 |
| Condition that limits physical activities                                 | DISMOBIL      | 35.1                      | 36.5                   | 24.5                                 |
| Other condition lasting six months or more                                | DISOTHER      | 35.1                      | 36.5                   | 24.6                                 |
| Difficulty: dressing, bathing, or getting around inside home              | DISOTHRA      | 90.2                      | 90.1                   | 90.9                                 |
| Difficulty: getting to school to attend class                             | DISOTHRB      | 90.2                      | 90.1                   | 90.9                                 |
| Difficulty: learning, remembering, or concentrating                       | DISOTHRC      | 90.2                      | 90.1                   | 90.9                                 |
| Difficulty: working at a job                                              | DISOTHRD      | 90.2                      | 90.1                   | 90.9                                 |
| Have a long-lasting sensory condition                                     | DISSENSR      | 35.0                      | 36.5                   | 24.5                                 |
| Distance education: entire program                                        | DISTALL       | 80.8                      | 81.7                   | 72.0                                 |
| Distance education: took courses in 2002-2003                             | DISTEDUC      | 35.6                      | 37.1                   | 24.4                                 |
| Distance education: location of courses                                   | DISTLOC       | 80.9                      | 81.8                   | 72.1                                 |
| Distance education: number of courses took                                | DISTNUM       | 81.5                      | 82.5                   | 72.7                                 |
| Distance education: satisfaction                                          | DISTSATF      | 81.0                      | 81.9                   | 72.2                                 |
| Main type of condition or impairment                                      | DISTYPES      | 84.5                      | 84.4                   | 84.9                                 |
| Took remedial course: English (freshman/sophomore)                        | REMEDIA       | 79.8                      | 79.8                   | 0.0                                  |
| Took remedial course: math (freshman/sophomore)                           | REMEDIB       | 79.8                      | 79.8                   | 0.0                                  |
| Took remedial course: reading (freshman/sophomore)                        | REMEDIC       | 79.8                      | 79.8                   | 0.0                                  |

See notes at end of table.

Table H-1. Rate of missing data before imputation for all variables: 2004—Continued

| Variable description                                         | Variable name | Percent missing data rate |                        |                                      |
|--------------------------------------------------------------|---------------|---------------------------|------------------------|--------------------------------------|
|                                                              |               | All students              | Undergraduate students | Graduate/first-professional students |
| Took remedial course: study skills (freshman/sophomore)      | REMEDID       | 79.8                      | 79.8                   | 0.0                                  |
| Took remedial course: writing (freshman/sophomore)           | REMEDIE       | 79.8                      | 79.8                   | 0.0                                  |
| Remedial courses: took this school year (freshman/sophomore) | REMETOOK      | 68.7                      | 68.7                   | 0.0                                  |
| Remedial courses: ever taken                                 | REMEVER       | 35.7                      | 35.7                   | 0.0                                  |
| Service needed: adaptive equipment and technology            | SERNEEDA      | 84.9                      | 84.8                   | 85.2                                 |
| Service needed: alternative exam format                      | SERNEEDB      | 84.9                      | 84.8                   | 85.2                                 |
| Service needed: courses substitution or waiver               | SERNEEDC      | 84.9                      | 84.8                   | 85.2                                 |
| Service needed: readers or classroom note takers             | SERNEEDD      | 84.9                      | 84.8                   | 85.2                                 |
| Service needed: registration assistance                      | SERNEEDE      | 84.9                      | 84.8                   | 85.2                                 |
| Service needed: sign language or oral interpreters           | SERNEEDF      | 85.0                      | 85.0                   | 85.3                                 |
| Service needed: tutors to assist with ongoing homework       | SERNEEDG      | 84.9                      | 84.8                   | 85.2                                 |
| Service needed: other                                        | SERNEEDX      | 84.9                      | 84.8                   | 85.2                                 |
| Service received: adaptive equipment and technology          | SERRECVA      | 84.6                      | 84.6                   | 85.0                                 |
| Service received: alternative exam format                    | SERRECVB      | 84.6                      | 84.6                   | 85.0                                 |
| Service received: courses substitution or waiver             | SERRECVC      | 84.6                      | 84.6                   | 85.0                                 |
| Service received: readers or classroom note takers           | SERRECVD      | 84.6                      | 84.6                   | 85.0                                 |
| Service received: registration assistance                    | SERRECVE      | 84.6                      | 84.6                   | 85.0                                 |
| Service received: sign language or oral interpreters         | SERRECVF      | 84.6                      | 84.6                   | 85.0                                 |
| Service received: tutors to assist with ongoing homework     | SERRECVG      | 84.6                      | 84.6                   | 85.0                                 |
| Service received: other                                      | SERRECVX      | 84.6                      | 84.6                   | 85.0                                 |
| Currently receiving SSI or SSDI                              | SSISSDI       | 84.5                      | 84.5                   | 84.8                                 |
| Ever applied for vocational rehabilitation services          | VOCAPPLY      | 86.7                      | 86.7                   | 86.5                                 |
| Ever received vocational rehabilitation services             | VOCRECV       | 84.5                      | 84.4                   | 84.8                                 |
| Ever vote                                                    | VOTEEVER      | 35.8                      | 37.0                   | 25.6                                 |
| Registered to vote                                           | VOTEREG       | 35.8                      | 37.1                   | 25.7                                 |
| Balance due on all credit cards                              | CRBALDUE      | 75.2                      | 75.2                   | 0.0                                  |
| Have dependent children in daycare                           | DEPCARE       | 40.2                      | 41.9                   | 27.8                                 |
| Monthly daycare costs                                        | DEPCOST       | 66.3                      | 68.0                   | 51.4                                 |
| Ever attend community college                                | EVER2PUB      | 35.0                      | 37.5                   | 22.9                                 |
| Ever attend 4-year institution                               | EVER4YR       | 39.8                      | 39.8                   | 0.0                                  |
| Graduate assistantship: included health insurance            | GAINSUR       | 17.2                      | 0.0                    | 17.2                                 |
| Graduate TA duties: answered student email                   | GRADTAA       | 18.1                      | 0.0                    | 18.1                                 |
| Graduate TA duties: assisted grading                         | GRADTAB       | 18.1                      | 0.0                    | 18.1                                 |
| Graduate TA duties: assumed teaching responsibility          | GRADTAC       | 18.1                      | 0.0                    | 18.1                                 |
| Graduate TA duties: held office hours                        | GRADTAD       | 18.1                      | 0.0                    | 18.1                                 |
| Graduate TA duties: lead discussion sections                 | GRADTAE       | 18.1                      | 0.0                    | 18.1                                 |
| Graduate TA duties: supervised lab hours                     | GRADTAF       | 18.1                      | 0.0                    | 18.1                                 |
| Highest level of education ever expected                     | HIGHLVEX      | 36.6                      | 37.3                   | 28.1                                 |
| Institution distance from home                               | HOMEDIST      | 38.8                      | 40.2                   | 28.0                                 |
| Assets: parents own home                                     | HOMEPAR       | 34.9                      | 34.9                   | 0.0                                  |
| Assets: student owns home                                    | HOMESTUD      | 47.0                      | 51.7                   | 33.0                                 |
| Can afford school without working (student)                  | JOB AFFOR     | 53.8                      | 53.7                   | 55.3                                 |
| Job related to coursework (non-degree)                       | JOBCLASS      | 45.8                      | 45.5                   | 52.5                                 |
| Earnings from work while enrolled (excl work-study)          | JOBEARN       | 49.0                      | 49.8                   | 41.8                                 |
| Job effect: helped with career preparation (student)         | JOBEFFA       | 53.7                      | 53.6                   | 55.2                                 |
| Job effect: helped with coursework (student)                 | JOBEFFB       | 53.7                      | 53.6                   | 55.2                                 |
| Job effect: restricted class choice (student)                | JOBEFFC       | 53.7                      | 53.6                   | 55.2                                 |
| Job effect: limited class schedule (student)                 | JOBEFFD       | 53.7                      | 53.6                   | 55.2                                 |
| Job effect: limited facility access (student)                | JOBEFFE       | 53.7                      | 53.6                   | 55.2                                 |
| Job effect: limited number of classes (student)              | JOBEFFF       | 53.7                      | 53.6                   | 55.2                                 |

See notes at end of table.

Table H-1. Rate of missing data before imputation for all variables: 2004—Continued

| Variable description                                         | Variable name | Percent missing data rate |                        |                                      |
|--------------------------------------------------------------|---------------|---------------------------|------------------------|--------------------------------------|
|                                                              |               | All students              | Undergraduate students | Graduate/first-professional students |
| Type of employer                                             | JOBEMPL       | 45.1                      | 46.2                   | 35.9                                 |
| Parents expected to have a job (student)                     | JOBEXPT       | 51.7                      | 51.7                   | 0.0                                  |
| Hours worked per week (excluding work-study)                 | JOBHOUR       | 43.7                      | 44.6                   | 36.4                                 |
| Main reason for working (student)                            | JOBMAIN       | 53.7                      | 53.6                   | 55.3                                 |
| Job related to major (degree)                                | JOBMAJOR      | 51.0                      | 53.2                   | 33.9                                 |
| Number of jobs during NPSAS year                             | JOBNUM        | 32.7                      | 34.0                   | 23.1                                 |
| Job located primarily on or off campus                       | JOBONOFF      | 43.7                      | 44.8                   | 34.9                                 |
| Have job prior to enrollment at NPSAS                        | JOBPRIOR      | 43.8                      | 44.8                   | 35.0                                 |
| Primary role, student or employee                            | JOBROLE       | 42.6                      | 43.5                   | 34.4                                 |
| Summer savings                                               | JOBSAVE       | 47.1                      | 47.1                   | 0.0                                  |
| Combine school and work: took class outside work (employee)  | JOBSCHA       | 69.8                      | 72.7                   | 48.9                                 |
| Combine school and work: took distance education (employee)  | JOBSCHB       | 69.8                      | 72.7                   | 48.9                                 |
| Combine school and work: modify work schedule (employee)     | JOBSCHC       | 69.8                      | 72.7                   | 48.9                                 |
| Summer job                                                   | JOBSUMMR      | 37.3                      | 37.3                   | 0.0                                  |
| Weeks worked while enrolled                                  | JOBWEEK       | 43.7                      | 44.7                   | 35.2                                 |
| Field of study/major (detailed)                              | MAJORS        | 10.7                      | 12.0                   | 1.1                                  |
| Number of credit cards in own name                           | NUMCRED       | 34.7                      | 34.7                   | 0.0                                  |
| Monthly allowance amount from parents                        | PARALLOW      | 25.6                      | 27.0                   | 0.0                                  |
| Help from parents: pay housing                               | PARHELPA      | 32.7                      | 32.7                   | 0.0                                  |
| Help from parents: pay education expenses other than tuition | PARHELPA      | 32.7                      | 32.7                   | 0.0                                  |
| Help from parents: pay living expenses other than housing    | PARHELPC      | 32.7                      | 32.7                   | 0.0                                  |
| Help from parents: pay tuition and fees                      | PARHELPA      | 32.7                      | 32.7                   | 0.0                                  |
| Lived with parents while not enrolled                        | PARLIVE       | 30.7                      | 30.7                   | 0.0                                  |
| Parents help pay credit bills                                | PARPAYCR      | 51.6                      | 51.6                   | 0.0                                  |
| Payoff or carry credit balance                               | PAYOFBAL      | 51.7                      | 51.7                   | 0.0                                  |
| Use credit to pay for tuition                                | PAYTUIT       | 51.5                      | 51.5                   | 0.0                                  |
| Primary language                                             | PRIMLANG      | 35.8                      | 37.3                   | 24.6                                 |
| Race—American Indian or Alaska Native recognized tribe       | RAINDTRB      | 37.8                      | 38.3                   | 32.1                                 |
| Siblings attended college before                             | SIBCOLB4      | 35.0                      | 35.0                   | 0.0                                  |
| School job: part of community service project                | SJCOMSER      | 33.4                      | 33.4                   | 0.0                                  |
| School job: hours per week                                   | SJHOURS       | 21.0                      | 20.5                   | 22.2                                 |
| School job: related to major                                 | SJMAJOR       | 34.4                      | 34.4                   | 0.0                                  |
| School job: located primarily on or off campus               | SJONOFF       | 34.3                      | 34.3                   | 0.0                                  |
| School job: for NPSAS or another institution/organization    | SJSCHOOL      | 34.4                      | 34.4                   | 0.0                                  |
| School job: involved with literacy education or tutoring     | SJTUTOR       | 33.3                      | 33.3                   | 0.0                                  |
| Spouse attending college                                     | SPINCOL       | 33.3                      | 37.3                   | 21.3                                 |
| Associate degree type                                        | UGDEGAA       | 2.6                       | 2.6                    | 0.0                                  |
| Received untaxed benefits in 2003                            | UNTAXBF       | 36.2                      | 39.8                   | 24.3                                 |
| Received untaxed benefits: child support                     | UNTAXBFA      | 70.7                      | 70.3                   | 74.6                                 |
| Received untaxed benefits: disability payments               | UNTAXBFB      | 79.6                      | 78.4                   | 87.2                                 |
| Received untaxed benefits: food stamps                       | UNTAXBFC      | 79.6                      | 78.4                   | 87.2                                 |
| Received untaxed benefits: social security benefits          | UNTAXBFD      | 79.8                      | 78.6                   | 87.4                                 |
| Received untaxed benefits: TANF                              | UNTAXBFE      | 70.7                      | 70.3                   | 74.6                                 |
| Received untaxed benefits: worker's compensation             | UNTAXBFF      | 79.6                      | 78.4                   | 87.2                                 |
| Student was born in the United States                        | USBORN        | 35.6                      | 36.9                   | 25.1                                 |
| Year began graduate school                                   | YEARGRAD      | 22.0                      | 0.0                    | 22.0                                 |
| Year received bachelor's degree                              | BAYEAR        | 19.3                      | 0.0                    | 19.3                                 |
| Grade point average                                          | GPA           | 12.8                      | 12.8                   | 0.0                                  |
| Graduate class level                                         | GRADLVL       | 3.9                       | 0.0                    | 3.9                                  |
| Year began graduate degree                                   | GRADPYR       | 24.5                      | 0.0                    | 24.5                                 |
| Graduate enrollment status (all years)                       | GRENRST       | 21.7                      | 0.0                    | 21.7                                 |

See notes at end of table.

**Table H-1. Rate of missing data before imputation for all variables: 2004—Continued**

| Variable description                                          | Variable name | Percent missing data rate |                        |                                      |
|---------------------------------------------------------------|---------------|---------------------------|------------------------|--------------------------------------|
|                                                               |               | All students              | Undergraduate students | Graduate/first-professional students |
| High school degree type                                       | HSDEG         | 9.7                       | 9.7                    | 0.0                                  |
| High school graduation year                                   | HSGRADYY      | 13.5                      | 13.5                   | 0.0                                  |
| Student's parents were born in the United States              | PARBORN       | 36.1                      | 37.6                   | 24.8                                 |
| Year first enrolled in postsecondary education                | PSECTYR       | 24.0                      | 24.0                   | 0.0                                  |
| Type of class: business                                       | CLASSA        | 46.2                      | 46.0                   | 47.6                                 |
| Type of class: health                                         | CLASSB        | 46.2                      | 46.0                   | 47.6                                 |
| Type of class: education                                      | CLASSC        | 46.2                      | 46.0                   | 47.6                                 |
| Type of class: engineering and engineering technology         | CLASSD        | 46.2                      | 46.0                   | 47.6                                 |
| Type of class: computer and information sciences              | CLASSE        | 46.2                      | 46.0                   | 47.6                                 |
| Type of class: social sciences                                | CLASSF        | 46.2                      | 46.0                   | 47.6                                 |
| Type of class: natural sciences and mathematics               | CLASSG        | 46.2                      | 46.0                   | 47.6                                 |
| Type of class: arts and humanities                            | CLASSH        | 46.2                      | 46.0                   | 47.6                                 |
| Type of class: communications                                 | CLASSI        | 46.2                      | 46.0                   | 47.6                                 |
| Type of class: vocational program                             | CLASSJ        | 46.2                      | 46.0                   | 47.6                                 |
| Type of classes: university transfer                          | CLASSK        | 46.2                      | 46.0                   | 47.6                                 |
| Type of classes: general education                            | CLASSL        | 46.2                      | 46.0                   | 47.6                                 |
| Type of class: other                                          | CLASSX        | 46.2                      | 46.0                   | 47.6                                 |
| Claimed as a dependent                                        | DEPCLAIM      | 32.7                      | 32.7                   | 0.0                                  |
| Ever attended elementary or secondary school outside the U.S. | FORESCH       | 36.2                      | 36.2                   | 0.0                                  |
| Tuition paid by assistantship                                 | GRASTUIT      | 20.2                      | 0.0                    | 20.2                                 |
| Type of high school attended                                  | HSTYPE        | 34.8                      | 34.8                   | 0.0                                  |
| Effect of job on grades                                       | JOBEFFGR      | 35.3                      | 35.9                   | 26.8                                 |
| NPSAS was first school attended after high school             | NPFIRST       | 34.0                      | 34.0                   | 0.0                                  |
| Own investments, business or farm over \$10,000               | OWNINVST      | 46.7                      | 50.7                   | 33.0                                 |
| Parents taking college courses in 2003-2004                   | PARCOLL       | 35.0                      | 35.0                   | 0.0                                  |
| Parents own other real estate                                 | PARESTA       | 35.8                      | 35.8                   | 0.0                                  |
| Claim Federal Hope scholarship                                | TAXHOPE       | 38.0                      | 38.9                   | 31.8                                 |
| Claim lifetime learning tax credit                            | TAXLEARN      | 37.7                      | 38.8                   | 29.2                                 |
| Claim tuition tax deduction                                   | TAXTUIT       | 36.9                      | 38.2                   | 27.9                                 |
| Transferred credits to NPSAS                                  | TRANSCRD      | 68.5                      | 68.5                   | 0.0                                  |
| Transferred from NPSAS                                        | TRANSFR       | 58.7                      | 58.7                   | 0.0                                  |
| Plan to transfer from NPSAS                                   | TRANSPLN      | 51.9                      | 51.9                   | 0.0                                  |
| Transferred to NPSAS                                          | TRANSTO       | 43.4                      | 43.4                   | 0.0                                  |

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table H-2. Pre- versus post-imputation frequency distribution for eight select variables: 2004

| Variable                                          | Percent                  |                           |                     |
|---------------------------------------------------|--------------------------|---------------------------|---------------------|
|                                                   | Pre-imputation frequency | Post-imputation frequency | Difference pre-post |
| Dependency status                                 |                          |                           |                     |
| Dependent                                         | 43.5                     | 45.9                      | -2.4                |
| Independent                                       | 56.5                     | 54.1                      | 2.4                 |
| Dependents—has dependent children                 |                          |                           |                     |
| No                                                | 77.6                     | 75.6                      | 1.9                 |
| Yes                                               | 22.4                     | 24.4                      | -1.9                |
| Dependents—has dependents                         |                          |                           |                     |
| No dependents                                     | 73.9                     | 73.7                      | 0.1                 |
| Has dependents                                    | 26.1                     | 26.3                      | -0.1                |
| Mother's highest education level                  |                          |                           |                     |
| Do not know                                       | 4.3                      | 3.9                       | 0.4                 |
| Did not complete high school                      | 10.7                     | 9.8                       | 0.9                 |
| High school diploma or equivalent                 | 38.0                     | 35.0                      | 3.0                 |
| Vocational or technical training                  | 4.0                      | 3.7                       | 0.3                 |
| Less than 2 years of college                      | 6.2                      | 6.9                       | -0.7                |
| Associate's degree                                | 7.1                      | 7.9                       | -0.9                |
| Two or more years of college but no degree        | 3.7                      | 4.1                       | -0.4                |
| Bachelor's degree                                 | 16.1                     | 17.9                      | -1.8                |
| Master's degree or equivalent                     | 8.1                      | 8.8                       | -0.7                |
| First-professional degree                         | 0.8                      | 0.8                       | 0.0                 |
| Doctoral degree                                   | 1.1                      | 1.2                       | -0.1                |
| Number of institutions attended                   |                          |                           |                     |
| One institution attended                          | 87.3                     | 87.5                      | -0.2                |
| Two institutions attended                         | 11.8                     | 11.6                      | 0.2                 |
| Three institutions attended                       | 0.8                      | 0.8                       | 0.0                 |
| Four institutions attended                        | 0.1                      | 0.1                       | 0.0                 |
| Five institutions attended                        | 0.0                      | 0.0                       | 0.0                 |
| Military service type                             |                          |                           |                     |
| No military service                               | 95.3                     | 95.4                      | -0.1                |
| Active duty                                       | 0.5                      | 0.5                       | -0.1                |
| Reserves                                          | 1.0                      | 1.1                       | -0.1                |
| Veteran                                           | 3.2                      | 3.0                       | 0.3                 |
| Number of family members in college (independent) |                          |                           |                     |
| No family members in college                      | 47.7                     | 45.9                      | 1.7                 |
| One family member in college                      | 45.3                     | 46.5                      | -1.2                |
| Two family members in college                     | 6.2                      | 6.6                       | -0.4                |
| Three family members in college                   | 0.7                      | 0.8                       | -0.1                |
| Four family members in college                    | 0.1                      | 0.1                       | 0.0                 |
| Five family members in college                    | 0.0                      | 0.0                       | 0.0                 |
| Six family members in college                     | 0.0                      | 0.0                       | 0.0                 |
| Disability                                        |                          |                           |                     |
| No disability                                     | 90.1                     | 89.7                      | 0.4                 |
| Disabled                                          | 9.9                      | 10.3                      | -0.4                |

<sup>1</sup> Difference = (Pre-Post)/Pre.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).





# **Appendix I**

## **Analysis Variables**

---



**Table I-1. Analysis variables: 2004**

| Variable name | Prefix                   | Label                                                     |
|---------------|--------------------------|-----------------------------------------------------------|
| STUDTYPE      | A_Student_Type_Indicator | NPSAS:04 Student type                                     |
| AIDAPP        | Aid_Application          | Applied for any aid                                       |
| FEDAPP        | Aid_Application          | Applied for federal aid                                   |
| ANYFEDND      | Aid_Federal              | Federal need-based aid flag                               |
| CAMPAMT       | Aid_Federal              | Federal campus-based aid (Perkins, SEOG, FWSP)            |
| FEDNEED       | Aid_Federal              | Federal need-based aid                                    |
| TFEDAID       | Aid_Federal              | Total federal aid (excludes VA/DOD)                       |
| TFEDAID2      | Aid_Federal              | Total federal aid (includes VA/DOD)                       |
| TFEDWRK       | Aid_Federal              | Federal Work-study                                        |
| TITIVAMT      | Aid_Federal              | Total federal Title IV aid                                |
| ANYGTRN       | Aid_Federal_Grants       | Graduate traineeship flag                                 |
| ANYPELL       | Aid_Federal_Grants       | Pell grant flag                                           |
| GRTRNAMT      | Aid_Federal_Grants       | Traineeship amount                                        |
| OTHFDGRT      | Aid_Federal_Grants       | Other federal grants (not Title IV)                       |
| PELLAMT       | Aid_Federal_Grants       | Federal Pell Grant                                        |
| PLNPSAS       | Aid_Federal_Grants       | NPSAS school Pell indicator                               |
| SEOGAMT       | Aid_Federal_Grants       | Federal SEOG grant                                        |
| TFEDGRT       | Aid_Federal_Grants       | Total federal grants                                      |
| ANYSTAF       | Aid_Federal_Loans        | Stafford loan flag                                        |
| DIRECTLN      | Aid_Federal_Loans        | Stafford loan-Direct or FFELP program indicator           |
| FEDCUM1       | Aid_Federal_Loans        | Cumulative federal loans-undergraduate                    |
| FEDCUM2       | Aid_Federal_Loans        | Cumulative federal loans-graduate/first-professional      |
| FEDCUM3       | Aid_Federal_Loans        | Cumulative federal loans-total                            |
| FEDOWE1       | Aid_Federal_Loans        | Amount still owed on all undergraduate federal loans      |
| FEDOWE2       | Aid_Federal_Loans        | Amount still owed on all graduate federal loans           |
| FEDOWE3       | Aid_Federal_Loans        | Amount still owed on all federal loans                    |
| LNNPSAS       | Aid_Federal_Loans        | NPSAS school loan indicator                               |
| PERKAMT       | Aid_Federal_Loans        | Perkins loan                                              |
| PERKCUM1      | Aid_Federal_Loans        | Cumulative Perkins loans-undergraduate                    |
| PERKCUM2      | Aid_Federal_Loans        | Cumulative Perkins loans-graduate/first-professional      |
| PERKCUM3      | Aid_Federal_Loans        | Cumulative Perkins loans-total                            |
| PHSLOAN       | Aid_Federal_Loans        | Federal health professions loans                          |
| PLUSAMT       | Aid_Federal_Loans        | PLUS loan total                                           |
| PLUSCUM       | Aid_Federal_Loans        | Cumulative PLUS loans                                     |
| STAFCT1       | Aid_Federal_Loans        | Stafford subsidized maximum categories                    |
| STAFCT2       | Aid_Federal_Loans        | Stafford total maximum categories                         |
| STAFFAMT      | Aid_Federal_Loans        | Stafford total subsidized + unsubsidized                  |
| STAFSUB       | Aid_Federal_Loans        | Stafford subsidized total                                 |
| STAFTYPE      | Aid_Federal_Loans        | Stafford loan types received                              |
| STAFUNSB      | Aid_Federal_Loans        | Stafford unsubsidized total                               |
| STFCUM1       | Aid_Federal_Loans        | Cumulative Stafford loans-undergraduate                   |
| STFCUM2       | Aid_Federal_Loans        | Cumulative Stafford loans-graduate/first-professional     |
| STFCUM3       | Aid_Federal_Loans        | Cumulative Stafford loans-total                           |
| SUBLOAN       | Aid_Federal_Loans        | Federal subsidized loans (Stafford & Perkins)             |
| T4LNAMT1      | Aid_Federal_Loans        | Title IV loans (except PLUS)                              |
| T4LNAMT2      | Aid_Federal_Loans        | Title IV loans (includes PLUS)                            |
| TFEDLN        | Aid_Federal_Loans        | Total federal loans (excludes PLUS)                       |
| TFEDLN2       | Aid_Federal_Loans        | Total federal loans (includes PLUS)                       |
| ANYFED        | Aid_Federal_Total        | Federal any aid flag                                      |
| ANYGFEL       | Aid_Grants               | Graduate fellowship flag                                  |
| EMPLYAMT      | Aid_Grants               | Employer aid (includes college staff)                     |
| GRFELAMT      | Aid_Grants               | Total graduate fellowships, grants, traineeships, waivers |
| MERITAMT      | Aid_Grants               | Total merit-only grants                                   |
| INLNAMT       | Aid_Institutional        | Institutional loans                                       |
| INSTAMT       | Aid_Institutional        | Institutional aid total                                   |

See notes at end of table.

**Table I-1. Analysis variables: 2004—Continued**

| Variable name | Prefix                   | Label                                                                |
|---------------|--------------------------|----------------------------------------------------------------------|
| INSTWRK       | Aid_Institutional        | Institutional work-study                                             |
| ANYINSTG      | Aid_Institutional_Grants | Institution grant flag                                               |
| EMPLWAIV      | Aid_Institutional_Grants | Institutional tuition waivers for staff                              |
| GRINFEL       | Aid_Institutional_Grants | Institutional graduate fellowship amount                             |
| INATHAMT      | Aid_Institutional_Grants | Athletic scholarships                                                |
| INGRTAMT      | Aid_Institutional_Grants | Institutional grants total                                           |
| INSMERIT      | Aid_Institutional_Grants | Institutional merit-only grants                                      |
| INSTNEED      | Aid_Institutional_Grants | Institutional need-based grants                                      |
| INSTNOND      | Aid_Institutional_Grants | Institutional no-need & merit grants                                 |
| INSWAIV       | Aid_Institutional_Grants | Institutional tuition & fee waivers                                  |
| ANYGAST       | Aid_Institutional_Other  | Graduate any assistantship flag                                      |
| ANYGDA        | Aid_Institutional_Other  | Graduate other assistantship flag                                    |
| ANYGRA        | Aid_Institutional_Other  | Graduate research assistantship flag                                 |
| ANYGTA        | Aid_Institutional_Other  | Graduate teaching assistantship flag                                 |
| GRASTAMT      | Aid_Institutional_Other  | Total assistantships amount                                          |
| GRGRDAMT      | Aid_Institutional_Other  | Other graduate assistantship amount                                  |
| GRRESAMT      | Aid_Institutional_Other  | Research assistantship amount                                        |
| GRTEAAMT      | Aid_Institutional_Other  | Teaching assistantship amount                                        |
| ANYINWK       | Aid_Institutional_Work   | Work-study (institution) flag                                        |
| UNSBLOAN      | Aid_Loans                | Total unsubsidized loans (all sources)                               |
| AIDSNEED      | Aid_Need                 | Aid amount exceeding federal need                                    |
| EFC           | Aid_Need                 | Expected Family Contribution (EFC composite)                         |
| EFC1          | Aid_Need                 | EFC as reported (Pell, CPS, CADE)                                    |
| EFCOID        | Aid_Need                 | Aid subject to federal EFC limitation                                |
| SNEED1        | Aid_Need                 | Student budget minus EFC                                             |
| SNEED2        | Aid_Need                 | Student budget minus EFC minus total aid                             |
| SNEED3        | Aid_Need                 | Student budget minus EFC minus federal grants                        |
| SNEED4        | Aid_Need                 | Student budget minus EFC minus grants + federal need aid             |
| SNEED5        | Aid_Need                 | Student budget minus EFC minus all grants                            |
| SNEED7        | Aid_Need                 | Student budget minus EFC, federal & state grants                     |
| NETCST1       | Aid_Net Price            | Student budget minus all aid                                         |
| NETCST10      | Aid_Net Price            | Tuition and fees minus federal grants                                |
| NETCST12      | Aid_Net Price            | Tuition and fees minus state grants                                  |
| NETCST13      | Aid_Net Price            | Tuition and fees minus institutional grants                          |
| NETCST14      | Aid_Net Price            | Tuition and fees minus all non-federal grants                        |
| NETCST15      | Aid_Net Price            | Tuition and fees minus state + institutional grants                  |
| NETCST16      | Aid_Net Price            | Student budget minus federal and state grants                        |
| NETCST17      | Aid_Net Price            | Student budget minus all grants and loans                            |
| NETCST18      | Aid_Net Price            | Student budget minus all aid except work-study                       |
| NETCST2       | Aid_Net Price            | Student budget minus federal grants                                  |
| NETCST3       | Aid_Net Price            | Student budget minus all grants                                      |
| NETCST4       | Aid_Net Price            | Student budget minus grants and half of loans                        |
| NETCST9       | Aid_Net Price            | Tuition and fees minus all grants                                    |
| ANYVET        | Aid_Outside              | Veterans benefits flag                                               |
| OTHRSCR       | Aid_Outside              | Outside sources total                                                |
| OTHTYPE       | Aid_Outside              | Total other type of aid (PLUS, job training, assistantships, VA/DOD) |
| PRIVAMT       | Aid_Outside              | Total private sources grants and loans                               |
| PRIVLOAN      | Aid_Outside              | Private (alternative) loans                                          |
| VADODAMT      | Aid_Outside              | Veteran's benefits and DOD                                           |
| VETBEN        | Aid_Outside              | Veteran's benefits                                                   |
| ANYEMP        | Aid_Outside_Grants       | Employer aid flag                                                    |
| ANYPEMP       | Aid_Outside_Grants       | Parent employer aid flag                                             |
| ANYPRVGT      | Aid_Outside_Grants       | Private grant flag                                                   |
| EMPLYAM1      | Aid_Outside_Grants       | Employer aid (student)                                               |

See notes at end of table.

**Table I-1. Analysis variables: 2004—Continued**

| Variable name | Prefix             | Label                                                |
|---------------|--------------------|------------------------------------------------------|
| EMPLYAM2      | Aid_Outside_Grants | Employer aid (parents)                               |
| EMPLYAM3      | Aid_Outside_Grants | Employer aid (student & parents)                     |
| OTHGTAMT      | Aid_Outside_Grants | Outside grants (private & employer)                  |
| PRIVAIID      | Aid_Outside_Grants | Private sources grants                               |
| ANYPRVLN      | Aid_Outside_Loans  | Private loan flag                                    |
| AIDSRC        | Aid_Package        | Aid package by source of aid                         |
| AIDTYPE       | Aid_Package        | Aid package by type of aid                           |
| FEDLNPAK      | Aid_Package        | Federal loan package by type of loan                 |
| FEDPACK       | Aid_Package        | Federal aid package by type of aid                   |
| GLOANSRC      | Aid_Package        | Loan package by source of loan for graduate students |
| GRNTSRC       | Aid_Package        | Grant package by source of grant                     |
| INSTPACK      | Aid_Package        | Aid package with institutional aid                   |
| LOANSRC       | Aid_Package        | Loan package by source of loan                       |
| PELLPACK      | Aid_Package        | Aid package with Pell grants                         |
| AIDCST        | Aid_Ratio          | Ratio of total aid to student budget                 |
| FEDGRPCT      | Aid_Ratio          | Ratio of federal grants to total aid                 |
| FEDPCT        | Aid_Ratio          | Ratio of federal aid to total aid                    |
| GRTCST        | Aid_Ratio          | Ratio of grant aid to student budget                 |
| GRTLOAN       | Aid_Ratio          | Ratio of grants to total loans                       |
| GRTPCT        | Aid_Ratio          | Ratio of grants to total aid                         |
| GRTPCTTN      | Aid_Ratio          | Ratio of grant aid to tuition                        |
| GRTRATIO      | Aid_Ratio          | Ratio of grants to grants and loans                  |
| INSTGPCT      | Aid_Ratio          | Ratio of institutional grants to total aid           |
| INSTPCT       | Aid_Ratio          | Ratio of institution aid to total aid                |
| LOANCST       | Aid_Ratio          | Ratio of loans to student budget (excludes PLUS)     |
| LOANCST2      | Aid_Ratio          | Ratio of loans to student budget (includes PLUS)     |
| LOANPCT       | Aid_Ratio          | Ratio of loans to total aid (excludes PLUS)          |
| LOANPCT2      | Aid_Ratio          | Ratio of loans to total aid (includes PLUS)          |
| PELLCST       | Aid_Ratio          | Ratio of Pell grant to student budget                |
| PELLRAT1      | Aid_Ratio          | Ratio of Pell grant to total aid                     |
| PELLRAT2      | Aid_Ratio          | Ratio of Pell grant to total grants                  |
| PLUSPCT       | Aid_Ratio          | Ratio of PLUS loan to total aid                      |
| STAPCT        | Aid_Ratio          | Ratio of state aid to total aid                      |
| STGRPCT       | Aid_Ratio          | Ratio of state grants to total aid                   |
| WORKPCT       | Aid_Ratio          | Ratio of work-study to total aid                     |
| STATEAMT      | Aid_State          | State aid total                                      |
| STLNAMT       | Aid_State          | State loans                                          |
| ANYSTGRT      | Aid_State_Grants   | State grant flag                                     |
| MNAFR         | Aid_State_Grants   | Minnesota Assigned Family Responsibility             |
| NYNTB         | Aid_State_Grants   | New York net taxable balance                         |
| NYSCHD        | Aid_State_Grants   | New York TAP award schedule                          |
| STATNEED      | Aid_State_Grants   | State-need-based grants                              |
| STATNOND      | Aid_State_Grants   | State non-need & merit grants                        |
| STGTAMT       | Aid_State_Grants   | State grants total                                   |
| STMERIT       | Aid_State_Grants   | State merit-only grants                              |
| STNOND1       | Aid_State_Grants   | State non-need grants                                |
| STWKAMT       | Aid_State_Other    | State work-study                                     |
| VOHELP        | Aid_State_Other    | Vocational rehabilitation and training               |
| ANYWKST       | Aid_Total          | Work-study job flag                                  |
| TNFEDAID      | Aid_Total          | Total non-federal aid                                |
| TOTAID        | Aid_Total          | Aid total amount                                     |
| TOTAID2       | Aid_Total          | Total federal (Title IV), state, & institutional aid |
| TOTAID4       | Aid_Total          | Total aid excluding PLUS                             |
| TOTAID5       | Aid_Total          | Total aid excluding work-study                       |
| TOTWKST       | Aid_Total          | Total work-study                                     |

See notes at end of table.

**Table I-1. Analysis variables: 2004—Continued**

| Variable name | Prefix                  | Label                                                        |
|---------------|-------------------------|--------------------------------------------------------------|
| NEEDAID       | Aid_Total_Grants        | Total need-based grant aid                                   |
| TNFEDGRT      | Aid_Total_Grants        | Total non-federal grants                                     |
| TOTGRT        | Aid_Total_Grants        | Total grants                                                 |
| BORAMT1       | Aid_Total_Loans         | Cumulative borrowed for undergraduate education              |
| BORAMT2       | Aid_Total_Loans         | Cumulative borrowed for graduate education                   |
| BORAMT3       | Aid_Total_Loans         | Cumulative borrowed for education                            |
| OWEAMT1       | Aid_Total_Loans         | Amount still owed on all undergraduate education loans       |
| OWEAMT2       | Aid_Total_Loans         | Amount still owed on all graduate education loans            |
| OWEAMT3       | Aid_Total_Loans         | Amount still owed on all education loans                     |
| TNFEDLN       | Aid_Total_Loans         | Total non-federal loans                                      |
| TOTLOAN       | Aid_Total_Loans         | Total loans (excluding PLUS)                                 |
| TOTLOAN2      | Aid_Total_Loans         | Total loans (including PLUS)                                 |
| AGE           | Background_Demographics | Age as of 12/31/03                                           |
| AGEGROUP      | Background_Demographics | Age groups as of 12/31/03                                    |
| AGEPSE        | Background_Demographics | Age at start of postsecondary education                      |
| CITIZEN2      | Background_Demographics | Citizenship                                                  |
| DELAYENR      | Background_Demographics | Delayed enrollment into PSE- number of years                 |
| DEPEND        | Background_Demographics | Dependency status                                            |
| DEPEND2       | Background_Demographics | Dependency status (3 categories)                             |
| DEPEND4       | Background_Demographics | Dependency status (4 categories)                             |
| DEPEND5A      | Background_Demographics | Dependency and marital status (separated=married)            |
| DEPEND5B      | Background_Demographics | Dependency and marital status (separated=unmarried)          |
| GENDER        | Background_Demographics | Gender                                                       |
| HISPANIC      | Background_Demographics | Race-ethnicity: Hispanic or Latino origin                    |
| HISPTYPE      | Background_Demographics | Race-ethnicity: Type of Hispanic origin                      |
| IMMIGRA       | Background_Demographics | Immigrant status                                             |
| ORPHAN        | Background_Demographics | Orphan or ward of court                                      |
| PRIMLANG      | Background_Demographics | English is the primary language                              |
| RAASIAN       | Background_Demographics | Race--Asian                                                  |
| RABLACK       | Background_Demographics | Race—Black or African-American                               |
| RACE          | Background_Demographics | Race-ethnicity (with multiple)                               |
| RACECEN       | Background_Demographics | Race: census categories                                      |
| RAINDIAN      | Background_Demographics | Race—American Indian or Alaska Native                        |
| RAINDTRB      | Background_Demographics | Race—American Indian or Alaska Native recognized tribe       |
| RAISLAND      | Background_Demographics | Race—Native Hawaiian/other Pacific Islander                  |
| RAOTHER       | Background_Demographics | Race—Other                                                   |
| RAWHITE       | Background_Demographics | Race—White                                                   |
| RISKINDX      | Background_Demographics | Index of risk                                                |
| SINGLPAR      | Background_Demographics | Single-parent independent students                           |
| SMARITAL      | Background_Demographics | Student's marital status                                     |
| USBORN        | Background_Demographics | Student was born in the United States                        |
| DISABLE       | Background_Disabilities | Disability indicator                                         |
| DISMOBIL      | Background_Disabilities | Condition that limits physical activities                    |
| DISOTHER      | Background_Disabilities | Other condition lasting six months or more                   |
| DISOTHRB      | Background_Disabilities | Difficulty: dressing, bathing, or getting around inside home |
| DISOTHRB      | Background_Disabilities | Difficulty: getting to school to attend class                |
| DISOTHRB      | Background_Disabilities | Difficulty: learning, remembering, or concentrating          |
| DISOTHRD      | Background_Disabilities | Difficulty: working at a job                                 |
| DISSENSR      | Background_Disabilities | Have a long-lasting sensory condition                        |
| DISTYPES      | Background_Disabilities | Main type of condition or impairment                         |
| SERNEEDA      | Background_Disabilities | Service needed: adaptive equipment and technology            |
| SERNEEDB      | Background_Disabilities | Service needed: alternative exam format                      |
| SERNEEDC      | Background_Disabilities | Service needed: course substitution or waiver                |
| SERNEEDD      | Background_Disabilities | Service needed: readers or classroom note takers             |
| SERNEEDE      | Background_Disabilities | Service needed: registration assistance                      |

See notes at end of table.

Table I-1. Analysis variables: 2004—Continued

| Variable name | Prefix                  | Label                                                    |
|---------------|-------------------------|----------------------------------------------------------|
| SERNEEDF      | Background_Disabilities | Service needed: sign language or oral interpreters       |
| SERNEEDG      | Background_Disabilities | Service needed: tutors to assist with ongoing homework   |
| SERNEEDX      | Background_Disabilities | Service needed: other                                    |
| SERRECVA      | Background_Disabilities | Service received: adaptive equipment and technology      |
| SERRECVB      | Background_Disabilities | Service received: alternative exam format                |
| SERRECVC      | Background_Disabilities | Service received: courses substitution or waiver         |
| SERRECVD      | Background_Disabilities | Service received: readers or classroom note takers       |
| SERRECVE      | Background_Disabilities | Service received: registration assistance                |
| SERRECVF      | Background_Disabilities | Service received: sign language or oral interpreters     |
| SERRECVG      | Background_Disabilities | Service received: tutors to assist with ongoing homework |
| SERRECVX      | Background_Disabilities | Service received: other                                  |
| SSISSDI       | Background_Disabilities | Currently receiving SSI or SSDI                          |
| VOCAPPLY      | Background_Disabilities | Ever applied for vocational rehabilitation services      |
| VOCRECV       | Background_Disabilities | Ever received vocational rehabilitation services         |
| DEPANY        | Background_Family       | Dependents - has dependents                              |
| DEPCARE       | Background_Family       | Dependent children in daycare                            |
| DEPCHILD      | Background_Family       | Dependents - has dependent children                      |
| DEPCOST       | Background_Family       | Monthly daycare costs                                    |
| DEPNUM        | Background_Family       | Dependents - total number                                |
| DEPNUMCH      | Background_Family       | Dependents - number of dependent children                |
| DEPOLD        | Background_Family       | Dependent children - age of oldest                       |
| DEPOTHER      | Background_Family       | Dependents - has dependent other than children           |
| DEPTYPE       | Background_Family       | Dependents - types of dependents                         |
| DEPYNG        | Background_Family       | Dependent children - age of youngest                     |
| HSIZE         | Background_Family       | Family size (dependent & independent)                    |
| SFAMNUM       | Background_Family       | Family size (independent)                                |
| SINCOL        | Background_Family       | Number of family members in college (independent)        |
| SPINCOL       | Background_Family       | Spouse attending college                                 |
| LOCALRES      | Background_Residence    | Housing                                                  |
| PARLIVE       | Background_Residence    | Lived with parents while not enrolled                    |
| STUSTATE      | Background_Residence    | State of legal residence (student)                       |
| GAINSUR       | Education_Assistantship | Graduate assistantship: included health insurance        |
| GRADTAA       | Education_Assistantship | Graduate TA duties: answered student e-mail              |
| GRADTAB       | Education_Assistantship | Graduate TA duties: assisted grading                     |
| GRADTAC       | Education_Assistantship | Graduate TA duties: assumed teaching responsibility      |
| GRADTAD       | Education_Assistantship | Graduate TA duties: held office hours                    |
| GRADTAE       | Education_Assistantship | Graduate TA duties: led discussion sections              |
| GRADTAF       | Education_Assistantship | Graduate TA duties: supervised lab hours                 |
| DEGEARN       | Education_Attainment    | Degree already earned since high school                  |
| DEGEARNA      | Education_Attainment    | Degree already earned: bachelor's degree                 |
| DEGEARNB      | Education_Attainment    | Degree already earned: associate's degree                |
| DEGEARNC      | Education_Attainment    | Degree already earned: undergraduate certificate/diploma |
| DEGEARND      | Education_Attainment    | Degree already earned: post-BA certificate               |
| DEGEARNE      | Education_Attainment    | Degree already earned: master's degree                   |
| DEGEARNF      | Education_Attainment    | Degree already earned: post-MA certificate               |
| DEGEARNG      | Education_Attainment    | Degree already earned: first professional degree         |
| DEGEARNH      | Education_Attainment    | Degree already earned: doctoral degree                   |
| ATTEND        | Education_Attendance    | Attendance intensity in fall                             |
| ATTEND2       | Education_Attendance    | Attendance intensity in fall (half-time)                 |
| ATTNPT        | Education_Attendance    | Attendance intensity (half-time)                         |
| ATTNPTRN      | Education_Attendance    | Attendance intensity (all schools)                       |
| ATTNSTAT      | Education_Attendance    | Attendance pattern                                       |
| BAYEAR        | Education_Attendance    | Year received bachelor's degree                          |
| E01           | Education_Attendance    | Monthly enrollment status 2003/07                        |
| E02           | Education_Attendance    | Monthly enrollment status 2003/08                        |

See notes at end of table.

**Table I-1. Analysis variables: 2004—Continued**

| Variable name | Prefix                | Label                                                        |
|---------------|-----------------------|--------------------------------------------------------------|
| E03           | Education_Attendance  | Monthly enrollment status 2003/09                            |
| E04           | Education_Attendance  | Monthly enrollment status 2003/10                            |
| E05           | Education_Attendance  | Monthly enrollment status 2003/11                            |
| E06           | Education_Attendance  | Monthly enrollment status 2003/12                            |
| E07           | Education_Attendance  | Monthly enrollment status 2004/01                            |
| E08           | Education_Attendance  | Monthly enrollment status 2004/02                            |
| E09           | Education_Attendance  | Monthly enrollment status 2004/03                            |
| E10           | Education_Attendance  | Monthly enrollment status 2004/04                            |
| E11           | Education_Attendance  | Monthly enrollment status 2004/05                            |
| E12           | Education_Attendance  | Monthly enrollment status 2004/06                            |
| ENLEN         | Education_Attendance  | Number of months enrolled                                    |
| ENR01         | Education_Attendance  | Monthly enrollment status 2003/07                            |
| ENR02         | Education_Attendance  | Monthly enrollment status 2003/08                            |
| ENR03         | Education_Attendance  | Monthly enrollment status 2003/09                            |
| ENR04         | Education_Attendance  | Monthly enrollment status 2003/10                            |
| ENR05         | Education_Attendance  | Monthly enrollment status 2003/11                            |
| ENR06         | Education_Attendance  | Monthly enrollment status 2003/12                            |
| ENR07         | Education_Attendance  | Monthly enrollment status 2004/01                            |
| ENR08         | Education_Attendance  | Monthly enrollment status 2004/02                            |
| ENR09         | Education_Attendance  | Monthly enrollment status 2004/03                            |
| ENR10         | Education_Attendance  | Monthly enrollment status 2004/04                            |
| ENR11         | Education_Attendance  | Monthly enrollment status 2004/05                            |
| ENR12         | Education_Attendance  | Monthly enrollment status 2004/06                            |
| ENRFALL       | Education_Attendance  | Enrolled from July through Dec in 2003                       |
| ENRSPR        | Education_Attendance  | Enrolled from Jan through June in 2004                       |
| ENRSTAT       | Education_Attendance  | Enrollment pattern                                           |
| EVER2PUB      | Education_Attendance  | Ever attend community college                                |
| EVER4YR       | Education_Attendance  | Ever attend 4-year institution                               |
| GRADGAP       | Education_Attendance  | Years between BA and graduate school                         |
| GRADPYR       | Education_Attendance  | Year began graduate degree                                   |
| GRENRST       | Education_Attendance  | Graduate enrollment status (all years)                       |
| MFT           | Education_Attendance  | Months enrolled full-time                                    |
| MHT           | Education_Attendance  | Months enrolled half-time                                    |
| MLT           | Education_Attendance  | Months enrolled less than half time                          |
| MPT           | Education_Attendance  | Months enrolled part-time                                    |
| PSECTYR       | Education_Attendance  | Year first enrolled in postsecondary education               |
| STUDMULT      | Education_Attendance  | Number of institutions attended                              |
| DELIVE        | Education_Courses     | Distance education used: live, interactive TV or audio       |
| DERECR        | Education_Courses     | Distance education used: pre-recorded TV or audio            |
| DEWWW         | Education_Courses     | Distance education used: the internet                        |
| DISTALL       | Education_Courses     | Distance education: entire program                           |
| DISTEDUC      | Education_Courses     | Distance education: took courses in 2003-2004                |
| DISTLOC       | Education_Courses     | Distance education: location of courses                      |
| DISTNUM       | Education_Courses     | Distance education: number of courses took                   |
| DISTSATF      | Education_Courses     | Distance education: satisfaction                             |
| REMEDIA       | Education_Courses     | Took remedial course: English (freshman/sophomore)           |
| REMEDIB       | Education_Courses     | Took remedial course: math (freshman/sophomore)              |
| REMEDIC       | Education_Courses     | Took remedial course: reading (freshman/sophomore)           |
| REMEDID       | Education_Courses     | Took remedial course: study skills (freshman/sophomore)      |
| REMEDIE       | Education_Courses     | Took remedial course: writing (freshman/sophomore)           |
| REMETOOK      | Education_Courses     | Remedial courses: took this school year (freshman/sophomore) |
| REMEVER       | Education_Courses     | Remedial courses: ever taken                                 |
| HSDEG         | Education_High School | High school degree type                                      |
| HSGRADYY      | Education_High School | High school graduation year                                  |
| GPA           | Education_Performance | Grade point average                                          |

See notes at end of table.



Table I-1. Analysis variables: 2004—Continued

| Variable name | Prefix                          | Label                                                       |
|---------------|---------------------------------|-------------------------------------------------------------|
| CCTRACK       | Education_Persistence           | Community college track                                     |
| STAY1YR       | Education_Persistence           | Attained or persisted in 2003-04                            |
| COLLGRAD      | Education_Program               | Graduating senior in 2003-2004                              |
| GRADDEG       | Education_Program               | Graduate degree program                                     |
| GRADGPG       | Education_Program               | Graduate and first-professional degree programs             |
| GRADLVL       | Education_Program               | Graduate class level                                        |
| GRADPGM       | Education_Program               | Graduate programs                                           |
| HIGHLVEX      | Education_Program               | Highest level of education ever expected                    |
| MAJORS        | Education_Program               | Field of study/major (detailed)                             |
| MAJORS12      | Education_Program               | Field of study: undergraduate (12 cat)                      |
| MAJORSGR      | Education_Program               | Graduate field of study (12 cat)                            |
| PROGSTAT      | Education_Program               | Completed degree program in 2003-2004                       |
| STYPELST      | Education_Program               | Student type                                                |
| UGDEG         | Education_Program               | Undergraduate degree program                                |
| UGDEGAA       | Education_Program               | Associate degree type                                       |
| UGLVL1        | Education_Program               | Class level                                                 |
| UGLVL2        | Education_Program               | Class level (for loans)                                     |
| ATTENDA       | Education_Reasons_School Choice | Reason enrolled: complete associate's degree                |
| ATTENDB       | Education_Reasons_School Choice | Reason enrolled: complete certificate                       |
| ATTENDC       | Education_Reasons_School Choice | Reason enrolled: job skills                                 |
| ATTENDD       | Education_Reasons_School Choice | Reason enrolled: personal interest                          |
| ATTENDE       | Education_Reasons_School Choice | Reason enrolled: transfer to a 2-year college               |
| ATTENDF       | Education_Reasons_School Choice | Reason enrolled: transfer to a 4-year college               |
| ATTENDG       | Education_Reasons_School Choice | Reason enrolled: transfer to another college                |
| CONSIDRA      | Education_Reasons_School Choice | Considered campus safety before choosing NPSAS              |
| CONSIDRB      | Education_Reasons_School Choice | Considered graduation rate before choosing NPSAS            |
| CONSIDRC      | Education_Reasons_School Choice | Considered job placement rate before choosing NPSAS         |
| JOBAFFOR      | Employment_While Enrolled       | Can afford school without working (student)                 |
| JOBCLASS      | Employment_While Enrolled       | Job related to coursework (non-degree)                      |
| JOBEARN       | Employment_While Enrolled       | Earnings from work while enrolled (excl work-study)         |
| JOBEARN2      | Employment_While Enrolled       | Earnings from work while enrolled (incl work-study)         |
| JOBEFFA       | Employment_While Enrolled       | Job effect: helped with career preparation (student)        |
| JOBEFFB       | Employment_While Enrolled       | Job effect: helped with coursework (student)                |
| JOBEFFC       | Employment_While Enrolled       | Job effect: restricted class choice (student)               |
| JOBEFFD       | Employment_While Enrolled       | Job effect: limited class schedule (student)                |
| JOBEFFE       | Employment_While Enrolled       | Job effect: limited facility access (student)               |
| JOBEFFF       | Employment_While Enrolled       | Job effect: limited number of classes (student)             |
| JOBEMPL       | Employment_While Enrolled       | Type of employer                                            |
| JOBENR        | Employment_While Enrolled       | Work intensity while enrolled (excl work-study)             |
| JOBENR2       | Employment_While Enrolled       | Work intensity while enrolled (including work-study)        |
| JOBEXPT       | Employment_While Enrolled       | Parents expected to have a job (student)                    |
| JOBHOUR       | Employment_While Enrolled       | Hours worked per week (excluding wk-study)                  |
| JOBHOUR2      | Employment_While Enrolled       | Hours worked per week (including work-study)                |
| JOBMAIN       | Employment_While Enrolled       | Main reason for working (student)                           |
| JOBMAJOR      | Employment_While Enrolled       | Job related to major (degree)                               |
| JOBNUM        | Employment_While Enrolled       | Number of jobs during NPSAS year                            |
| JOBONOFF      | Employment_While Enrolled       | Job located primarily on of off campus                      |
| JOBPRIOR      | Employment_While Enrolled       | Have job prior to enrollment at NPSAS                       |
| JOBROLE       | Employment_While Enrolled       | Primary role (student or employee)                          |
| JOBSCHA       | Employment_While Enrolled       | Combine school and work: took class outside work (employee) |
| JOBSCHB       | Employment_While Enrolled       | Combine school and work: took distance education (employee) |
| JOBSCHC       | Employment_While Enrolled       | Combine school and work: modify work schedule (employee)    |
| JOBTYP        | Employment_While Enrolled       | Job type: Work-study or regular job                         |
| JOBTYP        | Employment_While Enrolled       | Job type: Work-study or regular job                         |
| JOBWEEK       | Employment_While Enrolled       | Weeks worked while enrolled                                 |
| SJCOMSER      | Employment_While Enrolled       | School job: part of community service project               |

See notes at end of table.

**Table I-1. Analysis variables: 2004—Continued**

| Variable name | Prefix                    | Label                                                          |
|---------------|---------------------------|----------------------------------------------------------------|
| SJHOURS       | Employment_While Enrolled | School job: hours per week                                     |
| SJMAJOR       | Employment_While Enrolled | School job: related to major                                   |
| SJONOFF       | Employment_While Enrolled | School job: located primarily on or off campus                 |
| SJSCHOOL      | Employment_While Enrolled | School job: for NPSAS or another institution/organization      |
| SJTUTOR       | Employment_While Enrolled | School job: involved with literacy education or tutoring       |
| HOMEPAR       | Finances_Assets           | Assets: parent owns home                                       |
| HOMESTUD      | Finances_Assets           | Assets: student owns home                                      |
| CRBALDUE      | Finances_Debt_Other       | Credit cards - balance due                                     |
| NUMCRED       | Finances_Debt_Other       | Credit cards - number in own name                              |
| PARPAYCR      | Finances_Debt_Other       | Credit cards - parents help pay                                |
| PAYOFBAL      | Finances_Debt_Other       | Credit cards - pay off or carry balance                        |
| PAYTUIT       | Finances_Debt_Other       | Credit cards - use to pay tuition                              |
| CINCOME       | Finances_Income           | Total income-parents and independent (continuous)              |
| DEPINC        | Finances_Income           | Income of dependent student's parents                          |
| DSTUINC       | Finances_Income           | Income of dependent student (excluding parents)                |
| INCOME        | Finances_Income           | Total income by dependency (categorical)                       |
| INDEPINC      | Finances_Income           | Income of independent student and spouse                       |
| ISTUINC       | Finances_Income           | Income of independent student (excluding spouse)               |
| JOBSAVE       | Finances_Income           | Summer savings                                                 |
| JOBSUMMR      | Finances_Income           | Summer job                                                     |
| PCTALL        | Finances_Income           | Income percentile rank for all students                        |
| PCTDEP        | Finances_Income           | Income percentile dependent students                           |
| PCTINDEP      | Finances_Income           | Income percentile independent students                         |
| PCTPOV        | Finances_Income           | Income percent of poverty level                                |
| SPSINC        | Finances_Income           | Income of independent student's spouse                         |
| UNTAXBF       | Finances_Income           | Received untaxed benefits in 2003                              |
| UNTAXBFA      | Finances_Income           | Received untaxed benefits: child support                       |
| UNTAXBFB      | Finances_Income           | Received untaxed benefits: disability payments                 |
| UNTAXBFC      | Finances_Income           | Received untaxed benefits: food stamps                         |
| UNTAXBFD      | Finances_Income           | Received untaxed benefits: social security benefits            |
| UNTAXBFE      | Finances_Income           | Received untaxed benefits: TANF                                |
| UNTAXBFF      | Finances_Income           | Received untaxed benefits: worker's compensation               |
| XDEPINC       | Finances_Income           | Income of dependent student's parents (categorical)            |
| XDSTUINC      | Finances_Income           | Income of dependent student (excluding parents) (categorical)  |
| XISTUINC      | Finances_Income           | Income of independent student (excluding spouse) (categorical) |
| XSPSINC       | Finances_Income           | Income of independent student's spouse (categorical)           |
| INSTID        | Institution               | NPSAS:04 Sample Institution IPEDS UNITID                       |
| CALSYS        | Institution_Other         | Academic calendar system                                       |
| CLOCK         | Institution_Other         | Clock hour or credit hour institution                          |
| CNTLAFFI      | Institution_Other         | Institutional control and affiliation                          |
| ENRLSIZE      | Institution_Other         | Enrollment size at NPSAS institution                           |
| GPASCALE      | Institution_Other         | GPA scale                                                      |
| HBCU          | Institution_Other         | Historical Black college indicator                             |
| HOMEDIST      | Institution_Other         | Institution distance from home                                 |
| INSTSAST      | Institution_Other         | NPSAS institution representative sample states                 |
| INSTSTAT      | Institution_Other         | NPSAS institution state                                        |
| INSTSTSE      | Institution_Other         | NPSAS institution representative state sample by sector        |
| LOCALE        | Institution_Other         | Degree of urbanization                                         |
| OBereg        | Institution_Other         | NPSAS institution region                                       |
| OCRHSI        | Institution_Other         | Hispanic-serving institution                                   |
| PCTMIN1       | Institution_Other         | Percent enrolled-Black, non-Hispanic                           |
| PCTMIN2       | Institution_Other         | Percent enrolled-American Indian/Alaskan                       |
| PCTMIN3       | Institution_Other         | Percent enrolled-Asian/Pacific Islander                        |
| PCTMIN4       | Institution_Other         | Percent enrolled-Hispanic                                      |
| SAMESTAT      | Institution_Other         | Attend institution in state of legal residence                 |

See notes at end of table.

Table I-1. Analysis variables: 2004—Continued

| Variable name | Prefix                       | Label                                                        |
|---------------|------------------------------|--------------------------------------------------------------|
| SELECTIV      | Institution_Other            | Selectivity (4-year institutions)                            |
| BUDGETAJ      | Institution_Price            | Student budget (attendance adjusted)                         |
| BUDGETFT      | Institution_Price            | Student full budget (full-time, full-year)                   |
| BUDNONAJ      | Institution_Price            | Non-tuition expense budget (attendance adjusted)             |
| BUDNONFT      | Institution_Price            | Non-tuition budget (full-time, full-year)                    |
| INJURIS       | Institution_Price            | Tuition jurisdiction (in/out of area)-NPSAS inst             |
| TUITION2      | Institution_Price            | Tuition and fees (NPSAS)                                     |
| ADMCON1       | Institution_Requirements     | Consider secondary school GPA                                |
| ADMCON2       | Institution_Requirements     | Consider secondary school rank                               |
| ADMCON3       | Institution_Requirements     | Consider secondary school record                             |
| ADMCON4       | Institution_Requirements     | Consider completion of college-preparatory program           |
| ADMCON5       | Institution_Requirements     | Consider recommendations                                     |
| ADMCON6       | Institution_Requirements     | Consider formal demonstration of competencies                |
| ADMCON7       | Institution_Requirements     | Consider admission test scores                               |
| ADMCON8       | Institution_Requirements     | Consider TOEFL                                               |
| AIDCTRL       | Institution_Type             | Institution control (with multiple)                          |
| AIDLEVL       | Institution_Type             | Institution level (with multiple)                            |
| AIDSECT       | Institution_Type             | Institution sector (with multiple)                           |
| AIDSECTG      | Institution_Type             | Institution type - graduate (with multiple)                  |
| ATTNINST      | Institution_Type             | Institution type and full-time status                        |
| CC2000        | Institution_Type             | Carnegie code (2000) for NPSAS institution                   |
| CC2000A       | Institution_Type             | Carnegie code (2000) with control                            |
| CONTROL       | Institution_Type             | NPSAS institution control                                    |
| FPOFFER       | Institution_Type             | First-professional degree program offered                    |
| GASECTOR      | Institution_Type             | Georgia institution sector                                   |
| HLOFFER       | Institution_Type             | Highest level of offering at NPSAS institution               |
| LEVEL         | Institution_Type             | NPSAS institution level                                      |
| NYSECTOR      | Institution_Type             | New York institution sector                                  |
| PELLSECA      | Institution_Type             | Sector of school from which received Pell grant 1            |
| PELLSECB      | Institution_Type             | Sector of school from which received Pell grant 2            |
| PGMSEC        | Institution_Type             | Graduate program and institution type                        |
| SECTOR1       | Institution_Type             | NPSAS institution sector (control & level)                   |
| SECTOR4       | Institution_Type             | Institution sector (4 with multiple)                         |
| SECTOR9       | Institution_Type             | NPSAS institution type                                       |
| STFSECA       | Institution_Type             | Sector of school from which received Stafford loan 1         |
| STFSECB       | Institution_Type             | Sector of school from which received Stafford loan 2         |
| PAREduc       | Parent_Education             | Parent's highest education level                             |
| PDADeD        | Parent_Education             | Father's highest education level                             |
| PMOMeD        | Parent_Education             | Mother's highest education level                             |
| PARBORn       | Parent_Family                | Student's parents were born in the United States             |
| PFAMNUM       | Parent_Family                | Family size (dependent)                                      |
| PINCOL        | Parent_Family                | Number of family members in college (dependent)              |
| PMARITAl      | Parent_Family                | Parent's marital status                                      |
| SIBCOLB4      | Parent_Family                | Siblings attended college before                             |
| SIBINCOL      | Parent_Family                | Have siblings in college                                     |
| PARALLOW      | Parent_Support               | Monthly allowance amount from parents                        |
| PARHELPA      | Parent_Support               | Help from parents: pay housing                               |
| PARHELPB      | Parent_Support               | Help from parents: pay education expenses other than tuition |
| PARHELPC      | Parent_Support               | Help from parents: pay living expenses other than housing    |
| PARHELPD      | Parent_Support               | Help from parents: pay tuition and fees                      |
| COMHOUR       | Public_Service_Participation | Community service - average hours per month                  |
| COMONE        | Public_Service_Participation | Community service - one time event                           |
| COMREQ        | Public_Service_Participation | Community service - required or part of program              |
| COMSERV       | Public_Service_Participation | Community service - performed last year                      |
| COMSERVA      | Public_Service_Participation | Community service: fundraising                               |

See notes at end of table.

**Table I-1. Analysis variables: 2004—Continued**

| Variable name | Prefix                       | Label                                                           |
|---------------|------------------------------|-----------------------------------------------------------------|
| COMSERVB      | Public Service_Participation | Community service: homeless shelter/soup kitchen                |
| COMSERVC      | Public Service_Participation | Community service: hospital/nursing home                        |
| COMSERVD      | Public Service_Participation | Community service: neighborhood improvement                     |
| COMSERVE      | Public Service_Participation | Community service: service to church                            |
| COMSERVF      | Public Service_Participation | Community service: tutoring/mentoring                           |
| COMSERVG      | Public Service_Participation | Community service: work with kids other than tutoring/mentoring |
| COMSERVX      | Public Service_Participation | Community service: others                                       |
| MILTYPE       | Public Service_Participation | Military service type                                           |
| VETERAN       | Public Service_Participation | Veteran status                                                  |
| VOTEEVER      | Public Service_Participation | Ever vote                                                       |
| VOTEREG       | Public Service_Participation | Registered to vote                                              |
| COMPTO87      | Survey_Sample                | Comparable to 1987 NPSAS (excluding Puerto Rico)                |
| DATASRC       | Survey_Sample                | Data sources (CATI, CADE, and CPS)                              |
| FTBSTAT       | Survey_Sample                | First time beginners                                            |
| INCADE        | Survey_Sample                | Data available from CADE                                        |
| INCATI        | Survey_Sample                | Data available from CATI                                        |
| INCPS         | Survey_Sample                | Data available from CPS                                         |
| INNSLDS       | Survey_Sample                | Data available from NSLDS federal loan record                   |
| INPELL        | Survey_Sample                | Data available from NSLDS Pell grant record                     |
| ZRID          | Survey_Sample                | Identification number                                           |
| ZATTENDA      | Survey_Source                | Source variable for ATTENDA                                     |
| ZATTENDB      | Survey_Source                | Source variable for ATTENDB                                     |
| ZATTENDC      | Survey_Source                | Source variable for ATTENDC                                     |
| ZATTENDD      | Survey_Source                | Source variable for ATTENDD                                     |
| ZATTENDE      | Survey_Source                | Source variable for ATTENDE                                     |
| ZATTENDF      | Survey_Source                | Source variable for ATTENDF                                     |
| ZATTENDG      | Survey_Source                | Source variable for ATTENDG                                     |
| ZBORAMT1      | Survey_Source                | Source variable for BORAMT1                                     |
| ZBORAMT2      | Survey_Source                | Source variable for BORAMT2                                     |
| ZBORAMT3      | Survey_Source                | Source variable for BORAMT3                                     |
| ZBUDGET       | Survey_Source                | Source variable for BUDNONAJ                                    |
| ZCAMP         | Survey_Source                | Source variable for CAMPAMT                                     |
| ZCITIZEN      | Survey_Source                | Source variable for CITIZEN2                                    |
| ZCOMHOUR      | Survey_Source                | Source variable for COMHOUR                                     |
| ZCOMONE       | Survey_Source                | Source variable for COMONE                                      |
| ZCOMREQ       | Survey_Source                | Source variable for COMREQ                                      |
| ZCOMSERA      | Survey_Source                | Source variable for COMSERVA                                    |
| ZCOMSERB      | Survey_Source                | Source variable for COMSERVB                                    |
| ZCOMSERC      | Survey_Source                | Source variable for COMSERVC                                    |
| ZCOMSERD      | Survey_Source                | Source variable for COMSERVD                                    |
| ZCOMSERE      | Survey_Source                | Source variable for COMSERVE                                    |
| ZCOMSERF      | Survey_Source                | Source variable for COMSERVF                                    |
| ZCOMSERG      | Survey_Source                | Source variable for COMSERVG                                    |
| ZCOMSERV      | Survey_Source                | Source variable for COMSERV                                     |
| ZCOMSERX      | Survey_Source                | Source variable for COMSERVX                                    |
| ZCONSIDA      | Survey_Source                | Source variable for CONSIDRA                                    |
| ZCONSIDB      | Survey_Source                | Source variable for CONSIDRB                                    |
| ZCONSIDC      | Survey_Source                | Source variable for CONSIDRC                                    |
| ZCRBALDU      | Survey_Source                | Source variable for CRBALDUE                                    |
| ZDEGEARA      | Survey_Source                | Source variable for DEGEARNA                                    |
| ZDEGEARB      | Survey_Source                | Source variable for DEGEARNB                                    |
| ZDEGEARC      | Survey_Source                | Source variable for DEGEARNC                                    |
| ZDEGEARD      | Survey_Source                | Source variable for DEGEARND                                    |
| ZDEGEARE      | Survey_Source                | Source variable for DEGEARNE                                    |
| ZDEGEARF      | Survey_Source                | Source variable for DEGEARNF                                    |

See notes at end of table.

Table I-1. Analysis variables: 2004—Continued

| Variable name | Prefix        | Label                                    |
|---------------|---------------|------------------------------------------|
| ZDEGEARG      | Survey_Source | Source variable for DEGEARNG             |
| ZDEGEARH      | Survey_Source | Source variable for DEGEARNH             |
| ZDEGEARN      | Survey_Source | Source variable for DEGEARN              |
| ZDELIVE       | Survey_Source | Source variable for DELIVE               |
| ZDEPCARE      | Survey_Source | Source variable for DEPCARE              |
| ZDEPCOST      | Survey_Source | Source variable for DEPCOST              |
| ZDEPINC       | Survey_Source | Source variables for DEPINC              |
| ZDERECR       | Survey_Source | Source variable for DERECR               |
| ZDEWWW        | Survey_Source | Source variable for DEWWW                |
| ZDISABLE      | Survey_Source | Source variable for DISABLE              |
| ZDISMOBI      | Survey_Source | Source variable for DISMOBIL             |
| ZDISOTHA      | Survey_Source | Source variable for DISOTHRA             |
| ZDISOTHB      | Survey_Source | Source variable for DISOTHRB             |
| ZDISOTHC      | Survey_Source | Source variable for DISOTHRC             |
| ZDISOTHD      | Survey_Source | Source variable for DISOTHRD             |
| ZDISOTHR      | Survey_Source | Source variable for DISOTHER             |
| ZDISSENS      | Survey_Source | Source variable for DISSENSR             |
| ZDISTALL      | Survey_Source | Source variable for DISTALL              |
| ZDISTEDU      | Survey_Source | Source variable for DISTEDUC             |
| ZDISTLOC      | Survey_Source | Source variable for DISTLOC              |
| ZDISTNUM      | Survey_Source | Source variable for DISTNUM              |
| ZDISTSAT      | Survey_Source | Source variable for DISTSATF             |
| ZDISTYPE      | Survey_Source | Source variable for DISTYPES             |
| ZDSTUINC      | Survey_Source | Source variables for DSTUINC             |
| ZEFC          | Survey_Source | Source variable for ZEFC                 |
| ZEFC1         | Survey_Source | Source variable for ZEFC1                |
| ZEMPLWV       | Survey_Source | Source variable for EEMPLWAIV            |
| ZEMPLYA1      | Survey_Source | Source variable for EMPLOYAM1            |
| ZEMPLYA2      | Survey_Source | Source variable for EMPLOYAM2            |
| ZEMPLYA3      | Survey_Source | Source variable for EMPLOYAM3            |
| ZEMPLYAM      | Survey_Source | Source variable for EMPLOYAMT            |
| ZENROLL       | Survey_Source | Source variable for enrollment variables |
| ZEVER2PU      | Survey_Source | Source variable for EVER2PUB             |
| ZEVER4YR      | Survey_Source | Source variable for EVER4YR              |
| ZFEDNEED      | Survey_Source | Source variable for FEDNEED              |
| ZGAINSUR      | Survey_Source | Source variable for GAINSUR              |
| ZGENDER       | Survey_Source | Source variable for GENDER               |
| ZGPA          | Survey_Source | Source variable for GPA                  |
| ZGRADDEG      | Survey_Source | Source variable for GRADDEG              |
| ZGRADGPG      | Survey_Source | Source variable for ZGRADGPG             |
| ZGRADLVL      | Survey_Source | Source variable for GRADLVL              |
| ZGRADTAA      | Survey_Source | Source variable for GRADTAA              |
| ZGRADTAB      | Survey_Source | Source variable for GRADTAB              |
| ZGRADTAC      | Survey_Source | Source variable for GRADTAC              |
| ZGRADTAD      | Survey_Source | Source variable for GRADTAD              |
| ZGRADTAE      | Survey_Source | Source variable for GRADTAE              |
| ZGRADTAF      | Survey_Source | Source variable for GRADTAF              |
| ZGRASTAM      | Survey_Source | Source variable for GRASTAMT             |
| ZGRGRDAM      | Survey_Source | Source variable for GRGRDAMT             |
| ZGRINFEL      | Survey_Source | Source variable for GRINFEL              |
| ZGRRESAM      | Survey_Source | Source variable for GRRESAMT             |
| ZGRTEAAM      | Survey_Source | Source variable for GRTEAAMT             |
| ZGRTRNAM      | Survey_Source | Source variable for GRTRNAMT             |
| ZHIGHLVE      | Survey_Source | Source variable for HIGHLVEX             |
| ZHOMEDIS      | Survey_Source | Source variable for HOMEDIST             |

See notes at end of table.

**Table I-1. Analysis variables: 2004—Continued**

| Variable name | Prefix        | Label                         |
|---------------|---------------|-------------------------------|
| ZHOMEPAR      | Survey_Source | Source variable for HOMEPAR   |
| ZHOMESTU      | Survey_Source | Source variable for HOMESTUD  |
| ZHSDEG        | Survey_Source | Source variable for HSDEG     |
| ZHSGRADY      | Survey_Source | Source variable for HSGRADYY  |
| ZINATHAM      | Survey_Source | Source variable for INATHAMT  |
| ZINCOME       | Survey_Source | Source variable for INCOME    |
| ZINDEINC      | Survey_Source | Source variables for INDEPINC |
| ZINGRTAM      | Survey_Source | Source variable for INGRTAMT  |
| ZINLNAMT      | Survey_Source | Source variable for INLNAMT   |
| ZINSMERI      | Survey_Source | Source variable for INSMERIT  |
| ZINSTAMT      | Survey_Source | Source variable for INSTAMT   |
| ZINSTND       | Survey_Source | Source variable for INSTNEED  |
| ZINSTNON      | Survey_Source | Source variable for INSTNOND  |
| ZINSTWRK      | Survey_Source | Source variable for INSTWRK   |
| ZINSWAIV      | Survey_Source | Source variable for INSWAIV   |
| ZISTUINC      | Survey_Source | Source variables for ISTUINC  |
| ZJOBAFFO      | Survey_Source | Source variable for JOBAFFOR  |
| ZJOBCLAS      | Survey_Source | Source variable for JOBCLASS  |
| ZJOBearn      | Survey_Source | Source variable for JOBEARN   |
| ZJOBEFFA      | Survey_Source | Source variable for JOBEFFA   |
| ZJOBEFFB      | Survey_Source | Source variable for JOBEFFB   |
| ZJOBEFFC      | Survey_Source | Source variable for JOBEFFC   |
| ZJOBEFFD      | Survey_Source | Source variable for JOBEFFD   |
| ZJOBEFFE      | Survey_Source | Source variable for JOBEFFE   |
| ZJOBFFFF      | Survey_Source | Source variable for JOBEFFF   |
| ZJOBEMPL      | Survey_Source | Source variable for JOBEMPL   |
| ZJOBEXPT      | Survey_Source | Source variable for JOBEXPT   |
| ZJOBHOUR      | Survey_Source | Source variable for JOBHOUR   |
| ZJOBMAIN      | Survey_Source | Source variable for JOBMAIN   |
| ZJOBMAJO      | Survey_Source | Source variable for JOBMAJOR  |
| ZJOBNUM       | Survey_Source | Source variable for JOBNUM    |
| ZJOBONOF      | Survey_Source | Source variable for JOBONOFF  |
| ZJOBPRIO      | Survey_Source | Source variable for JOBPRIOR  |
| ZJOBROLE      | Survey_Source | Source variable for JOBROLE   |
| ZJOBsave      | Survey_Source | Source variable for JOBSAVE   |
| ZJOBSCHA      | Survey_Source | Source variable for JOBSCHA   |
| ZJOBSCHB      | Survey_Source | Source variable for JOBSCHB   |
| ZJOBSCHC      | Survey_Source | Source variable for JOBSCHC   |
| ZJOBSUMM      | Survey_Source | Source variable for JOBSUMMR  |
| ZJOBWEEK      | Survey_Source | Source variable for JOBWEEK   |
| ZMAJORS       | Survey_Source | Source variable for MAJORS    |
| ZNUMCRED      | Survey_Source | Source variable for NUMCRED   |
| ZOTHFDGT      | Survey_Source | Source variable for OTHFDGRT  |
| ZOTHGTAM      | Survey_Source | Source variable for OTHGTAMT  |
| ZOTHRSCR      | Survey_Source | Source variable for OTHRSCR   |
| ZOTHTYPE      | Survey_Source | Source variable for OTHTYPE   |
| ZOWEAMT1      | Survey_Source | Source variable for OWEAMT1   |
| ZOWEAMT2      | Survey_Source | Source variable for OWEAMT2   |
| ZOWEAMT3      | Survey_Source | Source variable for OWEAMT3   |
| ZPARALLO      | Survey_Source | Source variable for PARALLOW  |
| ZPARHELA      | Survey_Source | Source variable for PARHELPA  |
| ZPARHELB      | Survey_Source | Source variable for PARHELPB  |
| ZPARHELC      | Survey_Source | Source variable for PARHELPC  |
| ZPARHELD      | Survey_Source | Source variable for PARHELPD  |
| ZPARLIVE      | Survey_Source | Source variable for PARLIVE   |

See notes at end of table.

Table I-1. Analysis variables: 2004—Continued

| Variable name | Prefix        | Label                        |
|---------------|---------------|------------------------------|
| ZPARPAYC      | Survey_Source | Source variable for PARPAYCR |
| ZPAYOFBA      | Survey_Source | Source variable for PAYOFBAL |
| ZPAYUIT       | Survey_Source | Source variable for PAYUIT   |
| ZPELL         | Survey_Source | Source variable for PELLAMT  |
| ZPERK         | Survey_Source | Source variable for PERKAMT  |
| ZPHSLOAN      | Survey_Source | Source variable for PHSLOAN  |
| ZPLUS         | Survey_Source | Source variable for PLUSAMT  |
| ZPRIMLAN      | Survey_Source | Source variable for PRIMLANG |
| ZPRIVAI       | Survey_Source | Source variable for PRIVAI   |
| ZPRIVAMT      | Survey_Source | Source variable for PRIVAMT  |
| ZPRIVLON      | Survey_Source | Source variable for PRIVLOAN |
| ZPSECTYR      | Survey_Source | Source variable for PSECTYR  |
| ZRAINDTR      | Survey_Source | Source variable for RAINDTRB |
| ZREMEDIA      | Survey_Source | Source variable for REMEDIA  |
| ZREMEDIB      | Survey_Source | Source variable for REMEDIB  |
| ZREMEDIC      | Survey_Source | Source variable for REMEDIC  |
| ZREMEDID      | Survey_Source | Source variable for REMEDID  |
| ZREMEDIE      | Survey_Source | Source variable for REMEDIE  |
| ZREMETOO      | Survey_Source | Source variable for REMETOOK |
| ZREMEVER      | Survey_Source | Source variable for REMEVER  |
| ZSEOG         | Survey_Source | Source variable for SEOGAMT  |
| ZSERNEDA      | Survey_Source | Source variable for SERNEEDA |
| ZSERNEDB      | Survey_Source | Source variable for SERNEEDB |
| ZSERNEDC      | Survey_Source | Source variable for SERNEEDC |
| ZSERNEDD      | Survey_Source | Source variable for SERNEEDD |
| ZSERNEDE      | Survey_Source | Source variable for SERNEEDE |
| ZSERNEDF      | Survey_Source | Source variable for SERNEEDF |
| ZSERNEDG      | Survey_Source | Source variable for SERNEEDG |
| ZSERNEDX      | Survey_Source | Source variable for SERNEEDX |
| ZSERRECA      | Survey_Source | Source variable for SERRECA  |
| ZSERRECB      | Survey_Source | Source variable for SERRECB  |
| ZSERRECC      | Survey_Source | Source variable for SERRECC  |
| ZSERRECD      | Survey_Source | Source variable for SERRECD  |
| ZSERRECE      | Survey_Source | Source variable for SERRECE  |
| ZSERRECF      | Survey_Source | Source variable for SERRECF  |
| ZSERRECG      | Survey_Source | Source variable for SERRECG  |
| ZSERRECX      | Survey_Source | Source variable for SERRECVX |
| ZSIBCOLB      | Survey_Source | Source variable for SIBCOLB4 |
| ZSJCOMSE      | Survey_Source | Source variable for SJCOMSER |
| ZSJHOURS      | Survey_Source | Source variable for SJHOURS  |
| ZSJMAJOR      | Survey_Source | Source variable for SJMAJOR  |
| ZSJONOFF      | Survey_Source | Source variable for SJONOFF  |
| ZSJSCHOO      | Survey_Source | Source variable for SJSCHOOL |
| ZSJTUTOR      | Survey_Source | Source variable for SJTUTOR  |
| ZSMAR         | Survey_Source | Source variable for SMARITAL |
| ZSPINCOL      | Survey_Source | Source variable for SPINCOL  |
| ZSPSINC       | Survey_Source | Source variables for SPSINC  |
| ZSSISSDI      | Survey_Source | Source variable for SSISSDI  |
| ZSTAF         | Survey_Source | Source variable for STAFFAMT |
| ZSTAFS        | Survey_Source | Source variable for STAFSUB  |
| ZSTAFU        | Survey_Source | Source variable for STAFUNSB |
| ZSTATEAM      | Survey_Source | Source variable for STATEAMT |
| ZSTATND       | Survey_Source | Source variable for STATNEED |
| ZSTATNON      | Survey_Source | Source variable for STATNOND |
| ZSTGTAMT      | Survey_Source | Source variable for STGTAMT  |

See notes at end of table.

**Table I-1. Analysis variables: 2004—Continued**

| Variable name | Prefix         | Label                        |
|---------------|----------------|------------------------------|
| ZSTLNAMT      | Survey_Source  | Source variable for STLNAMT  |
| ZSTMERIT      | Survey_Source  | Source variable for STMERIT  |
| ZSTNOND1      | Survey_Source  | Source variable for STNOND1  |
| ZSTWKAMT      | Survey_Source  | Source variable for STWKAMT  |
| ZSTYPE        | Survey_Source  | Source variable for STYPELST |
| ZT4LNAM1      | Survey_Source  | Source variable for T4LNAMT1 |
| ZT4LNAM2      | Survey_Source  | Source variable for T4LNAMT2 |
| ZTFEDAID      | Survey_Source  | Source variable for TFEDAID  |
| ZTFEDGRT      | Survey_Source  | Source variable for TFEDGRT  |
| ZTFEDLN       | Survey_Source  | Source variable for TFEDLN   |
| ZTFEDLN2      | Survey_Source  | Source variable for TFEDLN2  |
| ZTFEDWRK      | Survey_Source  | Source variable for TFEDWRK  |
| ZTITIVAM      | Survey_Source  | Source variable for TITIVAMT |
| ZTOTAID       | Survey_Source  | Source variable for TOTAID   |
| ZTOTGRT       | Survey_Source  | Source variable for TOTGRT   |
| ZTOTLOAN      | Survey_Source  | Source variable for TOTLOAN  |
| ZTOTWKST      | Survey_Source  | Source variable for TOTWKST  |
| ZTUITION      | Survey_Source  | Source variable for TUITION2 |
| ZUGDEG        | Survey_Source  | Source variable for UGDEG    |
| ZUGDEGAA      | Survey_Source  | Source variable for UGDEGAA  |
| ZUGLVL1       | Survey_Source  | Source variable for UGLVL1   |
| ZUNTAXA       | Survey_Source  | Source variable for UNTAXBFA |
| ZUNTAXB       | Survey_Source  | Source variable for UNTAXBFB |
| ZUNTAXBF      | Survey_Source  | Source variable for UNTAXBF  |
| ZUNTAXC       | Survey_Source  | Source variable for UNTAXBFC |
| ZUNTAXD       | Survey_Source  | Source variable for UNTAXBFD |
| ZUNTAXE       | Survey_Source  | Source variable for UNTAXBFE |
| ZUNTAXF       | Survey_Source  | Source variable for UNTAXBFF |
| ZUSBORN       | Survey_Source  | Source variable for USBORN   |
| ZVADODAM      | Survey_Source  | Source variable for VADODAMT |
| ZVETBEN       | Survey_Source  | Source variable for VETBEN   |
| ZVOCAPPL      | Survey_Source  | Source variable for VOCAPPLY |
| ZVOCHELP      | Survey_Source  | Source variable for VOCHHELP |
| ZVOCRECV      | Survey_Source  | Source variable for VOCRECV  |
| ZVOTEEVE      | Survey_Source  | Source variable for VOTEEVER |
| ZVOTEREG      | Survey_Source  | Source variable for VOTEREG  |
| ANALPSU       | Survey_Weights | PSU                          |
| ANALSTR       | Survey_Weights | Stratum                      |
| WTA00         | Survey_Weights | Study weight                 |

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).



# **Appendix J**

## **GEM Adjustment Procedure**

---



Weight adjustments are obtained using a generalized exponential model (GEM) with weight adjustment at adjustment step  $j$  for individual  $i$  having the following form:

$$\alpha_{ji}(\lambda_j) = \frac{l_{ji}(u_{ji} - c_{ji}) + u_{ji}(c_{ji} - l_{ji}) \exp(A_{ji}x_{ji}'\lambda_j)}{(u_{ji} - c_{ji}) + (c_{ji} - l_{ji}) \exp(A_{ji}x_{ji}'\lambda_j)}$$

where the  $l_{ji}, u_{ji}$  are lower and upper bounds on  $\alpha_{ji}$ , the  $c_{ji}$  are pre-specified centering constants such that  $l_{ji} < c_{ji} < u_{ji}$ ,  $x_{ji}$  is a covariate vector, and  $A_{ji} = (u_{ji} - l_{ji}) / ((u_{ji} - c_{ji})(c_{ji} - l_{ji}))$  is a scale factor.<sup>1</sup> The  $p$ -dimensional parameter vector  $\lambda_j$  is estimated by solving

$$\sum_{i \in A} x_{ji} w_{ji} \alpha_{ji}(\lambda_j) - T_x = 0$$

where  $T_x$  is a control total vector and  $A$  is the set of individuals whose weights are being adjusted.

To fit a GEM, at adjustment step  $j$ , individuals are first stratified and then grouped according to extreme weights within strata: low-extreme (weight = median -3 times the interquartile range), normal, or high-extreme (weight = median +3 times the interquartile range) weights. Depending on the strata and extreme weight group they are in, each individual is then assigned a bounds adjustment multiple (see below for details). Furthermore, across all strata, each extreme weight group is given group-specific bounds. Each individual's final adjustment bounds for model fitting is obtained by multiplying their individual adjustment multiple by the group-specific bounds. The GEM can then be fit with individual weight adjustments constrained to lie within the obtained bounds.

The GEM procedure used for institution and student weight adjustments was similar, with the exception that extreme weight adjustments were not done for the institution weights. The institution weights are incorporated into the student weights (see section 6.2.1), so the extreme weight adjustments were done only at the student level. The summary of the institution GEM adjustment factors is in section 6.1.3. The details of the student GEM adjustments are below.

The first step in finding individual bounds was to stratify individuals by the 375-level cross of the 58-level institutional strata and eight student sampling strata.<sup>2</sup> These strata were used in the sampling design, as outlined in section 2.1.1, and so should group similar weights together.

For each stratum, individuals were then further partitioned into extreme weight groups: low-extreme, normal, and high-extreme. This partitioning was accomplished using a standard nonparametric approach to outlier detection based on the interquartile range. Within stratum  $k$  for  $k=1, \dots, 375$ , the interquartile range,  $IQR_k$  is as follows:

<sup>1</sup> To see the relationship to a logit model, let the lower bound  $l_{ji}$  equal 1, the centering constant  $c_{ji}$  equal 2, and let the upper bound  $u_{ji}$  go to infinity. In the limit there is  $a_{ji} = 1 + \exp(x_{ji}'\lambda_j)$ , a logit model in which  $a_{ji}$  is the reciprocal of a response probability.

<sup>2</sup> Not all 58 institutional strata contained students in all 8 student strata. For example, less-than-2-year and 2-year institutions had no graduate/first-professional students.

$$IQR_{jk} = \hat{P}_{jk,75} - \hat{P}_{jk,25},$$

the difference of the estimated 75<sup>th</sup> and 25<sup>th</sup> percentiles (the third and first quartiles). Using  $\hat{P}_{jk,50}$ , the estimated stratum  $k$  sample median, outlier bounds  $b_{jk1}, b_{jk2}$  were computed where

$$b_{jk1} = \hat{P}_{jk,50} - 3IQR_{jk}$$

$$b_{jk2} = \hat{P}_{jk,50} + 3IQR_{jk}$$

and the weights in stratum  $k$  could then be grouped:  $w_{ji}$  is considered low-extreme if  $w_{ji} < b_{jk1}$ ,  $w_{ji}$  is considered high-extreme if  $w_{ji} > b_{jk2}$ , and  $w_{ji}$  is considered normal otherwise. The individual  $i$  bounds adjustment multiple,  $m_{ji}$ , is then obtained as follows:

$$m_{ji} = \frac{b_{jk1}}{w_{ji}} \quad \text{if } w_{ji} \text{ is low-extreme}$$

$$= 1 \quad \text{if } w_{ji} \text{ is normal}$$

$$= \frac{b_{jk2}}{w_{ji}} \quad \text{if } w_{ji} \text{ is high-extreme}$$

and so  $m_{ji} > 1$  for low-extreme weights and  $m_{ji} < 1$  for high-extreme weights. This has the desirable effect of increasing the lower bound for low-extreme weights and decreasing the upper bound for high-extreme weights.

To obtain the extreme weight group bounds, let  $g$  give the grouping, with  $g=1$  being low-extreme,  $g=2$  being normal, and  $g=3$  being high-extreme. The group bounds are then a lower bound  $l_{jg}^*$ , and an upper bound  $u_{jg}^*$  and also a centering constant  $c_j^*$ . To reduce the total number of bounds in the model and to simplify the fitting process,  $l_{j2}^* = l_{j3}^*$ , and  $u_{j1}^* = u_{j2}^*$  was always constrained. Extreme weight group bounds were then further constrained for nonresponse adjustment.

The additional constraints on the extreme weight group bounds for nonresponse adjustment are that  $l_{j1}^* = l_{j2}^* = l_{j3}^* = 1$  because individual weight adjustments were restricted to be greater than 1. This is desirable as nonresponse adjustments represent the inverse of response probabilities. The centering constant  $c_j^*$  is then set equal to the reciprocal of the estimated weighted response rate.

The extreme weight group bounds were not implemented for poststratification due to model convergence problems. For poststratification, the low-extreme and high-extreme bounds were set equal to the normal bounds, and the centering constant was 1, i.e.,  $c_4^* = 1$ .

Subject to all of the above constraints, the extreme weight group bounds used in adjusting the initial weights are provided in table J-1. All further specifications of these bounds were made to ensure model convergence.

**Table J-1. Bounds and centering constants for group weight adjustments for each GEM adjustment step: 2004**

| Adjustment step               | Lower bounds |        |              | Centering constant | Upper bounds |        |              |
|-------------------------------|--------------|--------|--------------|--------------------|--------------|--------|--------------|
|                               | Low extreme  | Normal | High extreme |                    | Low extreme  | Normal | High extreme |
| Location adjustment           | 1.0          | 1.0    | #            | 1.0                | 8.3          | 8.3    | 3.9          |
| Refusal adjustment            | 1.0          | 1.0    | #            | 1.0                | 1.4          | 1.4    | 1.4          |
| Other nonresponse adjustment  | 1.0          | 1.0    | #            | 1.0                | 1.5          | 1.5    | 1.3          |
| Poststratification adjustment | 0.5          | 0.5    | 0.5          | 1.0                | 26.8         | 26.8   | 26.8         |

# Rounds to zero.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Once the group bounds had been determined, individual weight adjustment bounds were found by multiplying the individual bounds adjustment multiples by the appropriate group specific bounds:

$$l_{ji} = l_{jg}^* m_{ji}$$

$$c_{ji} = c_j^* m_{ji}$$

$$u_{ji} = u_{jg}^* m_{ji}$$

where  $g$  is determined by the group to which  $w_{ji}$  belongs.

GEM adjustment for nonresponse and poststratification also differs by choice of covariate vector  $x_{ji}$ , and the composition of control total vector  $T_x$ .

For nonresponse adjustment, the components of  $x_{ji}$  are the predictors of nonresponse. Vector  $T_x$  is in this case the full sample (respondents and nonrespondents) weight totals for the levels of the predictors in  $x_{ji}$ . Solution of equation (1) is then equivalent to finding the  $\lambda_j$  for which  $\sum_{i \in A} x_{ji} w_{ji} \alpha_{ji}(\lambda_j) = T_x$  where  $A$  is the set of all respondents. That is, the lambda is found such that its associated adjustments have the property that sums of adjusted weights for respondents equal sums of the current weights over the entire sample. Since nonrespondents have adjusted weights set equal to zero, it is then also true that over all sampled individuals, sums of adjusted weights equal those of current weights.

For poststratification adjustment, the components of  $x_{ji}$  are the levels of the selected variables for which population level control totals are available (see section 6.2.3). In this case, vector  $T_x$  contains these control totals. The resulting weights have been adjusted to preserve the totals.



## Appendix K Nonresponse Bias Analysis

---

|                                             |      |
|---------------------------------------------|------|
| Institution Nonresponse Bias Analysis ..... | K-3  |
| Student Nonresponse Bias Analysis .....     | K-69 |
| Item-Level Nonresponse Bias Analysis.....   | K-85 |





## **Institution Nonresponse Bias Analysis**

---



**Table K-1. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for all institutions: 2004**

| Variable                                                                | Before nonresponse adjustment |                            |                          |                              |                   |               | After nonresponse adjustment     |                                 |                |               |  |
|-------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|-------------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                                                         | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias    | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Institution strata                                                      |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| Public less-than-2-year                                                 | 50                            | 20                         | 4.49                     | 6.01                         | -0.29             | -0.06         | 4.82                             | 5.93                            | -1.12          | -0.23         |  |
| Public 2-year                                                           | 320                           | 60                         | 16.92                    | 18.00                        | -0.21             | -0.01         | 17.15                            | 19.09                           | -1.93          | -0.11         |  |
| Public 4-year, non-doctorate-granting                                   | 110                           | 20                         | 6.02                     | 8.80                         | -0.53             | -0.08         | 6.61                             | 5.73                            | 0.88           | 0.13          |  |
| Public 4-year, doctorate-granting                                       | 200                           | 30                         | 4.57                     | 2.34                         | 0.43 <sup>1</sup> | 0.10          | 4.09                             | 4.50                            | -0.40          | -0.10         |  |
| Private not-for-profit, less-than-4 year                                | 70                            | 10                         | 5.66                     | 1.05                         | 0.89 <sup>1</sup> | 0.19          | 4.67                             | 5.40                            | -0.73          | -0.16         |  |
| Private not-for-profit, 4-year, non-doctorate-granting                  | 220                           | 50                         | 16.92                    | 14.42                        | 0.48              | 0.03          | 16.38                            | 16.89                           | -0.51          | -0.03         |  |
| Private not-for-profit, 4-year, doctorate-granting                      | 170                           | 50                         | 7.26                     | 8.20                         | -0.18             | -0.02         | 7.47                             | 7.45                            | 0.02           | #             |  |
| Private for-profit, less-than-2-year                                    | 140                           | 30                         | 20.72                    | 27.33                        | -1.27             | -0.06         | 22.14                            | 18.70                           | 3.44           | 0.16          |  |
| Private for-profit, 2-year or more                                      | 90                            | 20                         | 17.44                    | 13.86                        | 0.69              | 0.04          | 16.67                            | 16.31                           | 0.36           | 0.02          |  |
| Carnegie classification code                                            |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| Doctorate-granting/research universities—extensive                      | 130                           | 20                         | 2.58                     | 1.52                         | 0.20              | 0.09          | 2.35                             | 2.39                            | -0.04          | -0.02         |  |
| Doctorate-granting/research universities—intensive                      | 90                            | 10                         | 1.86                     | 0.94                         | 0.18              | 0.10          | 1.66                             | 1.91                            | -0.25          | -0.15         |  |
| Master's colleges and universities I                                    | 180                           | 30                         | 7.73                     | 7.75                         | #                 | #             | 7.73                             | 7.92                            | -0.19          | -0.02         |  |
| Master's (comprehensive) colleges and universities II                   | 20                            | 10                         | 1.38                     | 1.41                         | -0.01             | #             | 1.38                             | 1.15                            | 0.23           | 0.17          |  |
| Baccalaureate colleges—liberal arts                                     | 50                            | 10                         | 2.83                     | 3.13                         | -0.06             | -0.02         | 2.90                             | 2.67                            | 0.22           | 0.08          |  |
| Baccalaureate colleges—general                                          | 80                            | 20                         | 6.05                     | 9.44                         | -0.65             | -0.10         | 6.78                             | 5.70                            | 1.07           | 0.16          |  |
| Baccalaureate/associate's colleges                                      | 10                            | #                          | 1.30                     | 0.77                         | 0.10              | 0.08          | 1.19                             | 1.14                            | 0.05           | 0.04          |  |
| Associate's colleges                                                    | 340                           | 60                         | 23.50                    | 24.18                        | -0.13             | -0.01         | 23.64                            | 23.88                           | -0.24          | -0.01         |  |
| Theological seminaries and other specialized faith-related institutions | 30                            | 10                         | 6.15                     | 1.36                         | 0.92              | 0.18          | 5.12                             | 5.85                            | -0.72          | -0.14         |  |
| Medical schools and medical centers                                     | 30                            | 10                         | 0.65                     | 0.87                         | -0.04             | -0.06         | 0.70                             | 0.71                            | -0.01          | -0.01         |  |
| Other separate health profession schools                                | 10                            | #                          | 0.90                     | 0.37                         | 0.10              | 0.13          | 0.78                             | 1.29                            | -0.51          | -0.65         |  |
| Schools of engineering and technology                                   | 10                            | #                          | 1.44                     | 0.34                         | 0.21              | 0.17          | 1.21                             | 1.39                            | -0.19          | -0.16         |  |

See notes at end of table.

K-5

Table K-1. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for all institutions: 2004—Continued

| Variable                                                                                  | Before nonresponse adjustment |                            |                          |                              |                   |               | After nonresponse adjustment     |                                 |                |               |  |
|-------------------------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|-------------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                                                                           | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias    | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Schools of business and management                                                        | 10                            | #                          | 0.42                     | 0.43                         | #                 | #             | 0.42                             | 0.56                            | -0.13          | -0.31         |  |
| Schools of art, music, and design                                                         | 20                            | 10                         | 0.82                     | 2.35                         | -0.29             | -0.26         | 1.15                             | 0.82                            | 0.33           | 0.29          |  |
| Schools of law                                                                            | #                             | #                          | 0.10                     | 0.58                         | -0.09             | -0.47         | 0.21                             | 0.11                            | 0.10           | 0.47          |  |
| Teachers colleges                                                                         | #                             | #                          | 0.10                     | #                            | #                 | #             | 0.08                             | 0.23                            | -0.16          | -2.03         |  |
| Other specialized institutions                                                            | 10                            | #                          | 1.35                     | 0.83                         | 0.10              | 0.08          | 1.24                             | 1.24                            | #              | #             |  |
| Tribal colleges and universities                                                          | #                             | #                          | 0.23                     | #                            | #                 | #             | 0.18                             | 0.19                            | #              | -0.03         |  |
| Unavailable or unknown                                                                    | 330                           | 70                         | 40.60                    | 43.75                        | -0.60             | -0.01         | 41.28                            | 40.85                           | 0.43           | 0.01          |  |
| Degree of urbanization                                                                    |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| Large city                                                                                | 350                           | 80                         | 22.51                    | 22.97                        | -0.09             | #             | 22.61                            | 22.01                           | 0.59           | 0.03          |  |
| Mid-size city                                                                             | 360                           | 60                         | 22.17                    | 25.92                        | -0.72             | -0.03         | 22.98                            | 21.26                           | 1.72           | 0.07          |  |
| Urban fringe of large city                                                                | 250                           | 60                         | 20.08                    | 14.26                        | 1.12              | 0.06          | 18.83                            | 21.76                           | -2.93          | -0.16         |  |
| Urban fringe of mid-size city                                                             | 80                            | 20                         | 6.48                     | 5.46                         | 0.20              | 0.03          | 6.26                             | 6.09                            | 0.17           | 0.03          |  |
| Large town                                                                                | 50                            | #                          | 2.14                     | 1.66                         | 0.09              | 0.04          | 2.03                             | 2.09                            | -0.05          | -0.03         |  |
| Small town                                                                                | 170                           | 30                         | 13.28                    | 9.37                         | 0.75              | 0.06          | 12.44                            | 13.93                           | -1.49          | -0.12         |  |
| Rural                                                                                     | 40                            | #                          | 3.64                     | 0.40                         | 0.62 <sup>1</sup> | 0.21          | 2.94                             | 3.35                            | -0.41          | -0.14         |  |
| Not assigned                                                                              | 30                            | #                          | 2.20                     | 0.73                         | 0.28              | 0.15          | 1.88                             | 1.82                            | 0.06           | 0.03          |  |
| Unavailable or unknown                                                                    | 50                            | 10                         | 7.52                     | 19.23                        | -2.25             | -0.23         | 10.04                            | 7.70                            | 2.34           | 0.23          |  |
| Bureau of Economic Analysis Code (Office of Business Economics [OBE]) Region <sup>2</sup> |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| New England                                                                               | 90                            | 20                         | 6.18                     | 13.12                        | -1.33             | -0.18         | 7.68                             | 6.96                            | 0.72           | 0.09          |  |
| Mid East                                                                                  | 200                           | 60                         | 14.44                    | 14.79                        | -0.07             | #             | 14.52                            | 17.58                           | -3.07          | -0.21         |  |
| Great Lakes                                                                               | 210                           | 40                         | 17.48                    | 8.02                         | 1.82              | 0.12          | 15.44                            | 16.13                           | -0.68          | -0.04         |  |
| Plains                                                                                    | 140                           | 20                         | 9.17                     | 3.68                         | 1.06              | 0.13          | 7.99                             | 8.66                            | -0.67          | -0.08         |  |
| Southeast                                                                                 | 320                           | 50                         | 23.63                    | 28.43                        | -0.92             | -0.04         | 24.66                            | 21.53                           | 3.13           | 0.13          |  |
| Southwest                                                                                 | 130                           | 30                         | 8.30                     | 6.86                         | 0.28              | 0.03          | 7.99                             | 8.32                            | -0.33          | -0.04         |  |
| Rocky Mountains                                                                           | 40                            | 10                         | 3.20                     | 5.06                         | -0.36             | -0.10         | 3.60                             | 3.48                            | 0.12           | 0.03          |  |
| Far West                                                                                  | 200                           | 60                         | 15.66                    | 19.95                        | -0.82             | -0.05         | 16.58                            | 15.82                           | 0.76           | 0.05          |  |
| Outlying areas                                                                            | 30                            | #                          | 1.93                     | 0.09                         | 0.35 <sup>1</sup> | 0.22          | 1.54                             | 1.52                            | 0.02           | 0.01          |  |
| Historically Black college or university                                                  |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| Yes                                                                                       | 30                            | 10                         | 2.00                     | 1.77                         | 0.05              | 0.02          | 1.95                             | 1.70                            | 0.25           | 0.13          |  |
| No                                                                                        | 1,340                         | 260                        | 98.00                    | 98.23                        | -0.05             | #             | 98.05                            | 98.30                           | -0.25          | #             |  |

See notes at end of table.

**Table K-1. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for all institutions: 2004—Continued**

| Variable                                  | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |  |
|-------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                           | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Percent receiving federal grant aid       |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                      | 400                           | 80                         | 18.56                    | 15.10                        | 0.66           | 0.04          | 17.82                            | 17.64                           | 0.18           | 0.01          |  |
| >25, <=50                                 | 490                           | 100                        | 34.15                    | 38.07                        | -0.75          | -0.02         | 34.99                            | 32.62                           | 2.38           | 0.07          |  |
| >50, <=75                                 | 230                           | 40                         | 22.73                    | 15.90                        | 1.31           | 0.06          | 21.26                            | 23.14                           | -1.88          | -0.09         |  |
| >75                                       | 120                           | 20                         | 15.74                    | 16.62                        | -0.17          | -0.01         | 15.93                            | 16.46                           | -0.54          | -0.03         |  |
| Unavailable or unknown                    | 120                           | 40                         | 8.82                     | 14.31                        | -1.06          | -0.11         | 10.00                            | 10.14                           | -0.14          | -0.01         |  |
| Percent receiving state/local grant aid   |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                      | 620                           | 110                        | 56.09                    | 52.95                        | 0.60           | 0.01          | 55.42                            | 55.41                           | #              | #             |  |
| >25, <=50                                 | 360                           | 80                         | 21.46                    | 22.92                        | -0.28          | -0.01         | 21.78                            | 21.57                           | 0.21           | 0.01          |  |
| >50, <=75                                 | 180                           | 30                         | 10.01                    | 6.18                         | 0.74           | 0.08          | 9.18                             | 9.51                            | -0.33          | -0.04         |  |
| >75                                       | 90                            | 10                         | 3.62                     | 3.64                         | #              | #             | 3.62                             | 3.37                            | 0.25           | 0.07          |  |
| Unavailable or unknown                    | 120                           | 40                         | 8.82                     | 14.31                        | -1.06          | -0.11         | 10.00                            | 10.14                           | -0.14          | -0.01         |  |
| Percent receiving institutional grant aid |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                      | 710                           | 120                        | 60.76                    | 53.22                        | 1.45           | 0.02          | 59.14                            | 59.88                           | -0.74          | -0.01         |  |
| >25, <=50                                 | 210                           | 40                         | 10.58                    | 12.29                        | -0.33          | -0.03         | 10.95                            | 10.43                           | 0.52           | 0.05          |  |
| >50, <=75                                 | 130                           | 40                         | 6.79                     | 11.12                        | -0.83          | -0.11         | 7.72                             | 6.92                            | 0.80           | 0.10          |  |
| >75                                       | 200                           | 40                         | 13.05                    | 9.06                         | 0.77           | 0.06          | 12.19                            | 12.63                           | -0.43          | -0.04         |  |
| Unavailable or unknown                    | 120                           | 40                         | 8.82                     | 14.31                        | -1.06          | -0.11         | 10.00                            | 10.14                           | -0.14          | -0.01         |  |
| Percent receiving student loan aid        |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                      | 430                           | 70                         | 29.32                    | 30.31                        | -0.19          | -0.01         | 29.53                            | 27.90                           | 1.63           | 0.06          |  |
| >25, <=50                                 | 330                           | 60                         | 14.96                    | 13.23                        | 0.33           | 0.02          | 14.59                            | 14.24                           | 0.34           | 0.02          |  |
| >50, <=75                                 | 320                           | 70                         | 27.49                    | 27.11                        | 0.07           | #             | 27.41                            | 25.37                           | 2.04           | 0.07          |  |
| >75                                       | 180                           | 30                         | 19.41                    | 15.04                        | 0.84           | 0.05          | 18.47                            | 22.35                           | -3.88          | -0.21         |  |
| Unavailable or unknown                    | 120                           | 40                         | 8.82                     | 14.31                        | -1.06          | -0.11         | 10.00                            | 10.14                           | -0.14          | -0.01         |  |
| Percent enrolled: Black, non-Hispanic     |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                      | 1,140                         | 220                        | 81.09                    | 68.87                        | 2.35           | 0.03          | 78.46                            | 82.05                           | -3.58          | -0.05         |  |
| >25, <=50                                 | 130                           | 20                         | 9.54                     | 10.71                        | -0.23          | -0.02         | 9.79                             | 9.11                            | 0.67           | 0.07          |  |
| >50, <=75                                 | 30                            | 10                         | 3.11                     | 8.23                         | -0.98          | -0.24         | 4.21                             | 3.06                            | 1.15           | 0.27          |  |
| >75                                       | 50                            | #                          | 4.50                     | 1.62                         | 0.55           | 0.14          | 3.88                             | 3.88                            | #              | #             |  |
| Unavailable or unknown                    | 20                            | 20                         | 1.76                     | 10.57                        | -1.69          | -0.49         | 3.66                             | 1.90                            | 1.76           | 0.48          |  |

See notes at end of table.

K-7

**Table K-1. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for all institutions: 2004—Continued**

| Variable                                           | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |  |
|----------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                                    | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Percent enrolled: Asian or Pacific Islander        |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                               | 1,310                         | 250                        | 96.23                    | 88.53                        | 1.48           | 0.02          | 94.57                            | 96.17                           | -1.60          | -0.02         |  |
| >25, <=50                                          | 20                            | 10                         | 1.82                     | 0.51                         | 0.25           | 0.16          | 1.53                             | 1.74                            | -0.20          | -0.13         |  |
| >50, <=75                                          | #                             | #                          | 0.15                     | #                            | #              | #             | 0.11                             | 0.15                            | -0.03          | -0.30         |  |
| >75                                                | #                             | #                          | 0.05                     | 0.40                         | -0.07          | -0.58         | 0.12                             | 0.04                            | 0.08           | 0.64          |  |
| Unavailable or unknown                             | 20                            | 20                         | 1.76                     | 10.57                        | -1.69          | -0.49         | 3.66                             | 1.90                            | 1.76           | 0.48          |  |
| Percent enrolled: Hispanic                         |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                               | 1,170                         | 220                        | 85.27                    | 71.82                        | 2.58           | 0.03          | 82.37                            | 85.19                           | -2.82          | -0.03         |  |
| >25, <=50                                          | 100                           | 20                         | 7.92                     | 10.63                        | -0.52          | -0.06         | 8.51                             | 7.38                            | 1.12           | 0.13          |  |
| >50, <=75                                          | 30                            | #                          | 2.07                     | 1.20                         | 0.17           | 0.09          | 1.89                             | 2.33                            | -0.44          | -0.24         |  |
| >75                                                | 40                            | 10                         | 2.97                     | 5.78                         | -0.54          | -0.15         | 3.58                             | 3.19                            | 0.38           | 0.11          |  |
| Unavailable or unknown                             | 20                            | 20                         | 1.76                     | 10.57                        | -1.69          | -0.49         | 3.66                             | 1.90                            | 1.76           | 0.48          |  |
| Total undergraduate enrollment <sup>3</sup>        |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <= 825.5                                           | 330                           | 70                         | 50.22                    | 43.68                        | 1.26           | 0.03          | 48.81                            | 48.98                           | -0.16          | #             |  |
| >825.5, <=2,938                                    | 330                           | 70                         | 22.80                    | 24.98                        | -0.42          | -0.02         | 23.27                            | 24.27                           | -1.00          | -0.04         |  |
| >2,938, <=9,799.5                                  | 340                           | 60                         | 15.24                    | 12.76                        | 0.48           | 0.03          | 14.70                            | 15.35                           | -0.65          | -0.04         |  |
| >9,799.5                                           | 340                           | 60                         | 10.28                    | 8.15                         | 0.41           | 0.04          | 9.82                             | 9.87                            | -0.05          | -0.01         |  |
| Unavailable or unknown                             | 20                            | 20                         | 1.47                     | 10.43                        | -1.72          | -0.54         | 3.39                             | 1.53                            | 1.87           | 0.55          |  |
| Total male undergraduate enrollment <sup>3</sup>   |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=281                                              | 330                           | 70                         | 49.43                    | 41.46                        | 1.53           | 0.03          | 47.71                            | 47.81                           | -0.10          | #             |  |
| >281, <=1,251                                      | 330                           | 70                         | 24.52                    | 28.84                        | -0.83          | -0.03         | 25.45                            | 26.38                           | -0.93          | -0.04         |  |
| >1,251, <=4,208.5                                  | 340                           | 60                         | 14.27                    | 11.61                        | 0.51           | 0.04          | 13.70                            | 14.42                           | -0.72          | -0.05         |  |
| >4,208.5                                           | 340                           | 60                         | 10.31                    | 7.67                         | 0.51           | 0.05          | 9.74                             | 9.86                            | -0.12          | -0.01         |  |
| Unavailable or unknown                             | 20                            | 20                         | 1.47                     | 10.43                        | -1.72          | -0.54         | 3.39                             | 1.53                            | 1.87           | 0.55          |  |
| Total female undergraduate enrollment <sup>3</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=472.5                                            | 330                           | 70                         | 51.49                    | 43.97                        | 1.44           | 0.03          | 49.87                            | 50.34                           | -0.47          | -0.01         |  |
| >472.5, <=1,645                                    | 330                           | 70                         | 20.93                    | 24.05                        | -0.60          | -0.03         | 21.60                            | 22.27                           | -0.66          | -0.03         |  |
| >1,645, <=5,422.5                                  | 350                           | 50                         | 15.40                    | 13.13                        | 0.44           | 0.03          | 14.91                            | 15.57                           | -0.65          | -0.04         |  |
| >5,422.5                                           | 340                           | 60                         | 10.72                    | 8.42                         | 0.44           | 0.04          | 10.22                            | 10.30                           | -0.07          | -0.01         |  |
| Unavailable or unknown                             | 20                            | 20                         | 1.47                     | 10.43                        | -1.72          | -0.54         | 3.39                             | 1.53                            | 1.87           | 0.55          |  |

See notes at end of table.

**Table K-1. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for all institutions: 2004—Continued**

| Variable                                                         | Before nonresponse adjustment |                            |                          |                              |                   |               | After nonresponse adjustment     |                                 |                |               |  |
|------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|-------------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                                                  | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias    | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Total graduate/first-professional enrollment <sup>4</sup>        |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| <= 1,820.5                                                       | 320                           | 90                         | 21.49                    | 29.67                        | -1.57             | -0.07         | 23.25                            | 21.95                           | 1.30           | 0.06          |  |
| > 1,820.5                                                        | 320                           | 60                         | 8.68                     | 5.10                         | 0.69 <sup>1</sup> | 0.09          | 7.91                             | 8.50                            | -0.59          | -0.07         |  |
| Total enrollment = 0                                             | 730                           | 130                        | 69.83                    | 65.22                        | 0.89              | 0.01          | 68.84                            | 69.55                           | -0.71          | -0.01         |  |
| Total male graduate/first-professional enrollment <sup>4</sup>   |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| <= 727                                                           | 330                           | 80                         | 22.16                    | 29.29                        | -1.37             | -0.06         | 23.69                            | 22.41                           | 1.28           | 0.05          |  |
| > 727                                                            | 310                           | 60                         | 7.95                     | 5.49                         | 0.47              | 0.06          | 7.42                             | 7.99                            | -0.57          | -0.08         |  |
| Total enrollment = 0                                             | 730                           | 130                        | 69.89                    | 65.22                        | 0.90              | 0.01          | 68.89                            | 69.60                           | -0.71          | -0.01         |  |
| Total female graduate/first-professional enrollment <sup>4</sup> |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| <= 1,073.5                                                       | 320                           | 90                         | 21.36                    | 29.53                        | -1.57             | -0.07         | 23.12                            | 21.69                           | 1.43           | 0.06          |  |
| > 1,073.5                                                        | 320                           | 60                         | 8.78                     | 5.24                         | 0.68 <sup>1</sup> | 0.08          | 8.02                             | 8.73                            | -0.71          | -0.09         |  |
| Total enrollment = 0                                             | 730                           | 130                        | 69.85                    | 65.22                        | 0.89              | 0.01          | 68.86                            | 69.58                           | -0.72          | -0.01         |  |

† Not applicable.

# Rounds to zero.

<sup>1</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>2</sup> New England = Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; Mid East = Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania; Great Lakes = Illinois, Indiana, Michigan, Ohio, Wisconsin; Plains = Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota; Southeast = Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia; Southwest = Arizona, New Mexico, Oklahoma, Texas; Rocky Mountains = Colorado, Idaho, Montana, Utah, Wyoming; Far West = Alaska, California, Hawaii, Nevada, Oregon, Washington; Outlying Areas = American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana Islands, Puerto Rico, Palau, Virgin Islands.

<sup>3</sup> Undergraduate enrollment categories were defined by quartiles.<sup>4</sup> Graduate/first-professional enrollment categories were defined by the median.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table K-2. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for public less-than-2-year institutions: 2004**

| Variable                                                                | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |
|-------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                                                         | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Carnegie classification code                                            |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| Doctorate-granting/research universities—extensive                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Doctorate-granting/research universities—intensive                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Master's colleges and universities I                                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Master's (comprehensive) colleges and universities II                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Baccalaureate colleges—liberal arts                                     | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Baccalaureate colleges—general                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Baccalaureate/associate's colleges                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Associate's colleges                                                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Theological seminaries and other specialized faith-related institutions | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Medical schools and medical centers                                     | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Other separate health profession schools                                | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Schools of engineering and technology                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Schools of business and management                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Schools of art, music, and design                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Schools of law                                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Teachers colleges                                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Other specialized institutions                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Tribal colleges and universities                                        | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                                                  | 50                            | 20                         | 100.00                   | 100.00                       | #              | #             | 100.00                           | 100.00                          | #              | #             |
| Degree of urbanization                                                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| Large city                                                              | #                             | #                          | 2.79                     | 2.99                         | -0.05          | -0.02         | 2.84                             | 1.76                            | 1.08           | 0.38          |
| Mid-size city                                                           | 10                            | #                          | 4.53                     | 5.71                         | -0.29          | -0.06         | 4.85                             | 3.21                            | 1.64           | 0.34          |
| Urban fringe of large city                                              | 10                            | #                          | 31.78                    | 23.52                        | 2.01           | 0.07          | 29.57                            | 45.74                           | -16.18         | -0.55         |
| Urban fringe of mid-size city                                           | 10                            | #                          | 14.71                    | 1.33                         | 3.25           | 0.28          | 11.12                            | 12.93                           | -1.81          | -0.16         |

See notes at end of table.



**Table K-2. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for public less-than-2-year institutions: 2004—Continued**

| Variable                                                                                  | Before nonresponse adjustment |                            |                          |                              |                    |               | After nonresponse adjustment     |                                 |                |               |
|-------------------------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|--------------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                                                                           | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias     | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Large town                                                                                | #                             | #                          | 6.18                     | #                            | #                  | #             | 4.52                             | 4.46                            | 0.05           | 0.01          |
| Small town                                                                                | 10                            | #                          | 23.76                    | 6.42                         | 4.22               | 0.22          | 19.11                            | 18.72                           | 0.40           | 0.02          |
| Rural                                                                                     | #                             | #                          | 6.25                     | #                            | #                  | #             | 4.58                             | 4.33                            | 0.25           | 0.05          |
| Not assigned                                                                              | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                                                                    | 10                            | #                          | 10.00                    | 60.02                        | -12.16             | -0.55         | 23.41                            | 8.85                            | 14.56          | 0.62          |
| Bureau of Economic Analysis Code (Office of Business Economics [OBE]) Region <sup>1</sup> |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |
| New England                                                                               | #                             | #                          | #                        | 60.02                        | -14.59             | -1.00         | 16.09                            | †                               | †              | †             |
| Mid East                                                                                  | 10                            | #                          | 21.39                    | 20.04                        | 0.33               | 0.02          | 21.03                            | 38.70                           | -17.67         | -0.84         |
| Great Lakes                                                                               | 10                            | #                          | 23.17                    | 3.30                         | 4.83               | 0.26          | 17.84                            | 19.43                           | -1.59          | -0.09         |
| Plains                                                                                    | #                             | #                          | 13.82                    | 1.21                         | 3.07               | 0.29          | 10.44                            | 10.99                           | -0.55          | -0.05         |
| Southeast                                                                                 | 10                            | #                          | 22.91                    | 6.55                         | 3.98               | 0.21          | 18.52                            | 15.80                           | 2.72           | 0.15          |
| Southwest                                                                                 | #                             | #                          | 10.54                    | 4.95                         | 1.36               | 0.15          | 9.04                             | 8.81                            | 0.23           | 0.03          |
| Rocky Mountains                                                                           | 10                            | #                          | 3.66                     | 2.74                         | 0.22               | 0.07          | 3.41                             | 2.82                            | 0.59           | 0.17          |
| Far West                                                                                  | 10                            | #                          | 4.07                     | 1.21                         | 0.70               | 0.21          | 3.30                             | 3.16                            | 0.15           | 0.04          |
| Outlying areas                                                                            | #                             | #                          | 0.44                     | #                            | #                  | #             | 0.32                             | 0.30                            | 0.03           | 0.09          |
| Historically Black college or university                                                  |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |
| Yes                                                                                       | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †              | †             |
| No                                                                                        | 50                            | 20                         | 100.00                   | 100.00                       | #                  | #             | 100.00                           | 100.00                          | #              | #             |
| Percent receiving federal grant aid                                                       |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |
| <=25                                                                                      | #                             | #                          | 2.54                     | 6.46                         | -0.95              | -0.27         | 3.59                             | 1.93                            | 1.66           | 0.46          |
| >25, <=50                                                                                 | 10                            | 10                         | 8.47                     | 15.50                        | -1.71              | -0.17         | 10.35                            | 5.94                            | 4.42           | 0.43          |
| >50, <=75                                                                                 | 20                            | #                          | 61.02                    | 15.61                        | 11.04 <sup>2</sup> | 0.22          | 48.85                            | 65.84                           | -16.99         | -0.35         |
| >75                                                                                       | 10                            | #                          | 17.52                    | #                            | #                  | #             | 12.83                            | 17.14                           | -4.31          | -0.34         |
| Unavailable or unknown                                                                    | 10                            | #                          | 10.44                    | 62.43                        | -12.64             | -0.55         | 24.38                            | 9.15                            | 15.23          | 0.62          |
| Percent receiving state/local grant aid                                                   |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |
| <=25                                                                                      | 30                            | 10                         | 45.84                    | 33.06                        | 3.11               | 0.07          | 42.41                            | 58.89                           | -16.48         | -0.39         |
| >25, <=50                                                                                 | 10                            | #                          | 33.98                    | 1.21                         | 7.97 <sup>2</sup>  | 0.31          | 25.19                            | 25.06                           | 0.13           | 0.01          |
| >50, <=75                                                                                 | 10                            | #                          | 8.08                     | #                            | #                  | #             | 5.91                             | 5.54                            | 0.37           | 0.06          |
| >75                                                                                       | #                             | #                          | 1.67                     | 3.30                         | -0.40              | -0.19         | 2.11                             | 1.37                            | 0.74           | 0.35          |
| Unavailable or unknown                                                                    | 10                            | #                          | 10.44                    | 62.43                        | -12.64             | -0.55         | 24.38                            | 9.15                            | 15.23          | 0.62          |

See notes at end of table.

K-11

**Table K-2. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for public less-than-2-year institutions: 2004—Continued**

| Variable                                    | Before nonresponse adjustment |                            |                          |                              |                    |               | After nonresponse adjustment     |                                 |                |               |  |
|---------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|--------------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                             | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias     | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Percent receiving institutional grant aid   |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |  |
| <=25                                        | 40                            | 10                         | 89.12                    | 35.78                        | 12.97              | 0.17          | 74.82                            | 90.36                           | -15.55         | -0.21         |  |
| >25, <=50                                   | #                             | #                          | #                        | 1.79                         | -0.43              | -1.00         | 0.48                             | †                               | †              | †             |  |
| >50, <=75                                   | #                             | #                          | 0.44                     | #                            | #                  | #             | 0.32                             | 0.49                            | -0.16          | -0.50         |  |
| >75                                         | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                      | 10                            | #                          | 10.44                    | 62.43                        | -12.64             | -0.55         | 24.38                            | 9.15                            | 15.23          | 0.62          |  |
| Percent receiving student loan aid          |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |  |
| <=25                                        | 30                            | 10                         | 46.95                    | 16.95                        | 7.29               | 0.18          | 38.91                            | 36.53                           | 2.38           | 0.06          |  |
| >25, <=50                                   | 10                            | #                          | 6.37                     | #                            | #                  | #             | 4.66                             | 4.57                            | 0.09           | 0.02          |  |
| >50, <=75                                   | #                             | #                          | 13.80                    | 18.83                        | -1.22              | -0.08         | 15.15                            | 11.12                           | 4.03           | 0.27          |  |
| >75                                         | #                             | #                          | 22.44                    | 1.79                         | 5.02               | 0.29          | 16.90                            | 38.63                           | -21.73         | -1.29         |  |
| Unavailable or unknown                      | 10                            | #                          | 10.44                    | 62.43                        | -12.64             | -0.55         | 24.38                            | 9.15                            | 15.23          | 0.62          |  |
| Percent enrolled: Black, non-Hispanic       |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |  |
| <=25                                        | 40                            | 10                         | 81.32                    | 9.18                         | 17.54 <sup>2</sup> | 0.27          | 61.98                            | 85.93                           | -23.95         | -0.39         |  |
| >25, <=50                                   | #                             | 10                         | 9.56                     | 16.06                        | -1.58              | -0.14         | 11.30                            | 6.11                            | 5.20           | 0.46          |  |
| >50, <=75                                   | #                             | #                          | #                        | 12.33                        | -3.00              | -1.00         | 3.31                             | †                               | †              | †             |  |
| >75                                         | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                      | #                             | #                          | 9.12                     | 62.43                        | -12.96             | -0.59         | 23.41                            | 7.96                            | 15.45          | 0.66          |  |
| Percent enrolled: Asian or Pacific Islander |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |  |
| <=25                                        | 50                            | 10                         | 90.88                    | 37.57                        | 12.96              | 0.17          | 76.59                            | 92.04                           | -15.45         | -0.20         |  |
| >25, <=50                                   | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †              | †             |  |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †              | †             |  |
| >75                                         | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                      | #                             | #                          | 9.12                     | 62.43                        | -12.96             | -0.59         | 23.41                            | 7.96                            | 15.45          | 0.66          |  |
| Percent enrolled: Hispanic                  |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |  |
| <=25                                        | 40                            | 10                         | 88.23                    | 37.57                        | 12.32              | 0.16          | 74.65                            | 89.87                           | -15.23         | -0.20         |  |
| >25, <=50                                   | #                             | #                          | 1.77                     | #                            | #                  | #             | 1.29                             | 1.37                            | -0.08          | -0.06         |  |
| >50, <=75                                   | #                             | #                          | 0.88                     | #                            | #                  | #             | 0.65                             | 0.79                            | -0.15          | -0.23         |  |
| >75                                         | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                      | #                             | #                          | 9.12                     | 62.43                        | -12.96             | -0.59         | 23.41                            | 7.96                            | 15.45          | 0.66          |  |

See notes at end of table.

**Table K-2. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for public less-than-2-year institutions: 2004—Continued**

| Variable                                           | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |
|----------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                                    | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Total undergraduate enrollment <sup>3</sup>        |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=206                                              | 10                            | #                          | 54.94                    | 21.99                        | 8.01           | 0.17          | 46.11                            | 66.55                           | -20.45         | -0.44         |
| >206, <=798                                        | 10                            | #                          | 21.19                    | 3.72                         | 4.25           | 0.25          | 16.51                            | 14.76                           | 1.75           | 0.11          |
| >798, <=2,099                                      | 10                            | #                          | 8.86                     | 7.65                         | 0.29           | 0.03          | 8.54                             | 5.80                            | 2.74           | 0.32          |
| >2099                                              | 10                            | #                          | 5.89                     | 4.20                         | 0.41           | 0.08          | 5.44                             | 4.93                            | 0.51           | 0.09          |
| Unavailable or unknown                             | #                             | #                          | 9.12                     | 62.43                        | -12.96         | -0.59         | 23.41                            | 7.96                            | 15.45          | 0.66          |
| Total male undergraduate enrollment <sup>3</sup>   |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=87                                               | 10                            | #                          | 50.48                    | 25.72                        | 6.02           | 0.14          | 43.84                            | 62.15                           | -18.30         | -0.42         |
| >87, <=309                                         | 10                            | #                          | 23.43                    | #                            | # <sup>2</sup> | #             | 17.15                            | 17.58                           | -0.44          | -0.03         |
| >309, <=1,015                                      | 10                            | #                          | 11.52                    | 6.16                         | 1.30           | 0.13          | 10.08                            | 7.76                            | 2.33           | 0.23          |
| >1,015                                             | 10                            | #                          | 5.45                     | 5.69                         | -0.06          | -0.01         | 5.52                             | 4.55                            | 0.96           | 0.17          |
| Unavailable or unknown                             | #                             | #                          | 9.12                     | 62.43                        | -12.96         | -0.59         | 23.41                            | 7.96                            | 15.45          | 0.66          |
| Total female undergraduate enrollment <sup>3</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=119                                              | 10                            | #                          | 54.51                    | 21.99                        | 7.91           | 0.17          | 45.79                            | 66.22                           | -20.43         | -0.45         |
| >119, <=342                                        | 10                            | #                          | 21.78                    | 3.72                         | 4.39           | 0.25          | 16.94                            | 15.18                           | 1.76           | 0.10          |
| >342, <=927                                        | 10                            | 10                         | 8.26                     | 9.44                         | -0.29          | -0.03         | 8.58                             | 5.41                            | 3.17           | 0.37          |
| >927                                               | 10                            | #                          | 6.33                     | 2.41                         | 0.95           | 0.18          | 5.28                             | 5.23                            | 0.05           | 0.01          |
| Unavailable or unknown                             | #                             | #                          | 9.12                     | 62.43                        | -12.96         | -0.59         | 23.41                            | 7.96                            | 15.45          | 0.66          |

† Not applicable.

# Rounds to zero.

<sup>1</sup> New England = Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; Mid East = Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania; Great Lakes = Illinois, Indiana, Michigan, Ohio, Wisconsin; Plains = Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota; Southeast = Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia; Southwest = Arizona, New Mexico, Oklahoma, Texas; Rocky Mountains = Colorado, Idaho, Montana, Utah, Wyoming; Far West = Alaska, California, Hawaii, Nevada, Oregon, Washington; Outlying Areas = American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana Islands, Puerto Rico, Palau, Virgin Islands.

<sup>2</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>3</sup> Undergraduate enrollment categories were defined by quartiles.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table K-3. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for public 2-year institutions: 2004**

| Variable                                                                | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |   |
|-------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|---|
|                                                                         | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |   |
| Carnegie classification code                                            |                               |                            |                          |                              |                |               |                                  |                                 |                |               |   |
| Doctorate-granting/research universities—extensive                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Doctorate-granting/research universities—intensive                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Master's colleges and universities I                                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Master's (comprehensive) colleges and universities II                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Baccalaureate colleges—liberal arts                                     | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Baccalaureate colleges—general                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Baccalaureate/associate's colleges                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Associate's colleges                                                    | 260                           | 40                         | 84.54                    | 94.02                        | -2.21          | -0.03         | 86.68                            | 80.01                           | 6.68           | 0.08          |   |
| Theological seminaries and other specialized faith-related institutions | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Medical schools and medical centers                                     | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Other separate health profession schools                                | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Schools of engineering and technology                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Schools of business and management                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Schools of art, music, and design                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Schools of law                                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Teachers colleges                                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Other specialized institutions                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Tribal colleges and universities                                        | #                             | #                          | 0.28                     | #                            | #              | #             | 0.21                             | 0.22                            | -0.01          | -0.04         |   |
| Unavailable or unknown                                                  | 60                            | 10                         | 15.18                    | 5.98                         | 2.14           | 0.16          | 13.11                            | 19.77                           | -6.67          | -0.51         |   |
| Degree of urbanization                                                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |   |
| Large city                                                              | 50                            | 10                         | 12.27                    | 6.75                         | 1.28           | 0.12          | 11.02                            | 11.72                           | -0.70          | -0.06         |   |
| Mid-size city                                                           | 90                            | 10                         | 25.91                    | 32.17                        | -1.46          | -0.05         | 27.32                            | 24.84                           | 2.48           | 0.09          |   |
| Urban fringe of large city                                              | 70                            | 20                         | 18.16                    | 20.99                        | -0.66          | -0.03         | 18.80                            | 16.35                           | 2.45           | 0.13          |   |

See notes at end of table.

**Table K-3. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for public 2-year institutions: 2004—Continued**

| Variable                                                                                  | Before nonresponse adjustment |                            |                          |                              |                   |               | After nonresponse adjustment     |                                 |                |               |  |
|-------------------------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|-------------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                                                                           | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias    | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Urban fringe of mid-size city                                                             | 20                            | #                          | 4.12                     | 1.31                         | 0.65              | 0.19          | 3.48                             | 3.64                            | -0.16          | -0.05         |  |
| Large town                                                                                | 10                            | #                          | 2.49                     | 8.83                         | -1.48             | -0.37         | 3.92                             | 2.13                            | 1.79           | 0.46          |  |
| Small town                                                                                | 70                            | 10                         | 25.07                    | 26.82                        | -0.41             | -0.02         | 25.46                            | 25.72                           | -0.26          | -0.01         |  |
| Rural                                                                                     | 20                            | #                          | 6.93                     | 1.41                         | 1.29              | 0.23          | 5.69                             | 6.06                            | -0.37          | -0.06         |  |
| Not assigned                                                                              | 10                            | #                          | 1.40                     | 0.51                         | 0.21              | 0.17          | 1.20                             | 1.31                            | -0.11          | -0.09         |  |
| Unavailable or unknown                                                                    | 10                            | #                          | 3.65                     | 1.21                         | 0.57              | 0.18          | 3.10                             | 8.23                            | -5.13          | -1.65         |  |
| Bureau of Economic Analysis Code (Office of Business Economics [OBE]) Region <sup>1</sup> |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| New England                                                                               | 20                            | #                          | 4.33                     | 3.93                         | 0.09              | 0.02          | 4.24                             | 4.53                            | -0.29          | -0.07         |  |
| Mid East                                                                                  | 40                            | 10                         | 8.86                     | 10.22                        | -0.32             | -0.03         | 9.17                             | 12.20                           | -3.04          | -0.33         |  |
| Great Lakes                                                                               | 60                            | #                          | 16.10                    | 3.25                         | 2.99 <sup>2</sup> | 0.23          | 13.20                            | 16.12                           | -2.92          | -0.22         |  |
| Plains                                                                                    | 40                            | 10                         | 12.38                    | 5.66                         | 1.57              | 0.14          | 10.87                            | 12.48                           | -1.62          | -0.15         |  |
| Southeast                                                                                 | 90                            | 10                         | 31.45                    | 27.92                        | 0.82              | 0.03          | 30.65                            | 28.87                           | 1.78           | 0.06          |  |
| Southwest                                                                                 | 40                            | #                          | 12.01                    | 1.99                         | 2.33 <sup>2</sup> | 0.24          | 9.75                             | 10.79                           | -1.04          | -0.11         |  |
| Rocky Mountains                                                                           | #                             | #                          | 2.01                     | 21.50                        | -4.54             | -0.69         | 6.41                             | 2.78                            | 3.63           | 0.57          |  |
| Far West                                                                                  | 40                            | 20                         | 12.41                    | 25.01                        | -2.93             | -0.19         | 15.25                            | 11.86                           | 3.39           | 0.22          |  |
| Outlying areas                                                                            | #                             | #                          | 0.45                     | 0.51                         | -0.02             | -0.03         | 0.46                             | 0.36                            | 0.10           | 0.22          |  |
| Historically Black college or university                                                  |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| Yes                                                                                       | #                             | #                          | 2.85                     | #                            | #                 | #             | 2.21                             | 2.54                            | -0.34          | -0.15         |  |
| No                                                                                        | 320                           | 60                         | 97.15                    | 100.00                       | -0.66             | -0.01         | 97.79                            | 97.46                           | 0.34           | #             |  |
| Percent receiving federal grant aid                                                       |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| <=25                                                                                      | 80                            | 10                         | 22.83                    | 19.47                        | 0.78              | 0.04          | 22.07                            | 20.57                           | 1.50           | 0.07          |  |
| >25, <=50                                                                                 | 170                           | 30                         | 48.43                    | 49.00                        | -0.13             | #             | 48.56                            | 45.35                           | 3.20           | 0.07          |  |
| >50, <=75                                                                                 | 60                            | 10                         | 20.98                    | 23.03                        | -0.48             | -0.02         | 21.44                            | 21.09                           | 0.35           | 0.02          |  |
| >75                                                                                       | 10                            | #                          | 3.95                     | 7.30                         | -0.78             | -0.16         | 4.71                             | 5.02                            | -0.31          | -0.07         |  |
| Unavailable or unknown                                                                    | 10                            | #                          | 3.81                     | 1.21                         | 0.61              | 0.19          | 3.22                             | 7.98                            | -4.75          | -1.47         |  |
| Percent receiving state/local grant aid                                                   |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| <=25                                                                                      | 150                           | 30                         | 48.11                    | 49.92                        | -0.42             | -0.01         | 48.52                            | 47.06                           | 1.46           | 0.03          |  |
| >25, <=50                                                                                 | 90                            | 20                         | 30.54                    | 45.02                        | -3.37             | -0.10         | 33.80                            | 29.84                           | 3.97           | 0.12          |  |
| >50, <=75                                                                                 | 50                            | 10                         | 11.16                    | 3.45                         | 1.79 <sup>2</sup> | 0.19          | 9.42                             | 9.71                            | -0.29          | -0.03         |  |
| >75                                                                                       | 30                            | #                          | 6.38                     | 0.40                         | 1.39 <sup>2</sup> | 0.28          | 5.03                             | 5.42                            | -0.39          | -0.08         |  |
| Unavailable or unknown                                                                    | 10                            | #                          | 3.81                     | 1.21                         | 0.61              | 0.19          | 3.22                             | 7.98                            | -4.75          | -1.47         |  |

See notes at end of table.

K-15

Appendix K. Nonresponse Bias Analysis

**Table K-3. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for public 2-year institutions: 2004—Continued**

| Variable                                    | Before nonresponse adjustment |                            |                          |                              |                   |               | After nonresponse adjustment     |                                 |                |               |  |
|---------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|-------------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                             | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias    | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Percent receiving institutional grant aid   |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| <=25                                        | 280                           | 50                         | 75.29                    | 81.95                        | -1.55             | -0.02         | 76.79                            | 70.80                           | 6.00           | 0.08          |  |
| >25, <=50                                   | 30                            | #                          | 15.03                    | 0.40                         | 3.41 <sup>2</sup> | 0.29          | 11.73                            | 15.28                           | -3.55          | -0.30         |  |
| >50, <=75                                   | #                             | #                          | 4.86                     | 16.44                        | -2.69             | -0.36         | 7.48                             | 5.23                            | 2.24           | 0.30          |  |
| >75                                         | #                             | #                          | 1.00                     | #                            | #                 | #             | 0.78                             | 0.72                            | 0.05           | 0.07          |  |
| Unavailable or unknown                      | 10                            | #                          | 3.81                     | 1.21                         | 0.61              | 0.19          | 3.22                             | 7.98                            | -4.75          | -1.47         |  |
| Percent receiving student loan aid          |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| <=25                                        | 250                           | 40                         | 74.81                    | 74.88                        | -0.02             | #             | 74.83                            | 69.82                           | 5.01           | 0.07          |  |
| >25, <=50                                   | 60                            | 10                         | 14.59                    | 22.30                        | -1.80             | -0.11         | 16.33                            | 13.88                           | 2.44           | 0.15          |  |
| >50, <=75                                   | 10                            | #                          | 6.56                     | 1.61                         | 1.15              | 0.21          | 5.44                             | 8.13                            | -2.69          | -0.49         |  |
| >75                                         | #                             | #                          | 0.23                     | #                            | #                 | #             | 0.18                             | 0.19                            | -0.01          | -0.06         |  |
| Unavailable or unknown                      | 10                            | #                          | 3.81                     | 1.21                         | 0.61              | 0.19          | 3.22                             | 7.98                            | -4.75          | -1.47         |  |
| Percent enrolled: Black, non-Hispanic       |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| <=25                                        | 260                           | 50                         | 81.41                    | 73.08                        | 1.94              | 0.02          | 79.53                            | 83.08                           | -3.54          | -0.04         |  |
| >25, <=50                                   | 40                            | 10                         | 12.00                    | 17.40                        | -1.26             | -0.09         | 13.22                            | 10.68                           | 2.54           | 0.19          |  |
| >50, <=75                                   | 10                            | #                          | 3.88                     | 8.30                         | -1.03             | -0.21         | 4.88                             | 3.61                            | 1.28           | 0.26          |  |
| >75                                         | #                             | #                          | 2.23                     | #                            | #                 | #             | 1.73                             | 2.10                            | -0.37          | -0.21         |  |
| Unavailable or unknown                      | #                             | #                          | 0.47                     | 1.21                         | -0.17             | -0.27         | 0.64                             | 0.54                            | 0.10           | 0.15          |  |
| Percent enrolled: Asian or Pacific Islander |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| <=25                                        | 310                           | 50                         | 97.86                    | 95.79                        | 0.48              | #             | 97.39                            | 97.77                           | -0.38          | #             |  |
| >25, <=50                                   | 10                            | #                          | 1.25                     | 0.81                         | 0.10              | 0.09          | 1.15                             | 1.28                            | -0.13          | -0.11         |  |
| >50, <=75                                   | #                             | #                          | 0.42                     | #                            | #                 | #             | 0.33                             | 0.41                            | -0.09          | -0.27         |  |
| >75                                         | #                             | #                          | #                        | 2.20                         | -0.51             | -1.00         | 0.50                             | †                               | †              | †             |  |
| Unavailable or unknown                      | #                             | #                          | 0.47                     | 1.21                         | -0.17             | -0.27         | 0.64                             | 0.54                            | 0.10           | 0.15          |  |
| Percent enrolled: Hispanic                  |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| <=25                                        | 280                           | 40                         | 89.64                    | 90.58                        | -0.22             | #             | 89.85                            | 90.39                           | -0.54          | -0.01         |  |
| >25, <=50                                   | 30                            | 10                         | 8.12                     | 5.42                         | 0.63              | 0.08          | 7.51                             | 7.49                            | 0.02           | #             |  |
| >50, <=75                                   | 10                            | #                          | 1.06                     | 0.40                         | 0.15              | 0.17          | 0.91                             | 0.94                            | -0.03          | -0.03         |  |
| >75                                         | 10                            | #                          | 0.71                     | 2.39                         | -0.39             | -0.36         | 1.09                             | 0.63                            | 0.46           | 0.42          |  |
| Unavailable or unknown                      | #                             | #                          | 0.47                     | 1.21                         | -0.17             | -0.27         | 0.64                             | 0.54                            | 0.10           | 0.15          |  |

See notes at end of table.

**Table K-3. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for public 2-year institutions: 2004—Continued**

| Variable                                           | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |
|----------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                                    | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Total undergraduate enrollment <sup>3</sup>        |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=3,564                                            | 80                            | 10                         | 33.29                    | 43.40                        | -2.35          | -0.07         | 35.57                            | 39.10                           | -3.54          | -0.10         |
| >3,564, <=7,738                                    | 80                            | 10                         | 26.51                    | 20.92                        | 1.30           | 0.05          | 25.24                            | 26.30                           | -1.05          | -0.04         |
| >7,738, <=16,918                                   | 80                            | 10                         | 25.52                    | 17.79                        | 1.80           | 0.08          | 23.78                            | 21.70                           | 2.08           | 0.09          |
| >16,918                                            | 70                            | 20                         | 14.21                    | 16.69                        | -0.58          | -0.04         | 14.77                            | 12.37                           | 2.41           | 0.16          |
| Unavailable or unknown                             | #                             | #                          | 0.47                     | 1.21                         | -0.17          | -0.27         | 0.64                             | 0.54                            | 0.10           | 0.15          |
| Total male undergraduate enrollment <sup>3</sup>   |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=1,355                                            | 80                            | 10                         | 36.08                    | 44.31                        | -1.91          | -0.05         | 37.94                            | 42.35                           | -4.41          | -0.12         |
| >1,355, <=3,237                                    | 90                            | 10                         | 25.28                    | 19.61                        | 1.32           | 0.06          | 24.00                            | 24.66                           | -0.67          | -0.03         |
| >3,237, <=7,322                                    | 80                            | 10                         | 24.40                    | 19.72                        | 1.09           | 0.05          | 23.35                            | 20.36                           | 2.98           | 0.13          |
| >7,322                                             | 70                            | 20                         | 13.76                    | 15.16                        | -0.33          | -0.02         | 14.08                            | 12.08                           | 1.99           | 0.14          |
| Unavailable or unknown                             | #                             | #                          | 0.47                     | 1.21                         | -0.17          | -0.27         | 0.64                             | 0.54                            | 0.10           | 0.15          |
| Total female undergraduate enrollment <sup>3</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=2,204                                            | 80                            | 10                         | 31.61                    | 36.50                        | -1.14          | -0.03         | 32.71                            | 37.42                           | -4.71          | -0.14         |
| >2,204, <=4,521                                    | 90                            | 10                         | 28.35                    | 19.92                        | 1.96           | 0.07          | 26.45                            | 28.27                           | -1.82          | -0.07         |
| >4,521, <=9,679                                    | 80                            | 10                         | 26.04                    | 25.68                        | 0.08           | #             | 25.96                            | 22.05                           | 3.90           | 0.15          |
| >9,679                                             | 70                            | 20                         | 13.53                    | 16.69                        | -0.74          | -0.05         | 14.24                            | 11.71                           | 2.54           | 0.18          |
| Unavailable or unknown                             | #                             | #                          | 0.47                     | 1.21                         | -0.17          | -0.27         | 0.64                             | 0.54                            | 0.10           | 0.15          |

† Not applicable.

# Rounds to zero.

<sup>1</sup> New England = Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; Mid East = Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania; Great Lakes = Illinois, Indiana, Michigan, Ohio, Wisconsin; Plains = Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota; Southeast = Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia; Southwest = Arizona, New Mexico, Oklahoma, Texas; Rocky Mountains = Colorado, Idaho, Montana, Utah, Wyoming; Far West = Alaska, California, Hawaii, Nevada, Oregon, Washington; Outlying Areas = American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana Islands, Puerto Rico, Palau, Virgin Islands.

<sup>2</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>3</sup> Undergraduate enrollment categories were defined by quartiles.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table K-4. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for public 4-year non-doctorate-granting institutions: 2004**

| Variable                                                                | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |   |
|-------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|---|
|                                                                         | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |   |
| Carnegie classification code                                            |                               |                            |                          |                              |                |               |                                  |                                 |                |               |   |
| Doctorate-granting/research universities—extensive                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Doctorate-granting/research universities—intensive                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Master's colleges and universities I                                    | 70                            | 10                         | 44.90                    | 32.81                        | 2.47           | 0.06          | 41.44                            | 47.05                           | -5.60          | -0.14         |   |
| Master's (comprehensive) colleges and universities II                   | 10                            | #                          | 4.20                     | 7.59                         | -0.69          | -0.14         | 5.17                             | 3.69                            | 1.48           | 0.29          |   |
| Baccalaureate colleges—liberal arts                                     | #                             | #                          | 2.69                     | 0.82                         | 0.38           | 0.17          | 2.16                             | 2.83                            | -0.67          | -0.31         |   |
| Baccalaureate colleges—general                                          | 10                            | #                          | 19.48                    | 50.75                        | -6.39          | -0.25         | 28.42                            | 19.01                           | 9.40           | 0.33          |   |
| Baccalaureate/associate's colleges                                      | 10                            | #                          | 2.85                     | #                            | #              | #             | 2.03                             | 2.17                            | -0.14          | -0.07         |   |
| Associate's colleges                                                    | #                             | #                          | 1.67                     | #                            | #              | #             | 1.19                             | 1.06                            | 0.13           | 0.11          |   |
| Theological seminaries and other specialized faith-related institutions | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Medical schools and medical centers                                     | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Other separate health profession schools                                | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Schools of engineering and technology                                   | #                             | #                          | 8.21                     | #                            | #              | #             | 5.86                             | 9.27                            | -3.41          | -0.58         |   |
| Schools of business and management                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Schools of art, music, and design                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Schools of law                                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Teachers colleges                                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Other specialized institutions                                          | #                             | #                          | 14.68                    | 0.82                         | 2.83           | 0.24          | 10.72                            | 14.03                           | -3.31          | -0.31         |   |
| Tribal colleges and universities                                        | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Unavailable or unknown                                                  | #                             | #                          | 1.32                     | 7.20                         | -1.20          | -0.48         | 3.00                             | 0.89                            | 2.11           | 0.70          |   |
| Degree of urbanization                                                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |   |
| Large city                                                              | 20                            | #                          | 7.45                     | 1.65                         | 1.18           | 0.19          | 5.79                             | 6.71                            | -0.92          | -0.16         |   |
| Mid-size city                                                           | 30                            | #                          | 16.87                    | 50.01                        | -6.77          | -0.29         | 26.34                            | 15.70                           | 10.65          | 0.40          |   |
| Urban fringe of large city                                              | 20                            | #                          | 10.59                    | 8.02                         | 0.52           | 0.05          | 9.85                             | 12.31                           | -2.45          | -0.25         |   |
| Urban fringe of mid-size city                                           | 10                            | #                          | 9.62                     | 3.19                         | 1.31           | 0.16          | 7.78                             | 10.17                           | -2.39          | -0.31         |   |
| Large town                                                              | 10                            | #                          | 12.08                    | #                            | #              | #             | 8.63                             | 13.15                           | -4.52          | -0.52         |   |
| Small town                                                              | 30                            | 10                         | 36.25                    | 35.48                        | 0.16           | #             | 36.03                            | 37.44                           | -1.41          | -0.04         |   |

See notes at end of table.



**Table K-4. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for public 4-year non-doctorate-granting institutions: 2004—Continued**

| Variable                                                                                  | Before nonresponse adjustment |                            |                          |                              |                    |               | After nonresponse adjustment     |                                 |                |               |
|-------------------------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|--------------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                                                                           | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias     | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Rural                                                                                     | #                             | #                          | 3.40                     | 0.82                         | 0.53               | 0.18          | 2.67                             | 2.15                            | 0.52           | 0.19          |
| Not assigned                                                                              | #                             | #                          | 2.43                     | #                            | #                  | #             | 1.73                             | 1.49                            | 0.24           | 0.14          |
| Unavailable or unknown                                                                    | #                             | #                          | 1.32                     | 0.82                         | 0.10               | 0.08          | 1.18                             | 0.89                            | 0.29           | 0.25          |
| Bureau of Economic Analysis Code (Office of Business Economics [OBE]) Region <sup>1</sup> |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |
| New England                                                                               | 10                            | #                          | 19.56                    | 42.41                        | -4.67              | -0.19         | 26.10                            | 17.72                           | 8.37           | 0.32          |
| Mid East                                                                                  | 20                            | #                          | 14.88                    | 15.65                        | -0.16              | -0.01         | 15.10                            | 15.33                           | -0.24          | -0.02         |
| Great Lakes                                                                               | 20                            | #                          | 6.87                     | 7.73                         | -0.18              | -0.02         | 7.12                             | 7.02                            | 0.10           | 0.01          |
| Plains                                                                                    | 10                            | #                          | 5.46                     | 9.16                         | -0.75              | -0.12         | 6.52                             | 4.79                            | 1.73           | 0.27          |
| Southeast                                                                                 | 30                            | #                          | 24.85                    | 3.99                         | 4.26               | 0.21          | 18.88                            | 20.70                           | -1.82          | -0.10         |
| Southwest                                                                                 | 10                            | #                          | 4.54                     | 14.47                        | -2.03              | -0.31         | 7.38                             | 4.29                            | 3.09           | 0.42          |
| Rocky Mountains                                                                           | 10                            | #                          | 14.07                    | #                            | #                  | #             | 10.05                            | 18.49                           | -8.45          | -0.84         |
| Far West                                                                                  | 20                            | 10                         | 7.33                     | 6.59                         | 0.15               | 0.02          | 7.12                             | 10.17                           | -3.05          | -0.43         |
| Outlying areas                                                                            | #                             | #                          | 2.43                     | #                            | #                  | #             | 1.73                             | 1.49                            | 0.24           | 0.14          |
| Historically Black college or university                                                  |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |
| Yes                                                                                       | 10                            | #                          | 8.61                     | #                            | # <sup>2</sup>     | #             | 6.15                             | 5.51                            | 0.64           | 0.10          |
| No                                                                                        | 110                           | 20                         | 91.39                    | 100.00                       | -1.76 <sup>2</sup> | -0.02         | 93.85                            | 94.49                           | -0.64          | -0.01         |
| Percent receiving federal grant aid                                                       |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |
| <=25                                                                                      | 30                            | 10                         | 39.31                    | 16.00                        | 4.76               | 0.14          | 32.64                            | 39.92                           | -7.28          | -0.22         |
| >25, <=50                                                                                 | 60                            | 10                         | 42.09                    | 67.16                        | -5.12              | -0.11         | 49.26                            | 45.03                           | 4.23           | 0.09          |
| >50, <=75                                                                                 | 20                            | #                          | 8.94                     | 1.54                         | 1.51               | 0.20          | 6.82                             | 7.23                            | -0.40          | -0.06         |
| >75                                                                                       | #                             | #                          | 6.16                     | 14.47                        | -1.70              | -0.22         | 8.54                             | 4.25                            | 4.29           | 0.50          |
| Unavailable or unknown                                                                    | #                             | #                          | 3.50                     | 0.82                         | 0.55               | 0.19          | 2.74                             | 3.57                            | -0.84          | -0.31         |
| Percent receiving state/local grant aid                                                   |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |
| <=25                                                                                      | 20                            | 10                         | 25.47                    | 70.86                        | -9.27              | -0.27         | 38.45                            | 27.43                           | 11.02          | 0.29          |
| >25, <=50                                                                                 | 50                            | 10                         | 53.16                    | 23.45                        | 6.07               | 0.13          | 44.67                            | 54.24                           | -9.58          | -0.21         |
| >50, <=75                                                                                 | 20                            | #                          | 12.44                    | 3.32                         | 1.86               | 0.18          | 9.83                             | 10.37                           | -0.53          | -0.05         |
| >75                                                                                       | 10                            | #                          | 5.42                     | 1.54                         | 0.79               | 0.17          | 4.31                             | 4.38                            | -0.07          | -0.02         |
| Unavailable or unknown                                                                    | #                             | #                          | 3.50                     | 0.82                         | 0.55               | 0.19          | 2.74                             | 3.57                            | -0.84          | -0.31         |
| Percent receiving institutional grant aid                                                 |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |
| <=25                                                                                      | 70                            | 10                         | 63.12                    | 69.06                        | -1.21              | -0.02         | 64.82                            | 61.12                           | 3.70           | 0.06          |
| >25, <=50                                                                                 | 20                            | 10                         | 20.53                    | 20.96                        | -0.09              | #             | 20.66                            | 21.20                           | -0.54          | -0.03         |

See notes at end of table.

K-19

**Table K-4. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for public 4-year non-doctorate-granting institutions: 2004—Continued**

| Variable                                    | Before nonresponse adjustment |                            |                          |                              |                   |               | After nonresponse adjustment     |                                 |                |               |
|---------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|-------------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                             | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias    | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| >50, <=75                                   | 10                            | #                          | 12.85                    | 9.16                         | 0.75              | 0.06          | 11.79                            | 14.12                           | -2.32          | -0.20         |
| >75                                         | †                             | †                          | †                        | †                            | †                 | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                      | #                             | #                          | 3.50                     | 0.82                         | 0.55              | 0.19          | 2.74                             | 3.57                            | -0.84          | -0.31         |
| Percent receiving student loan aid          |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |
| <=25                                        | 30                            | #                          | 14.23                    | 14.79                        | -0.12             | -0.01         | 14.39                            | 13.04                           | 1.35           | 0.09          |
| >25, <=50                                   | 50                            | 10                         | 43.26                    | 20.82                        | 4.58              | 0.12          | 36.84                            | 42.94                           | -6.10          | -0.17         |
| >50, <=75                                   | 30                            | 10                         | 36.82                    | 12.82                        | 4.90              | 0.15          | 29.96                            | 38.20                           | -8.25          | -0.28         |
| >75                                         | #                             | #                          | 2.19                     | 50.75                        | -9.92             | -0.82         | 16.08                            | 2.24                            | 13.83          | 0.86          |
| Unavailable or unknown                      | #                             | #                          | 3.50                     | 0.82                         | 0.55              | 0.19          | 2.74                             | 3.57                            | -0.84          | -0.31         |
| Percent enrolled: Black, non-Hispanic       |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |
| <=25                                        | 100                           | 20                         | 88.56                    | 53.59                        | 7.14              | 0.09          | 78.56                            | 91.63                           | -13.06         | -0.17         |
| >25, <=50                                   | 10                            | #                          | 3.83                     | 3.99                         | -0.03             | -0.01         | 3.88                             | 3.44                            | 0.44           | 0.11          |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †                 | †             | †                                | †                               | †              | †             |
| >75                                         | 10                            | #                          | 7.61                     | #                            | #                 | #             | 5.43                             | 4.93                            | 0.50           | 0.09          |
| Unavailable or unknown                      | #                             | #                          | #                        | 42.41                        | -8.66             | -1.00         | 12.13                            | †                               | †              | †             |
| Percent enrolled: Asian or Pacific Islander |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |
| <=25                                        | 110                           | 20                         | 97.96                    | 55.94                        | 8.59              | 0.10          | 85.95                            | 97.64                           | -11.69         | -0.14         |
| >25, <=50                                   | #                             | #                          | 2.04                     | 1.65                         | 0.08              | 0.04          | 1.92                             | 2.36                            | -0.44          | -0.23         |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †                 | †             | †                                | †                               | †              | †             |
| >75                                         | †                             | †                          | †                        | †                            | †                 | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                      | #                             | #                          | #                        | 42.41                        | -8.66             | -1.00         | 12.13                            | †                               | †              | †             |
| Percent enrolled: Hispanic                  |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |
| <=25                                        | 100                           | 20                         | 92.66                    | 41.47                        | 10.46             | 0.13          | 78.02                            | 93.45                           | -15.43         | -0.20         |
| >25, <=50                                   | 10                            | #                          | 4.52                     | 15.30                        | -2.20             | -0.33         | 7.60                             | 4.65                            | 2.95           | 0.39          |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †                 | †             | †                                | †                               | †              | †             |
| >75                                         | #                             | #                          | 2.82                     | 0.82                         | 0.41              | 0.17          | 2.25                             | 1.90                            | 0.35           | 0.16          |
| Unavailable or unknown                      | #                             | #                          | #                        | 42.41                        | -8.66             | -1.00         | 12.13                            | †                               | †              | †             |
| Total undergraduate enrollment <sup>3</sup> |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |
| <=3,892                                     | 30                            | 10                         | 49.62                    | 26.10                        | 4.80              | 0.11          | 42.90                            | 48.73                           | -5.83          | -0.14         |
| >3,892, <=6,690                             | 30                            | #                          | 22.19                    | 19.91                        | 0.47              | 0.02          | 21.54                            | 18.12                           | 3.42           | 0.16          |
| >6,690, <=11,155                            | 30                            | #                          | 16.72                    | 1.92                         | 3.02 <sup>2</sup> | 0.22          | 12.49                            | 19.96                           | -7.48          | -0.60         |
| >11,155                                     | 30                            | 10                         | 11.47                    | 9.65                         | 0.37              | 0.03          | 10.95                            | 13.19                           | -2.24          | -0.20         |
| Unavailable or unknown                      | #                             | #                          | #                        | 42.41                        | -8.66             | -1.00         | 12.13                            | †                               | †              | †             |

See notes at end of table.

**Table K-4. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for public 4-year non-doctorate-granting institutions: 2004—Continued**

| Variable                                                         | Before nonresponse adjustment |                            |                          |                              |                     |               | After nonresponse adjustment     |                                 |                    |               |
|------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|---------------------|---------------|----------------------------------|---------------------------------|--------------------|---------------|
|                                                                  | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias      | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias     | Relative bias |
| Total male undergraduate enrollment <sup>3</sup>                 |                               |                            |                          |                              |                     |               |                                  |                                 |                    |               |
| <=1,505                                                          | 30                            | 10                         | 53.23                    | 26.10                        | 5.54                | 0.12          | 45.47                            | 52.02                           | -6.54              | -0.14         |
| >1,505, <=2,664                                                  | 30                            | #                          | 18.19                    | 15.65                        | 0.52                | 0.03          | 17.46                            | 14.49                           | 2.98               | 0.17          |
| >2,664, <=4,596                                                  | 30                            | #                          | 16.47                    | 7.01                         | 1.93                | 0.13          | 13.77                            | 20.41                           | -6.64              | -0.48         |
| >4,596                                                           | 30                            | 10                         | 12.10                    | 8.83                         | 0.67                | 0.06          | 11.17                            | 13.09                           | -1.92              | -0.17         |
| Unavailable or unknown                                           | #                             | #                          | #                        | 42.41                        | -8.66               | -1.00         | 12.13                            | †                               | †                  | †             |
| Total female undergraduate enrollment <sup>3</sup>               |                               |                            |                          |                              |                     |               |                                  |                                 |                    |               |
| <=2,317                                                          | 30                            | 10                         | 43.21                    | 39.25                        | 0.81                | 0.02          | 42.08                            | 44.10                           | -2.02              | -0.05         |
| >2,317, <=4,181                                                  | 30                            | #                          | 29.47                    | 6.76                         | 4.64                | 0.19          | 22.98                            | 25.76                           | -2.78              | -0.12         |
| >4,181, <=6,285                                                  | 30                            | #                          | 15.51                    | 5.91                         | 1.96                | 0.14          | 12.77                            | 16.26                           | -3.50              | -0.27         |
| >6,285                                                           | 30                            | 10                         | 11.80                    | 5.66                         | 1.25                | 0.12          | 10.05                            | 13.88                           | -3.83              | -0.38         |
| Unavailable or unknown                                           | #                             | #                          | #                        | 42.41                        | -8.66               | -1.00         | 12.13                            | †                               | †                  | †             |
| Total graduate/first-professional enrollment <sup>4</sup>        |                               |                            |                          |                              |                     |               |                                  |                                 |                    |               |
| <=1,384                                                          | 50                            | 10                         | 39.90                    | 87.60                        | -9.74 <sup>2</sup>  | -0.20         | 53.54                            | 36.67                           | 16.87 <sup>2</sup> | 0.32          |
| >1,384                                                           | 50                            | 10                         | 25.68                    | 11.58                        | 2.88                | 0.13          | 21.64                            | 30.09                           | -8.44              | -0.39         |
| Total enrollment = 0                                             | 20                            | #                          | 34.43                    | 0.82                         | 6.86 <sup>2</sup>   | 0.25          | 24.82                            | 33.25                           | -8.43              | -0.34         |
| Total male graduate/first-professional enrollment <sup>4</sup>   |                               |                            |                          |                              |                     |               |                                  |                                 |                    |               |
| <=462                                                            | 50                            | 10                         | 40.96                    | 87.60                        | -9.53 <sup>2</sup>  | -0.19         | 54.29                            | 39.01                           | 15.29              | 0.28          |
| >462                                                             | 50                            | 10                         | 24.62                    | 11.58                        | 2.66                | 0.12          | 20.89                            | 27.75                           | -6.86              | -0.33         |
| Total enrollment = 0                                             | 20                            | #                          | 34.43                    | 0.82                         | 6.86 <sup>2</sup>   | 0.25          | 24.82                            | 33.25                           | -8.43              | -0.34         |
| Total female graduate/first-professional enrollment <sup>4</sup> |                               |                            |                          |                              |                     |               |                                  |                                 |                    |               |
| <=888                                                            | 50                            | 10                         | 39.24                    | 88.42                        | -10.05 <sup>2</sup> | -0.20         | 53.30                            | 36.01                           | 17.29 <sup>2</sup> | 0.32          |
| >888                                                             | 50                            | 10                         | 26.01                    | 10.75                        | 3.12                | 0.14          | 21.64                            | 30.32                           | -8.68              | -0.40         |
| Total enrollment = 0                                             | 20                            | #                          | 34.76                    | 0.82                         | 6.93 <sup>2</sup>   | 0.25          | 25.05                            | 33.67                           | -8.61              | -0.34         |

† Not applicable.

# Rounds to zero.

<sup>1</sup> New England = Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; Mid East = Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania; Great Lakes = Illinois, Indiana, Michigan, Ohio, Wisconsin; Plains = Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota; Southeast = Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia; Southwest = Arizona, New Mexico, Oklahoma, Texas; Rocky Mountains = Colorado, Idaho, Montana, Utah, Wyoming; Far West = Alaska, California, Hawaii, Nevada, Oregon, Washington; Outlying Areas = American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana Islands, Puerto Rico, Palau, Virgin Islands.

<sup>2</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>3</sup> Undergraduate enrollment categories were defined by quartiles.

<sup>4</sup> Graduate/first-professional enrollment categories were defined by the median.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table K-5. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for private not-for-profit 4-year non-doctorate-granting institutions: 2004**

| Variable                                                                | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |  |
|-------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                                                         | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Carnegie classification code                                            |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| Doctorate-granting/research universities—extensive                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Doctorate-granting/research universities—intensive                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Master's colleges and universities I                                    | 40                            | 10                         | 13.72                    | 18.23                        | -0.92          | -0.06         | 14.57                            | 14.77                           | -0.20          | -0.01         |  |
| Master's (comprehensive) colleges and universities II                   | 10                            | #                          | 5.97                     | 4.12                         | 0.38           | 0.07          | 5.62                             | 4.98                            | 0.64           | 0.11          |  |
| Baccalaureate colleges—liberal arts                                     | 40                            | 10                         | 13.92                    | 11.86                        | 0.42           | 0.03          | 13.53                            | 13.12                           | 0.41           | 0.03          |  |
| Baccalaureate colleges—general                                          | 60                            | 10                         | 28.37                    | 30.97                        | -0.53          | -0.02         | 28.86                            | 26.82                           | 2.04           | 0.07          |  |
| Baccalaureate/associate's colleges                                      | #                             | #                          | 0.81                     | 5.35                         | -0.93          | -0.53         | 1.67                             | 0.81                            | 0.86           | 0.51          |  |
| Associate's colleges                                                    | 10                            | #                          | 2.33                     | 3.82                         | -0.30          | -0.12         | 2.61                             | 3.32                            | -0.71          | -0.27         |  |
| Theological seminaries and other specialized faith-related institutions | 10                            | #                          | 20.14                    | 6.17                         | 2.86           | 0.17          | 17.50                            | 18.13                           | -0.63          | -0.04         |  |
| Medical schools and medical centers                                     | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Other separate health profession schools                                | 10                            | #                          | 2.99                     | 2.03                         | 0.20           | 0.07          | 2.81                             | 4.61                            | -1.81          | -0.64         |  |
| Schools of engineering and technology                                   | #                             | #                          | 1.40                     | #                            | #              | #             | 1.14                             | 1.11                            | 0.03           | 0.03          |  |
| Schools of business and management                                      | 10                            | #                          | 1.87                     | 2.97                         | -0.22          | -0.11         | 2.08                             | 2.68                            | -0.60          | -0.29         |  |
| Schools of art, music, and design                                       | 10                            | 10                         | 3.02                     | 7.35                         | -0.89          | -0.23         | 3.84                             | 3.02                            | 0.82           | 0.21          |  |
| Schools of law                                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Teachers colleges                                                       | #                             | #                          | 0.58                     | #                            | #              | #             | 0.47                             | 1.38                            | -0.91          | -1.94         |  |
| Other specialized institutions                                          | #                             | #                          | 1.63                     | 3.85                         | -0.45          | -0.22         | 2.05                             | 1.45                            | 0.60           | 0.29          |  |
| Tribal colleges and universities                                        | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                                                  | 10                            | #                          | 3.23                     | 3.28                         | -0.01          | #             | 3.24                             | 3.80                            | -0.55          | -0.17         |  |
| Degree of urbanization                                                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| Large city                                                              | 50                            | 10                         | 13.80                    | 32.48                        | -3.82          | -0.22         | 17.33                            | 14.07                           | 3.26           | 0.19          |  |
| Mid-size city                                                           | 60                            | 20                         | 21.32                    | 29.97                        | -1.77          | -0.08         | 22.95                            | 20.88                           | 2.07           | 0.09          |  |
| Urban fringe of large city                                              | 40                            | 10                         | 32.41                    | 13.13                        | 3.95           | 0.14          | 28.76                            | 35.54                           | -6.78          | -0.24         |  |
| Urban fringe of mid-size city                                           | 20                            | 10                         | 9.27                     | 18.93                        | -1.98          | -0.18         | 11.10                            | 8.83                            | 2.27           | 0.20          |  |
| Large town                                                              | 10                            | #                          | 1.39                     | #                            | #              | #             | 1.13                             | 1.18                            | -0.05          | -0.05         |  |

See notes at end of table.

**Table K-5. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for private not-for-profit 4-year non-doctorate-granting institutions: 2004—Continued**

| Variable                                                                                  | Before nonresponse adjustment |                            |                          |                              |                   |               | After nonresponse adjustment     |                                 |                |               |  |  |
|-------------------------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|-------------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|--|
|                                                                                           | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias    | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |  |
| Small town                                                                                | 30                            | 10                         | 10.14                    | 4.99                         | 1.05              | 0.12          | 9.17                             | 8.98                            | 0.19           | 0.02          |  |  |
| Rural                                                                                     | 10                            | #                          | 9.66                     | #                            | #                 | #             | 7.83                             | 8.95                            | -1.12          | -0.14         |  |  |
| Not assigned                                                                              | #                             | #                          | 1.78                     | 0.50                         | 0.26              | 0.17          | 1.54                             | 1.37                            | 0.17           | 0.11          |  |  |
| Unavailable or unknown                                                                    | #                             | #                          | 0.23                     | #                            | #                 | #             | 0.19                             | 0.20                            | -0.01          | -0.06         |  |  |
| Bureau of Economic Analysis Code (Office of Business Economics [OBE]) Region <sup>1</sup> |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |  |
| New England                                                                               | 20                            | #                          | 8.88                     | 12.17                        | -0.67             | -0.07         | 9.50                             | 12.43                           | -2.93          | -0.31         |  |  |
| Mid East                                                                                  | 20                            | 10                         | 12.51                    | 14.71                        | -0.45             | -0.03         | 12.93                            | 16.14                           | -3.21          | -0.25         |  |  |
| Great Lakes                                                                               | 50                            | 10                         | 27.28                    | 26.98                        | 0.06              | #             | 27.22                            | 23.41                           | 3.82           | 0.14          |  |  |
| Plains                                                                                    | 40                            | #                          | 19.55                    | 2.01                         | 3.59 <sup>2</sup> | 0.22          | 16.23                            | 17.26                           | -1.04          | -0.06         |  |  |
| Southeast                                                                                 | 50                            | 10                         | 16.69                    | 29.35                        | -2.59             | -0.13         | 19.08                            | 14.88                           | 4.21           | 0.22          |  |  |
| Southwest                                                                                 | 10                            | #                          | 1.66                     | 6.89                         | -1.07             | -0.39         | 2.65                             | 1.87                            | 0.78           | 0.29          |  |  |
| Rocky Mountains                                                                           | #                             | #                          | 0.12                     | 3.85                         | -0.76             | -0.87         | 0.82                             | 0.10                            | 0.72           | 0.88          |  |  |
| Far West                                                                                  | 30                            | #                          | 11.65                    | 4.04                         | 1.56              | 0.15          | 10.21                            | 12.63                           | -2.42          | -0.24         |  |  |
| Outlying areas                                                                            | #                             | #                          | 1.67                     | #                            | #                 | #             | 1.35                             | 1.28                            | 0.07           | 0.05          |  |  |
| Historically Black college or university                                                  |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |  |
| Yes                                                                                       | 10                            | #                          | 3.38                     | 7.73                         | -0.89             | -0.21         | 4.21                             | 2.82                            | 1.39           | 0.33          |  |  |
| No                                                                                        | 210                           | 50                         | 96.62                    | 92.27                        | 0.89              | 0.01          | 95.79                            | 97.18                           | -1.39          | -0.01         |  |  |
| Percent receiving federal grant aid                                                       |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |  |
| <=25                                                                                      | 80                            | 20                         | 29.12                    | 33.08                        | -0.81             | -0.03         | 29.87                            | 27.15                           | 2.72           | 0.09          |  |  |
| >25, <=50                                                                                 | 100                           | 20                         | 41.73                    | 43.42                        | -0.35             | -0.01         | 42.05                            | 40.57                           | 1.48           | 0.04          |  |  |
| >50, <=75                                                                                 | 30                            | #                          | 14.85                    | 10.40                        | 0.91              | 0.07          | 14.00                            | 15.42                           | -1.41          | -0.10         |  |  |
| >75                                                                                       | 10                            | #                          | 10.26                    | 9.88                         | 0.08              | 0.01          | 10.18                            | 10.35                           | -0.16          | -0.02         |  |  |
| Unavailable or unknown                                                                    | 10                            | #                          | 4.05                     | 3.22                         | 0.17              | 0.04          | 3.89                             | 6.51                            | -2.62          | -0.67         |  |  |
| Percent receiving state/local grant aid                                                   |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |  |
| <=25                                                                                      | 90                            | 20                         | 50.61                    | 18.53                        | 6.56 <sup>2</sup> | 0.15          | 44.54                            | 47.41                           | -2.87          | -0.06         |  |  |
| >25, <=50                                                                                 | 80                            | 20                         | 25.57                    | 49.17                        | -4.83             | -0.16         | 30.04                            | 26.27                           | 3.76           | 0.13          |  |  |

See notes at end of table.

K-23

**Table K-5. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for private not-for-profit 4-year non-doctorate-granting institutions: 2004—Continued**

| Variable                                    | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                   |               |
|---------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|-------------------|---------------|
|                                             | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias    | Relative bias |
| >50, <=75                                   | 30                            | 10                         | 15.13                    | 14.37                        | 0.16           | 0.01          | 14.98                            | 15.01                           | -0.02             | #             |
| >75                                         | 10                            | #                          | 4.64                     | 14.71                        | -2.06          | -0.31         | 6.55                             | 4.80                            | 1.75              | 0.27          |
| Unavailable or unknown                      | 10                            | #                          | 4.05                     | 3.22                         | 0.17           | 0.04          | 3.89                             | 6.51                            | -2.62             | -0.67         |
| Percent receiving institutional grant aid   |                               |                            |                          |                              |                |               |                                  |                                 |                   |               |
| <=25                                        | 20                            | 10                         | 14.43                    | 16.10                        | -0.34          | -0.02         | 14.75                            | 13.50                           | 1.25              | 0.08          |
| >25, <=50                                   | 20                            | 10                         | 6.58                     | 8.25                         | -0.34          | -0.05         | 6.90                             | 5.74                            | 1.16              | 0.17          |
| >50, <=75                                   | 40                            | 10                         | 16.64                    | 24.47                        | -1.60          | -0.09         | 18.12                            | 16.75                           | 1.37              | 0.08          |
| >75                                         | 120                           | 20                         | 58.31                    | 47.95                        | 2.12           | 0.04          | 56.35                            | 57.50                           | -1.15             | -0.02         |
| Unavailable or unknown                      | 10                            | #                          | 4.05                     | 3.22                         | 0.17           | 0.04          | 3.89                             | 6.51                            | -2.62             | -0.67         |
| Percent receiving student loan aid          |                               |                            |                          |                              |                |               |                                  |                                 |                   |               |
| <=25                                        | 20                            | #                          | 21.75                    | 4.04                         | 3.62           | 0.20          | 18.40                            | 19.24                           | -0.84             | -0.05         |
| >25, <=50                                   | 40                            | 10                         | 9.40                     | 16.00                        | -1.35          | -0.13         | 10.65                            | 8.34                            | 2.31              | 0.22          |
| >50, <=75                                   | 100                           | 30                         | 38.97                    | 54.99                        | -3.28          | -0.08         | 42.00                            | 35.15                           | 6.85 <sup>2</sup> | 0.16          |
| >75                                         | 60                            | 10                         | 25.83                    | 21.75                        | 0.84           | 0.03          | 25.06                            | 30.76                           | -5.70             | -0.23         |
| Unavailable or unknown                      | 10                            | #                          | 4.05                     | 3.22                         | 0.17           | 0.04          | 3.89                             | 6.51                            | -2.62             | -0.67         |
| Percent enrolled: Black, non-Hispanic       |                               |                            |                          |                              |                |               |                                  |                                 |                   |               |
| <=25                                        | 200                           | 50                         | 87.98                    | 91.26                        | -0.67          | -0.01         | 88.60                            | 86.63                           | 1.97              | 0.02          |
| >25, <=50                                   | 10                            | #                          | 5.01                     | 0.50                         | 0.92           | 0.23          | 4.16                             | 7.24                            | -3.09             | -0.74         |
| >50, <=75                                   | #                             | #                          | 2.20                     | 0.50                         | 0.35           | 0.19          | 1.88                             | 1.99                            | -0.11             | -0.06         |
| >75                                         | 10                            | #                          | 3.74                     | 7.23                         | -0.71          | -0.16         | 4.40                             | 3.12                            | 1.29              | 0.29          |
| Unavailable or unknown                      | #                             | #                          | 1.06                     | 0.50                         | 0.11           | 0.12          | 0.96                             | 1.02                            | -0.06             | -0.06         |
| Percent enrolled: Asian or Pacific Islander |                               |                            |                          |                              |                |               |                                  |                                 |                   |               |
| <=25                                        | 220                           | 50                         | 92.86                    | 99.50                        | -1.36          | -0.01         | 94.11                            | 93.93                           | 0.19              | #             |
| >25, <=50                                   | #                             | #                          | 6.08                     | #                            | #              | #             | 4.93                             | 5.06                            | -0.13             | -0.03         |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †                 | †             |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †                 | †             |
| Unavailable or unknown                      | #                             | #                          | 1.06                     | 0.50                         | 0.11           | 0.12          | 0.96                             | 1.02                            | -0.06             | -0.06         |

See notes at end of table.

**Table K-5. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for private not-for-profit 4-year non-doctorate-granting institutions: 2004—Continued**

| Variable                                                  | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |
|-----------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                                           | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Percent enrolled: Hispanic                                |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=25                                                      | 220                           | 50                         | 96.92                    | 99.50                        | -0.53          | -0.01         | 97.41                            | 97.38                           | 0.04           | #             |
| >25, <=50                                                 | #                             | #                          | 0.34                     | #                            | #              | #             | 0.28                             | 0.33                            | -0.05          | -0.17         |
| >50, <=75                                                 | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| >75                                                       | #                             | #                          | 1.67                     | #                            | #              | #             | 1.35                             | 1.28                            | 0.07           | 0.05          |
| Unavailable or unknown                                    | #                             | #                          | 1.06                     | 0.50                         | 0.11           | 0.12          | 0.96                             | 1.02                            | -0.06          | -0.06         |
| Total undergraduate enrollment <sup>3</sup>               |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=893.5                                                   | 60                            | 10                         | 40.72                    | 19.77                        | 4.29           | 0.12          | 36.75                            | 41.55                           | -4.80          | -0.13         |
| >893.5, <=1,631                                           | 60                            | 10                         | 21.62                    | 32.73                        | -2.27          | -0.10         | 23.72                            | 20.96                           | 2.76           | 0.12          |
| >1,631, <=2,530                                           | 60                            | 10                         | 18.95                    | 30.02                        | -2.27          | -0.11         | 21.05                            | 20.03                           | 1.02           | 0.05          |
| >2,530                                                    | 50                            | 10                         | 17.65                    | 16.97                        | 0.14           | 0.01          | 17.52                            | 16.44                           | 1.09           | 0.06          |
| Total male undergraduate enrollment <sup>3</sup>          |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=300                                                     | 60                            | 10                         | 39.17                    | 14.91                        | 4.96           | 0.15          | 34.58                            | 37.88                           | -3.30          | -0.10         |
| >300, <=625                                               | 50                            | 20                         | 22.94                    | 41.64                        | -3.83          | -0.14         | 26.48                            | 22.61                           | 3.86           | 0.15          |
| >625, <=1,020.5                                           | 60                            | 10                         | 20.74                    | 22.89                        | -0.44          | -0.02         | 21.15                            | 23.59                           | -2.44          | -0.12         |
| >1,020.5                                                  | 50                            | 20                         | 16.08                    | 20.06                        | -0.81          | -0.05         | 16.84                            | 14.90                           | 1.94           | 0.12          |
| Unavailable or unknown                                    | #                             | #                          | 1.06                     | 0.50                         | 0.11           | 0.12          | 0.96                             | 1.02                            | -0.06          | -0.06         |
| Total female undergraduate enrollment <sup>3</sup>        |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=513.5                                                   | 60                            | 10                         | 39.75                    | 19.27                        | 4.19           | 0.12          | 35.87                            | 40.55                           | -4.68          | -0.13         |
| >513.5, <=896.5                                           | 60                            | 10                         | 22.35                    | 18.11                        | 0.87           | 0.04          | 21.54                            | 22.55                           | -1.01          | -0.05         |
| >896.5, <=1,533.5                                         | 50                            | 20                         | 19.58                    | 46.37                        | -5.48          | -0.22         | 24.65                            | 19.48                           | 5.18           | 0.21          |
| >1,533.5                                                  | 60                            | 10                         | 17.26                    | 15.75                        | 0.31           | 0.02          | 16.97                            | 16.40                           | 0.57           | 0.03          |
| Unavailable or unknown                                    | #                             | #                          | 1.06                     | 0.50                         | 0.11           | 0.12          | 0.96                             | 1.02                            | -0.06          | -0.06         |
| Total graduate/first-professional enrollment <sup>4</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=325                                                     | 80                            | 10                         | 35.75                    | 26.46                        | 1.90           | 0.06          | 33.99                            | 37.11                           | -3.12          | -0.09         |
| >325                                                      | 70                            | 20                         | 24.02                    | 29.00                        | -1.02          | -0.04         | 24.96                            | 23.72                           | 1.24           | 0.05          |
| Total enrollment = 0                                      | 80                            | 20                         | 40.23                    | 44.54                        | -0.88          | -0.02         | 41.05                            | 39.17                           | 1.88           | 0.05          |

See notes at end of table.

K-25

**Table K-5. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for private not-for-profit 4-year non-doctorate-granting institutions: 2004—Continued**

| Variable                                                         | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |
|------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                                                  | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Total male graduate/first-professional enrollment <sup>4</sup>   |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=111                                                            | 70                            | 10                         | 37.58                    | 28.61                        | 1.84           | 0.05          | 35.88                            | 38.67                           | -2.78          | -0.08         |
| >111                                                             | 70                            | 20                         | 21.84                    | 26.85                        | -1.03          | -0.04         | 22.78                            | 21.88                           | 0.91           | 0.04          |
| Total enrollment = 0                                             | 80                            | 20                         | 40.58                    | 44.54                        | -0.81          | -0.02         | 41.33                            | 39.46                           | 1.88           | 0.05          |
| Total female graduate/first-professional enrollment <sup>4</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=203                                                            | 80                            | 10                         | 32.90                    | 26.59                        | 1.29           | 0.04          | 31.70                            | 33.38                           | -1.68          | -0.05         |
| >203                                                             | 70                            | 20                         | 26.87                    | 28.87                        | -0.41          | -0.01         | 27.25                            | 27.45                           | -0.20          | -0.01         |
| Total enrollment = 0                                             | 80                            | 20                         | 40.23                    | 44.54                        | -0.88          | -0.02         | 41.05                            | 39.17                           | 1.88           | 0.05          |

† Not applicable.

# Rounds to zero.

<sup>1</sup> New England = Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; Mid East = Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania; Great Lakes = Illinois, Indiana, Michigan, Ohio, Wisconsin; Plains = Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota; Southeast = Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia; Southwest = Arizona, New Mexico, Oklahoma, Texas; Rocky Mountains = Colorado, Idaho, Montana, Utah, Wyoming; Far West = Alaska, California, Hawaii, Nevada, Oregon, Washington; Outlying Areas = American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana Islands, Puerto Rico, Palau, Virgin Islands.

<sup>2</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>3</sup> Undergraduate enrollment categories were defined by quartiles.

<sup>4</sup> Graduate/first-professional enrollment categories were defined by the median.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).



**Table K-6. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for private not-for-profit 4-year doctorate-granting institutions: 2004**

| Variable                                                                | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |  |
|-------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                                                         | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| <b>Carnegie classification code</b>                                     |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| Doctorate-granting/research universities—extensive                      | 40                            | 10                         | 10.92                    | 7.95                         | 0.60           | 0.06          | 10.22                            | 10.60                           | -0.38          | -0.04         |  |
| Doctorate-granting/research universities—intensive                      | 40                            | 10                         | 9.83                     | 5.30                         | 0.92           | 0.10          | 8.76                             | 10.18                           | -1.42          | -0.16         |  |
| Master's colleges and universities I                                    | 30                            | 10                         | 19.44                    | 22.52                        | -0.62          | -0.03         | 20.17                            | 18.38                           | 1.79           | 0.09          |  |
| Master's (comprehensive) colleges and universities II                   | #                             | #                          | 0.55                     | 1.77                         | -0.25          | -0.31         | 0.83                             | 0.47                            | 0.37           | 0.44          |  |
| Baccalaureate colleges—liberal arts                                     | 10                            | 10                         | 4.33                     | 16.38                        | -2.44          | -0.36         | 7.18                             | 3.96                            | 3.22           | 0.45          |  |
| Baccalaureate colleges—general                                          | #                             | #                          | 0.27                     | 6.19                         | -1.20          | -0.81         | 1.67                             | 0.24                            | 1.43           | 0.86          |  |
| Baccalaureate/associate's colleges                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Associate's colleges                                                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Theological seminaries and other specialized faith-related institutions | 20                            | 10                         | 37.78                    | 5.69                         | 6.50           | 0.21          | 30.20                            | 37.36                           | -7.16          | -0.24         |  |
| Medical schools and medical centers                                     | 20                            | #                          | 4.10                     | 3.53                         | 0.11           | 0.03          | 3.96                             | 4.46                            | -0.49          | -0.12         |  |
| Other separate health profession schools                                | 5                             | 1                          | 5.40                     | 0.88                         | 0.91           | 0.20          | 4.33                             | 6.87                            | -2.54          | -0.59         |  |
| Schools of engineering and technology                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Schools of business and management                                      | #                             | #                          | 0.57                     | #                            | #              | #             | 0.44                             | 0.59                            | -0.15          | -0.34         |  |
| Schools of art, music, and design                                       | #                             | #                          | 1.60                     | #                            | #              | #             | 1.22                             | 1.58                            | -0.36          | -0.29         |  |
| Schools of law                                                          | #                             | #                          | 1.16                     | 7.13                         | -1.21          | -0.51         | 2.57                             | 1.15                            | 1.42           | 0.55          |  |
| Teachers colleges                                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Other specialized institutions                                          | #                             | #                          | 2.66                     | 2.42                         | 0.05           | 0.02          | 2.60                             | 2.61                            | -0.01          | #             |  |
| Tribal colleges and universities                                        | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                                                  | #                             | #                          | 1.39                     | 20.25                        | -3.82          | -0.73         | 5.84                             | 1.56                            | 4.28           | 0.73          |  |
| <b>Degree of urbanization</b>                                           |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| Large city                                                              | 70                            | 20                         | 43.83                    | 41.88                        | 0.40           | 0.01          | 43.37                            | 41.84                           | 1.53           | 0.04          |  |
| Mid-size city                                                           | 40                            | 10                         | 13.70                    | 7.25                         | 1.31           | 0.11          | 12.18                            | 13.63                           | -1.46          | -0.12         |  |
| Urban fringe of large city                                              | 40                            | 20                         | 18.62                    | 25.52                        | -1.40          | -0.07         | 20.25                            | 22.06                           | -1.82          | -0.09         |  |

See notes at end of table.

**Table K-6. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for private not-for-profit 4-year doctorate-granting institutions: 2004—Continued**

| Variable                                                                                  | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |  |
|-------------------------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                                                                           | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Urban fringe of mid-size city                                                             | 10                            | #                          | 18.32                    | 15.51                        | 0.57           | 0.03          | 17.66                            | 15.81                           | 1.85           | 0.10          |  |
| Large town                                                                                | #                             | #                          | 1.16                     | #                            | #              | #             | 0.88                             | 1.09                            | -0.20          | -0.23         |  |
| Small town                                                                                | 10                            | #                          | 2.84                     | 2.10                         | 0.15           | 0.06          | 2.67                             | 4.02                            | -1.36          | -0.51         |  |
| Rural                                                                                     | #                             | #                          | 0.27                     | 0.88                         | -0.12          | -0.31         | 0.42                             | 0.23                            | 0.18           | 0.44          |  |
| Not assigned                                                                              | #                             | #                          | 0.98                     | 6.86                         | -1.19          | -0.55         | 2.37                             | 0.78                            | 1.60           | 0.67          |  |
| Unavailable or unknown                                                                    | #                             | #                          | 0.27                     | #                            | #              | #             | 0.21                             | 0.53                            | -0.33          | -1.56         |  |
| Bureau of Economic Analysis Code (Office of Business Economics [OBE]) Region <sup>1</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| New England                                                                               | 20                            | #                          | 10.84                    | 16.39                        | -1.12          | -0.09         | 12.16                            | 11.90                           | 0.25           | 0.02          |  |
| Mid East                                                                                  | 40                            | 10                         | 17.95                    | 33.33                        | -3.12          | -0.15         | 21.59                            | 22.00                           | -0.41          | -0.02         |  |
| Great Lakes                                                                               | 20                            | 10                         | 7.47                     | 9.81                         | -0.47          | -0.06         | 8.02                             | 8.12                            | -0.10          | -0.01         |  |
| Plains                                                                                    | 20                            | #                          | 14.03                    | 3.53                         | 2.13           | 0.18          | 11.55                            | 12.15                           | -0.60          | -0.05         |  |
| Southeast                                                                                 | 20                            | 10                         | 28.40                    | 11.82                        | 3.36           | 0.13          | 24.49                            | 24.35                           | 0.14           | 0.01          |  |
| Southwest                                                                                 | 20                            | #                          | 5.25                     | 1.77                         | 0.71           | 0.16          | 4.43                             | 5.25                            | -0.82          | -0.19         |  |
| Rocky Mountains                                                                           | #                             | #                          | 0.84                     | 0.88                         | -0.01          | -0.01         | 0.85                             | 0.73                            | 0.12           | 0.14          |  |
| Far West                                                                                  | 30                            | 10                         | 14.22                    | 22.46                        | -1.67          | -0.11         | 16.17                            | 14.72                           | 1.44           | 0.09          |  |
| Outlying areas                                                                            | #                             | #                          | 0.98                     | #                            | #              | #             | 0.75                             | 0.78                            | -0.03          | -0.03         |  |
| Historically Black college or university                                                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| Yes                                                                                       | 10                            | #                          | 2.26                     | 7.07                         | -0.98          | -0.30         | 3.40                             | 1.91                            | 1.49           | 0.44          |  |
| No                                                                                        | 160                           | 50                         | 97.74                    | 92.93                        | 0.98           | 0.01          | 96.60                            | 98.09                           | -1.49          | -0.02         |  |
| Percent receiving federal grant aid                                                       |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                                                                      | 80                            | 20                         | 30.15                    | 28.57                        | 0.32           | 0.01          | 29.78                            | 28.95                           | 0.82           | 0.03          |  |
| >25, <=50                                                                                 | 30                            | 10                         | 23.29                    | 26.28                        | -0.61          | -0.03         | 24.00                            | 23.57                           | 0.43           | 0.02          |  |
| >50, <=75                                                                                 | 10                            | #                          | 3.79                     | 2.98                         | 0.16           | 0.05          | 3.60                             | 3.23                            | 0.36           | 0.10          |  |
| >75                                                                                       | #                             | #                          | 0.63                     | 6.19                         | -1.13          | -0.64         | 1.94                             | 0.60                            | 1.34           | 0.69          |  |
| Unavailable or unknown                                                                    | 50                            | 10                         | 42.14                    | 35.98                        | 1.25           | 0.03          | 40.68                            | 43.64                           | -2.96          | -0.07         |  |
| Percent receiving state/local grant aid                                                   |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                                                                      | 70                            | 20                         | 35.59                    | 25.32                        | 2.08           | 0.06          | 33.16                            | 34.53                           | -1.37          | -0.04         |  |
| >25, <=50                                                                                 | 40                            | 10                         | 17.90                    | 15.03                        | 0.58           | 0.03          | 17.22                            | 17.78                           | -0.56          | -0.03         |  |
| >50, <=75                                                                                 | 10                            | #                          | 4.10                     | 16.59                        | -2.53          | -0.38         | 7.05                             | 3.82                            | 3.23           | 0.46          |  |
| >75                                                                                       | #                             | #                          | 0.27                     | 7.07                         | -1.38          | -0.83         | 1.88                             | 0.22                            | 1.66           | 0.88          |  |
| Unavailable or unknown                                                                    | 50                            | 10                         | 42.14                    | 35.98                        | 1.25           | 0.03          | 40.68                            | 43.64                           | -2.96          | -0.07         |  |

See notes at end of table.

**Table K-6. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for private not-for-profit 4-year doctorate-granting institutions: 2004—Continued**

| Variable                                    | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |
|---------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                             | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Percent receiving institutional grant aid   |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=25                                        | 10                            | #                          | 3.93                     | 3.53                         | 0.08           | 0.02          | 3.83                             | 3.97                            | -0.14          | -0.04         |
| >25, <=50                                   | 30                            | #                          | 19.72                    | 3.53                         | 3.28           | 0.20          | 15.90                            | 19.21                           | -3.31          | -0.21         |
| >50, <=75                                   | 40                            | 10                         | 14.10                    | 30.83                        | -3.39          | -0.19         | 18.05                            | 14.02                           | 4.03           | 0.22          |
| >75                                         | 50                            | 10                         | 20.11                    | 26.13                        | -1.22          | -0.06         | 21.53                            | 19.16                           | 2.37           | 0.11          |
| Unavailable or unknown                      | 50                            | 10                         | 42.14                    | 35.98                        | 1.25           | 0.03          | 40.68                            | 43.64                           | -2.96          | -0.07         |
| Percent receiving student loan aid          |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=25                                        | 10                            | #                          | 2.43                     | 1.77                         | 0.13           | 0.06          | 2.28                             | 2.02                            | 0.25           | 0.11          |
| >25, <=50                                   | 50                            | 10                         | 28.94                    | 23.30                        | 1.14           | 0.04          | 27.61                            | 26.93                           | 0.67           | 0.02          |
| >50, <=75                                   | 60                            | 20                         | 24.05                    | 28.89                        | -0.98          | -0.04         | 25.19                            | 23.80                           | 1.40           | 0.06          |
| >75                                         | 10                            | 10                         | 2.44                     | 10.07                        | -1.55          | -0.39         | 4.24                             | 3.61                            | 0.63           | 0.15          |
| Unavailable or unknown                      | 50                            | 10                         | 42.14                    | 35.98                        | 1.25           | 0.03          | 40.68                            | 43.64                           | -2.96          | -0.07         |
| Percent enrolled: Black, non-Hispanic       |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=25                                        | 160                           | 50                         | 96.35                    | 87.31                        | 1.83           | 0.02          | 94.21                            | 96.63                           | -2.42          | -0.03         |
| >25, <=50                                   | #                             | #                          | 0.85                     | #                            | #              | #             | 0.65                             | 0.69                            | -0.04          | -0.07         |
| >50, <=75                                   | #                             | #                          | 0.27                     | 0.88                         | -0.12          | -0.31         | 0.42                             | 0.25                            | 0.17           | 0.40          |
| >75                                         | #                             | #                          | 1.99                     | 6.19                         | -0.85          | -0.30         | 2.98                             | 1.66                            | 1.32           | 0.44          |
| Unavailable or unknown                      | #                             | #                          | 0.55                     | 5.62                         | -1.03          | -0.65         | 1.74                             | 0.77                            | 0.97           | 0.56          |
| Percent enrolled: Asian or Pacific Islander |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=25                                        | 160                           | 50                         | 98.36                    | 94.38                        | 0.81           | 0.01          | 97.42                            | 98.14                           | -0.72          | -0.01         |
| >25, <=50                                   | #                             | #                          | 1.09                     | #                            | #              | #             | 0.83                             | 1.09                            | -0.26          | -0.31         |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                      | #                             | #                          | 0.55                     | 5.62                         | -1.03          | -0.65         | 1.74                             | 0.77                            | 0.97           | 0.56          |
| Percent enrolled: Hispanic                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=25                                        | 160                           | 50                         | 80.06                    | 94.38                        | -2.90          | -0.03         | 83.44                            | 82.41                           | 1.04           | 0.01          |
| >25, <=50                                   | #                             | #                          | 17.59                    | #                            | #              | #             | 13.44                            | 15.21                           | -1.77          | -0.13         |
| >50, <=75                                   | #                             | #                          | 0.82                     | #                            | #              | #             | 0.63                             | 0.84                            | -0.22          | -0.35         |
| >75                                         | #                             | #                          | 0.98                     | #                            | #              | #             | 0.75                             | 0.78                            | -0.03          | -0.03         |
| Unavailable or unknown                      | #                             | #                          | 0.55                     | 5.62                         | -1.03          | -0.65         | 1.74                             | 0.77                            | 0.97           | 0.56          |

See notes at end of table.

K-29

**Table K-6. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for private not-for-profit 4-year doctorate-granting institutions: 2004—Continued**

| Variable                                                       | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |
|----------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                                                | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Total undergraduate enrollment <sup>2</sup>                    |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=220                                                          | 40                            | 10                         | 41.81                    | 32.12                        | 1.96           | 0.05          | 39.52                            | 43.09                           | -3.57          | -0.09         |
| >220, <=2,834.5                                                | 40                            | 10                         | 27.87                    | 40.39                        | -2.54          | -0.08         | 30.83                            | 26.57                           | 4.26           | 0.14          |
| >2,834.5, <=5,943.5                                            | 40                            | 10                         | 15.31                    | 13.58                        | 0.35           | 0.02          | 14.90                            | 15.24                           | -0.34          | -0.02         |
| >5,943.5                                                       | 40                            | 10                         | 14.47                    | 8.28                         | 1.25           | 0.09          | 13.01                            | 14.33                           | -1.32          | -0.10         |
| Unavailable or unknown                                         | #                             | #                          | 0.55                     | 5.62                         | -1.03          | -0.65         | 1.74                             | 0.77                            | 0.97           | 0.56          |
| Total male undergraduate enrollment <sup>2</sup>               |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=55.5                                                         | 40                            | 10                         | 40.11                    | 34.95                        | 1.05           | 0.03          | 38.89                            | 41.08                           | -2.19          | -0.06         |
| >55.5, <=1,325                                                 | 40                            | 10                         | 31.41                    | 37.57                        | -1.25          | -0.04         | 32.86                            | 30.46                           | 2.41           | 0.07          |
| >1,325, <=2,526.5                                              | 40                            | 10                         | 13.93                    | 15.35                        | -0.29          | -0.02         | 14.26                            | 13.75                           | 0.52           | 0.04          |
| >2,526.5                                                       | 50                            | 10                         | 14.01                    | 6.52                         | 1.52           | 0.12          | 12.24                            | 13.95                           | -1.71          | -0.14         |
| Unavailable or unknown                                         | #                             | #                          | 0.55                     | 5.62                         | -1.03          | -0.65         | 1.74                             | 0.77                            | 0.97           | 0.56          |
| Total female undergraduate enrollment <sup>2</sup>             |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=116                                                          | 40                            | 10                         | 42.08                    | 31.24                        | 2.20           | 0.06          | 39.52                            | 43.30                           | -3.78          | -0.10         |
| >116, <=1,449.5                                                | 40                            | 20                         | 25.96                    | 41.28                        | -3.10          | -0.11         | 29.58                            | 24.93                           | 4.65           | 0.16          |
| >1,449.5, <=3,504                                              | 40                            | 10                         | 16.37                    | 15.35                        | 0.21           | 0.01          | 16.13                            | 16.24                           | -0.11          | -0.01         |
| >3,504                                                         | 50                            | 10                         | 15.04                    | 6.52                         | 1.73           | 0.13          | 13.03                            | 14.77                           | -1.74          | -0.13         |
| Unavailable or unknown                                         | #                             | #                          | 0.55                     | 5.62                         | -1.03          | -0.65         | 1.74                             | 0.77                            | 0.97           | 0.56          |
| Total graduate/first-professional enrollment <sup>3</sup>      |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=1,942                                                        | 80                            | 30                         | 67.35                    | 72.89                        | -1.12          | -0.02         | 68.66                            | 68.58                           | 0.07           | #             |
| >1,942                                                         | 90                            | 20                         | 32.65                    | 20.92                        | 2.38           | 0.08          | 29.88                            | 31.42                           | -1.54          | -0.05         |
| Total enrollment = 0                                           | #                             | #                          | #                        | 6.19                         | -1.25          | -1.00         | 1.46                             | †                               | †              | †             |
| Total male graduate/first-professional enrollment <sup>3</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=979                                                          | 80                            | 30                         | 70.72                    | 71.12                        | -0.08          | #             | 70.81                            | 71.06                           | -0.25          | #             |
| >979                                                           | 80                            | 20                         | 29.28                    | 22.69                        | 1.34           | 0.05          | 27.72                            | 28.94                           | -1.21          | -0.04         |
| Total enrollment = 0                                           | #                             | #                          | #                        | 6.19                         | -1.25          | -1.00         | 1.46                             | †                               | †              | †             |

See notes at end of table.

**Table K-6. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for private not-for-profit 4-year doctorate-granting institutions: 2004—Continued**

| Variable                                                         | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |   |
|------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|---|
|                                                                  | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |   |
| Total female graduate/first-professional enrollment <sup>3</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |   |
| ≤1,073                                                           | 80                            | 30                         | 67.57                    | 71.95                        | -0.89          | -0.01         | 68.60                            | 69.21                           | -0.61          | -0.01         |   |
| >1,073                                                           | 90                            | 20                         | 32.43                    | 21.86                        | 2.14           | 0.07          | 29.93                            | 30.79                           | -0.85          | -0.03         |   |
| Total enrollment = 0                                             | #                             | #                          | #                        | 6.19                         | -1.25          | -1.00         | 1.46                             | †                               | †              | †             | † |

† Not applicable.

# Rounds to zero.

<sup>1</sup> New England = Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; Mid East = Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania; Great Lakes = Illinois, Indiana, Michigan, Ohio, Wisconsin; Plains = Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota; Southeast = Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia; Southwest = Arizona, New Mexico, Oklahoma, Texas; Rocky Mountains = Colorado, Idaho, Montana, Utah, Wyoming; Far West = Alaska, California, Hawaii, Nevada, Oregon, Washington; Outlying Areas = American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana Islands, Puerto Rico, Palau, Virgin Islands.

<sup>2</sup> Undergraduate enrollment categories were defined by quartiles.

<sup>3</sup> Graduate/first-professional enrollment categories were defined by the median.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table K-7. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for private for-profit less-than-2-year institutions: 2004**

| Variable                                                                | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |
|-------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                                                         | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Carnegie classification code                                            |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| Doctorate-granting/research universities—extensive                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Doctorate-granting/research universities—intensive                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Master's colleges and universities I                                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Master's (Comprehensive) Colleges And Universities II                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Baccalaureate colleges—liberal arts                                     | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Baccalaureate colleges—general                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Baccalaureate/associate's colleges                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Associate's colleges                                                    | #                             | #                          | #                        | 0.27                         | -0.04          | -1.00         | 0.07                             | †                               | †              | †             |
| Theological seminaries and other specialized faith-related institutions | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Medical schools and medical centers                                     | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Other separate health profession schools                                | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Schools of engineering and technology                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Schools of business and management                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Schools of art, music, and design                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Schools of law                                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Teachers colleges                                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Other specialized institutions                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Tribal colleges and universities                                        | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                                                  | 140                           | 30                         | 100.00                   | 99.73                        | 0.04           | #             | 99.93                            | 100.00                          | -0.07          | #             |
| Degree of urbanization                                                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| Large city                                                              | 40                            | 10                         | 22.11                    | 31.92                        | -1.58          | -0.07         | 24.71                            | 25.02                           | -0.31          | -0.01         |
| Mid-size city                                                           | 30                            | 10                         | 25.68                    | 21.95                        | 0.60           | 0.02          | 24.69                            | 25.15                           | -0.47          | -0.02         |

See notes at end of table.

**Table K-7. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for private for-profit less-than-2-year institutions: 2004—Continued**

| Variable                                                                                  | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |  |
|-------------------------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                                                                           | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Urban fringe of large city                                                                | 30                            | 10                         | 16.14                    | 5.80                         | 1.67           | 0.12          | 13.39                            | 16.96                           | -3.57          | -0.27         |  |
| Urban fringe of mid-size city                                                             | 10                            | #                          | 6.10                     | 0.97                         | 0.83           | 0.16          | 4.74                             | 5.62                            | -0.88          | -0.19         |  |
| Large town                                                                                | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Small town                                                                                | #                             | #                          | 1.13                     | #                            | #              | #             | 0.83                             | 1.02                            | -0.19          | -0.23         |  |
| Rural                                                                                     | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Not assigned                                                                              | 10                            | #                          | 4.53                     | #                            | #              | #             | 3.33                             | 4.04                            | -0.71          | -0.21         |  |
| Unavailable or unknown                                                                    | 20                            | #                          | 24.31                    | 39.36                        | -2.42          | -0.09         | 28.31                            | 22.19                           | 6.12           | 0.22          |  |
| Bureau of Economic Analysis Code (Office of Business Economics [OBE]) Region <sup>1</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| New England                                                                               | 10                            | #                          | 4.73                     | 2.27                         | 0.40           | 0.09          | 4.08                             | 4.85                            | -0.77          | -0.19         |  |
| Mid East                                                                                  | 20                            | #                          | 11.29                    | 2.49                         | 1.42           | 0.14          | 8.96                             | 13.73                           | -4.78          | -0.53         |  |
| Great Lakes                                                                               | 10                            | #                          | 13.45                    | 6.01                         | 1.20           | 0.10          | 11.48                            | 12.17                           | -0.69          | -0.06         |  |
| Plains                                                                                    | #                             | #                          | 3.34                     | #                            | #              | #             | 2.46                             | 3.01                            | -0.56          | -0.23         |  |
| Southeast                                                                                 | 30                            | 10                         | 19.72                    | 52.34                        | -5.25          | -0.21         | 28.38                            | 18.25                           | 10.13          | 0.36          |  |
| Southwest                                                                                 | 20                            | 10                         | 14.67                    | 6.68                         | 1.29           | 0.10          | 12.55                            | 16.33                           | -3.78          | -0.30         |  |
| Rocky Mountains                                                                           | #                             | #                          | 0.81                     | 0.90                         | -0.02          | -0.02         | 0.83                             | 0.84                            | -0.01          | -0.01         |  |
| Far West                                                                                  | 30                            | 10                         | 26.94                    | 29.30                        | -0.38          | -0.01         | 27.57                            | 26.32                           | 1.25           | 0.05          |  |
| Outlying areas                                                                            | 10                            | #                          | 5.04                     | #                            | #              | #             | 3.70                             | 4.49                            | -0.79          | -0.21         |  |
| Historically Black college or university                                                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| Yes                                                                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| No                                                                                        | 140                           | 30                         | 100.00                   | 100.00                       | #              | #             | 100.00                           | 100.00                          | #              | #             |  |
| Percent receiving federal grant aid                                                       |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                                                                      | 10                            | #                          | 3.79                     | 0.27                         | 0.57           | 0.18          | 2.85                             | 3.66                            | -0.81          | -0.28         |  |
| >25, <=50                                                                                 | 30                            | #                          | 31.31                    | 31.02                        | 0.05           | #             | 31.24                            | 27.56                           | 3.68           | 0.12          |  |
| >50, <=75                                                                                 | 30                            | 10                         | 15.96                    | 17.70                        | -0.28          | -0.02         | 16.42                            | 15.18                           | 1.24           | 0.08          |  |
| >75                                                                                       | 60                            | 10                         | 40.79                    | 38.22                        | 0.41           | 0.01          | 40.11                            | 46.35                           | -6.24          | -0.16         |  |
| Unavailable or unknown                                                                    | 10                            | 10                         | 8.14                     | 12.79                        | -0.75          | -0.08         | 9.38                             | 7.25                            | 2.13           | 0.23          |  |
| Percent receiving state/local grant aid                                                   |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                                                                      | 120                           | 20                         | 89.17                    | 86.28                        | 0.47           | 0.01          | 88.41                            | 90.18                           | -1.77          | -0.02         |  |
| >25, <=50                                                                                 | #                             | #                          | 0.54                     | 0.67                         | -0.02          | -0.04         | 0.57                             | 0.48                            | 0.09           | 0.16          |  |

See notes at end of table.

K-33

**Table K-7. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for private for-profit less-than-2-year institutions: 2004—Continued**

| Variable                                    | Before nonresponse adjustment |                            |                          |                              |                   |               | After nonresponse adjustment     |                                 |                     |               |  |
|---------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|-------------------|---------------|----------------------------------|---------------------------------|---------------------|---------------|--|
|                                             | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias    | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias      | Relative bias |  |
| >50, <=75                                   | 10                            | #                          | 1.54                     | 0.27                         | 0.21              | 0.15          | 1.20                             | 1.43                            | -0.23               | -0.19         |  |
| >75                                         | #                             | #                          | 0.60                     | #                            | #                 | #             | 0.44                             | 0.66                            | -0.22               | -0.50         |  |
| Unavailable or unknown                      | 10                            | 10                         | 8.14                     | 12.79                        | -0.75             | -0.08         | 9.38                             | 7.25                            | 2.13                | 0.23          |  |
| Percent receiving institutional grant aid   |                               |                            |                          |                              |                   |               |                                  |                                 |                     |               |  |
| <=25                                        | 120                           | 20                         | 83.88                    | 57.19                        | 4.30              | 0.05          | 76.79                            | 85.58                           | -8.79               | -0.11         |  |
| >25, <=50                                   | #                             | #                          | 2.88                     | 26.71                        | -3.84             | -0.57         | 9.21                             | 2.49                            | 6.71                | 0.73          |  |
| >50, <=75                                   | #                             | #                          | 2.61                     | 3.31                         | -0.11             | -0.04         | 2.79                             | 2.50                            | 0.30                | 0.11          |  |
| >75                                         | #                             | #                          | 2.49                     | #                            | #                 | #             | 1.83                             | 2.18                            | -0.35               | -0.19         |  |
| Unavailable or unknown                      | 10                            | 10                         | 8.14                     | 12.79                        | -0.75             | -0.08         | 9.38                             | 7.25                            | 2.13                | 0.23          |  |
| Percent receiving student loan aid          |                               |                            |                          |                              |                   |               |                                  |                                 |                     |               |  |
| <=25                                        | 30                            | 10                         | 30.78                    | 49.20                        | -2.97             | -0.09         | 35.67                            | 27.29                           | 8.37                | 0.23          |  |
| >25, <=50                                   | 10                            | #                          | 5.34                     | 0.90                         | 0.71              | 0.15          | 4.16                             | 4.97                            | -0.81               | -0.19         |  |
| >50, <=75                                   | 40                            | 10                         | 24.50                    | 35.55                        | -1.78             | -0.07         | 27.43                            | 22.33                           | 5.10                | 0.19          |  |
| >75                                         | 50                            | #                          | 31.25                    | 1.56                         | 4.78 <sup>2</sup> | 0.18          | 23.37                            | 38.16                           | -14.79 <sup>2</sup> | -0.63         |  |
| Unavailable or unknown                      | 10                            | 10                         | 8.14                     | 12.79                        | -0.75             | -0.08         | 9.38                             | 7.25                            | 2.13                | 0.23          |  |
| Percent enrolled: Black, non-Hispanic       |                               |                            |                          |                              |                   |               |                                  |                                 |                     |               |  |
| <=25                                        | 90                            | 20                         | 70.03                    | 65.74                        | 0.69              | 0.01          | 68.89                            | 70.22                           | -1.33               | -0.02         |  |
| >25, <=50                                   | 30                            | 10                         | 10.10                    | 8.77                         | 0.21              | 0.02          | 9.74                             | 9.51                            | 0.23                | 0.02          |  |
| >50, <=75                                   | 10                            | #                          | 7.51                     | 21.39                        | -2.24             | -0.23         | 11.19                            | 7.97                            | 3.22                | 0.29          |  |
| >75                                         | 10                            | #                          | 10.50                    | #                            | # <sup>2</sup>    | #             | 7.71                             | 9.88                            | -2.17               | -0.28         |  |
| Unavailable or unknown                      | #                             | #                          | 1.86                     | 4.09                         | -0.36             | -0.16         | 2.46                             | 2.41                            | 0.04                | 0.02          |  |
| Percent enrolled: Asian or Pacific Islander |                               |                            |                          |                              |                   |               |                                  |                                 |                     |               |  |
| <=25                                        | 130                           | 20                         | 97.66                    | 95.91                        | 0.28              | #             | 97.19                            | 97.00                           | 0.19                | #             |  |
| >25, <=50                                   | #                             | #                          | 0.48                     | #                            | #                 | #             | 0.35                             | 0.59                            | -0.23               | -0.67         |  |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †                 | †             | †                                | †                               | †                   | †             |  |
| >75                                         | †                             | †                          | †                        | †                            | †                 | †             | †                                | †                               | †                   | †             |  |
| Unavailable or unknown                      | #                             | #                          | 1.86                     | 4.09                         | -0.36             | -0.16         | 2.46                             | 2.41                            | 0.04                | 0.02          |  |
| Percent enrolled: Hispanic                  |                               |                            |                          |                              |                   |               |                                  |                                 |                     |               |  |
| <=25                                        | 70                            | 10                         | 68.12                    | 62.66                        | 0.88              | 0.01          | 66.67                            | 63.23                           | 3.44                | 0.05          |  |
| >25, <=50                                   | 30                            | 10                         | 16.94                    | 9.80                         | 1.15              | 0.07          | 15.05                            | 16.91                           | -1.86               | -0.12         |  |

See notes at end of table.



**Table K-7. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for private for-profit less-than-2-year institutions: 2004—Continued**

| Variable                                           | Before nonresponse adjustment |                            |                          |                              |                   |               | After nonresponse adjustment     |                                 |                |               |  |
|----------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|-------------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                                    | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias    | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| >50, <=75                                          | 10                            | #                          | 5.31                     | 4.13                         | 0.19              | 0.04          | 5.00                             | 6.70                            | -1.70          | -0.34         |  |
| >75                                                | 20                            | #                          | 7.76                     | 19.32                        | -1.86             | -0.19         | 10.83                            | 10.75                           | 0.08           | 0.01          |  |
| Unavailable or unknown                             | #                             | #                          | 1.86                     | 4.09                         | -0.36             | -0.16         | 2.46                             | 2.41                            | 0.04           | 0.02          |  |
| Total undergraduate enrollment <sup>3</sup>        |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| <=215                                              | 30                            | 10                         | 59.34                    | 70.74                        | -1.84             | -0.03         | 62.36                            | 55.19                           | 7.18           | 0.12          |  |
| >215, <=415                                        | 30                            | 10                         | 20.53                    | 18.87                        | 0.27              | 0.01          | 20.09                            | 20.28                           | -0.19          | -0.01         |  |
| >415, <=807                                        | 40                            | #                          | 13.58                    | 2.40                         | 1.80 <sup>2</sup> | 0.15          | 10.61                            | 16.86                           | -6.25          | -0.59         |  |
| >807                                               | 30                            | 10                         | 6.12                     | 3.89                         | 0.36              | 0.06          | 5.53                             | 7.25                            | -1.73          | -0.31         |  |
| Unavailable or unknown                             | #                             | #                          | 0.43                     | 4.09                         | -0.59             | -0.58         | 1.41                             | 0.42                            | 0.99           | 0.70          |  |
| Total male undergraduate enrollment <sup>3</sup>   |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| <=23                                               | 30                            | 10                         | 53.57                    | 55.18                        | -0.26             | #             | 54.00                            | 50.92                           | 3.08           | 0.06          |  |
| >23, <=65                                          | 40                            | 10                         | 25.92                    | 33.53                        | -1.23             | -0.05         | 27.94                            | 27.27                           | 0.67           | 0.02          |  |
| >65, <=211                                         | 40                            | #                          | 12.02                    | 3.01                         | 1.45              | 0.14          | 9.63                             | 12.19                           | -2.57          | -0.27         |  |
| >211                                               | 30                            | 10                         | 8.06                     | 4.18                         | 0.62              | 0.08          | 7.03                             | 9.20                            | -2.17          | -0.31         |  |
| Unavailable or unknown                             | #                             | #                          | 0.43                     | 4.09                         | -0.59             | -0.58         | 1.41                             | 0.42                            | 0.99           | 0.70          |  |
| Total female undergraduate enrollment <sup>3</sup> |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |  |
| <=100                                              | 30                            | 10                         | 47.15                    | 71.13                        | -3.86             | -0.08         | 53.51                            | 43.66                           | 9.86           | 0.18          |  |
| >100, <=288                                        | 30                            | 10                         | 28.92                    | 16.74                        | 1.96              | 0.07          | 25.69                            | 27.99                           | -2.31          | -0.09         |  |
| >288, <=551                                        | 40                            | #                          | 16.33                    | 5.93                         | 1.68              | 0.11          | 13.57                            | 19.94                           | -6.38          | -0.47         |  |
| >551                                               | 30                            | 10                         | 7.17                     | 2.11                         | 0.82              | 0.13          | 5.83                             | 7.99                            | -2.17          | -0.37         |  |
| Unavailable or unknown                             | #                             | #                          | 0.43                     | 4.09                         | -0.59             | -0.58         | 1.41                             | 0.42                            | 0.99           | 0.70          |  |

† Not applicable.

# Rounds to zero.

<sup>1</sup> New England = Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; Mid East = Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania; Great Lakes = Illinois, Indiana, Michigan, Ohio, Wisconsin; Plains = Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota; Southeast = Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia; Southwest = Arizona, New Mexico, Oklahoma, Texas; Rocky Mountains = Colorado, Idaho, Montana, Utah, Wyoming; Far West = Alaska, California, Hawaii, Nevada, Oregon, Washington; Outlying Areas = American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana Islands, Puerto Rico, Palau, Virgin Islands.

<sup>2</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>3</sup> Undergraduate enrollment categories were defined by quartiles.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table K-8. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for California public 2-year institutions: 2004**

| Variable                                                                | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |       |  |
|-------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|-------|--|
|                                                                         | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |       |  |
| Carnegie classification code                                            |                               |                            |                          |                              |                |               |                                  |                                 |                |               |       |  |
| Doctorate-granting/research universities—extensive                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | †     |  |
| Doctorate-granting/research universities—intensive                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | †     |  |
| Master's colleges and universities I                                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | †     |  |
| Master's (comprehensive) colleges and universities II                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | †     |  |
| Baccalaureate colleges—liberal arts                                     | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | †     |  |
| Baccalaureate colleges—general                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | †     |  |
| Baccalaureate/associate's colleges                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | †     |  |
| Associate's colleges                                                    | 30                            | 10                         | 100.00                   | 100.00                       | # <sup>1</sup> | #             | 100.00                           | 100.00                          | # <sup>1</sup> | #             | #     |  |
| Theological seminaries and other specialized faith-related institutions | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | †     |  |
| Medical schools and medical centers                                     | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | †     |  |
| Other separate health profession schools                                | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | †     |  |
| Schools of engineering and technology                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | †     |  |
| Schools of business and management                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | †     |  |
| Schools of art, music, and design                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | †     |  |
| Schools of law                                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | †     |  |
| Teachers colleges                                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | †     |  |
| Other specialized institutions                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | †     |  |
| Tribal colleges and universities                                        | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | †     |  |
| Unavailable or unknown                                                  | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | †     |  |
| Degree of urbanization                                                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |       |  |
| Large city                                                              | 10                            | #                          | 16.21                    | 9.61                         | 2.25           | 0.16          | 13.90                            | 17.26                           | -3.36          | -0.24         | -0.24 |  |
| Mid-size city                                                           | 10                            | #                          | 29.85                    | 32.13                        | -0.78          | -0.03         | 30.65                            | 31.94                           | -1.29          | -0.04         | -0.04 |  |

See notes at end of table.

**Table K-8. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for California public 2-year institutions: 2004—Continued**

| Variable                                  | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |  |
|-------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                           | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Urban fringe of large city                | 10                            | 10                         | 44.60                    | 45.85                        | -0.43          | -0.01         | 45.03                            | 40.73                           | 4.31           | 0.10          |  |
| Urban fringe of mid-size city             | #                             | #                          | 9.35                     | #                            | #              | #             | 6.07                             | 10.07                           | -4.00          | -0.66         |  |
| Large town                                | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Small town                                | #                             | #                          | #                        | 12.42                        | -4.24          | -1.00         | 4.35                             | †                               | †              | †             |  |
| Rural                                     | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Not assigned                              | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Historically Black college or university  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| Yes                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| No                                        | 30                            | 10                         | 100.00                   | 100.00                       | # <sup>1</sup> | #             | 100.00                           | 100.00                          | # <sup>1</sup> | #             |  |
| Percent receiving federal grant aid       |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                      | 10                            | 10                         | 57.76                    | 34.82                        | 7.83           | 0.16          | 49.73                            | 59.13                           | -9.40          | -0.19         |  |
| >25, <=50                                 | 10                            | 10                         | 32.84                    | 65.18                        | -11.04         | -0.25         | 44.16                            | 32.52                           | 11.64          | 0.26          |  |
| >50, <=75                                 | #                             | #                          | 9.40                     | #                            | #              | #             | 6.11                             | 8.35                            | -2.24          | -0.37         |  |
| >75                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Percent receiving state/local grant aid   |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                      | 10                            | #                          | 23.36                    | 15.06                        | 2.83           | 0.14          | 20.45                            | 22.56                           | -2.11          | -0.10         |  |
| >25, <=50                                 | 10                            | 10                         | 52.59                    | 73.48                        | -7.13          | -0.12         | 59.90                            | 56.72                           | 3.19           | 0.05          |  |
| >50, <=75                                 | 10                            | #                          | 19.81                    | 11.46                        | 2.85           | 0.17          | 16.89                            | 16.61                           | 0.27           | 0.02          |  |
| >75                                       | #                             | #                          | 4.24                     | #                            | #              | #             | 2.76                             | 4.10                            | -1.35          | -0.49         |  |
| Unavailable or unknown                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Percent receiving institutional grant aid |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                      | 20                            | 10                         | 94.40                    | 100.00                       | -1.91          | -0.02         | 96.36                            | 95.64                           | 0.73           | 0.01          |  |
| >25, <=50                                 | #                             | #                          | 5.60                     | #                            | #              | #             | 3.64                             | 4.36                            | -0.73          | -0.20         |  |
| >50, <=75                                 | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >75                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Percent receiving student loan aid        |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                      | 30                            | 10                         | 100.00                   | 100.00                       | #              | #             | 100.00                           | 100.00                          | #              | #             |  |
| >25, <=50                                 | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |

See notes at end of table.

K-37

**Table K-8. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for California public 2-year institutions: 2004—Continued**

| Variable                                         | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |  |
|--------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                                  | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| >50, <=75                                        | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >75                                              | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                           | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Percent enrolled: Black, non-Hispanic            |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                             | 30                            | 10                         | 100.00                   | 100.00                       | #              | #             | 100.00                           | 100.00                          | #              | #             |  |
| >25, <=50                                        | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >50, <=75                                        | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >75                                              | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                           | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Percent enrolled: Asian or Pacific Islander      |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                             | 20                            | 10                         | 79.61                    | 94.66                        | -5.14          | -0.06         | 84.88                            | 79.79                           | 5.09           | 0.06          |  |
| >25, <=50                                        | 10                            | #                          | 15.22                    | 5.34                         | 3.37           | 0.28          | 11.77                            | 15.27                           | -3.50          | -0.30         |  |
| >50, <=75                                        | #                             | #                          | 5.17                     | #                            | #              | #             | 3.36                             | 4.95                            | -1.59          | -0.47         |  |
| >75                                              | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                           | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Percent enrolled: Hispanic                       |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                             | 10                            | 10                         | 42.84                    | 60.89                        | -6.16          | -0.13         | 49.16                            | 41.41                           | 7.75           | 0.16          |  |
| >25, <=50                                        | 10                            | 10                         | 54.94                    | 26.69                        | 9.64           | 0.21          | 45.05                            | 56.44                           | -11.39         | -0.25         |  |
| >50, <=75                                        | #                             | #                          | 2.22                     | #                            | #              | #             | 1.44                             | 2.14                            | -0.70          | -0.49         |  |
| >75                                              | #                             | #                          | #                        | 12.42                        | -4.24          | -1.00         | 4.35                             | †                               | †              | †             |  |
| Unavailable or unknown                           | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Total undergraduate enrollment <sup>2</sup>      |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=17,576                                         | 10                            | #                          | 45.75                    | 47.96                        | -0.75          | -0.02         | 46.52                            | 47.44                           | -0.91          | -0.02         |  |
| >17,576, <=29,617                                | 10                            | #                          | 30.09                    | 12.37                        | 6.05           | 0.25          | 23.89                            | 28.82                           | -4.94          | -0.21         |  |
| >29,617, <=41,593                                | #                             | 10                         | 8.09                     | 36.29                        | -9.62          | -0.54         | 17.96                            | 7.94                            | 10.02          | 0.56          |  |
| >41,593                                          | 10                            | #                          | 16.06                    | 3.38                         | 4.33           | 0.37          | 11.63                            | 15.80                           | -4.17          | -0.36         |  |
| Unavailable or unknown                           | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Total male undergraduate enrollment <sup>2</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=7,467                                          | 10                            | #                          | 41.56                    | 47.96                        | -2.18          | -0.05         | 43.80                            | 41.61                           | 2.19           | 0.05          |  |
| >7,467, <=12,738.5                               | 10                            | #                          | 24.94                    | 18.06                        | 2.35           | 0.10          | 22.53                            | 24.58                           | -2.05          | -0.09         |  |
| >12,738.5, <=19,584                              | #                             | 10                         | 17.02                    | 30.60                        | -4.63          | -0.21         | 21.78                            | 17.60                           | 4.17           | 0.19          |  |
| >19,584                                          | 10                            | #                          | 16.48                    | 3.38                         | 4.47           | 0.37          | 11.89                            | 16.21                           | -4.32          | -0.36         |  |
| Unavailable or unknown                           | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |

See notes at end of table.

**Table K-8. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for California public 2-year institutions: 2004—Continued**

| Variable                                           | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |   |
|----------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|---|
|                                                    | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |   |
| Total female undergraduate enrollment <sup>2</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |   |
| <=9,901                                            | 10                            | #                          | 50.92                    | 37.87                        | 4.45           | 0.10          | 46.35                            | 52.38                           | -6.04          | -0.13         |   |
| >9,901, <=16,965                                   | 10                            | #                          | 21.91                    | 27.46                        | -1.89          | -0.08         | 23.86                            | 20.15                           | 3.71           | 0.16          |   |
| >16,965, <=23,021                                  | #                             | 10                         | 11.22                    | 31.29                        | -6.85          | -0.38         | 18.24                            | 11.51                           | 6.74           | 0.37          |   |
| >23,021                                            | 10                            | #                          | 15.95                    | 3.38                         | 4.29           | 0.37          | 11.55                            | 15.96                           | -4.41          | -0.38         |   |
| Unavailable or unknown                             | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |

† Not applicable.

# Rounds to zero.

<sup>1</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>2</sup> Undergraduate enrollment categories were defined by quartiles.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table K-9. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for California public 4-year institutions: 2004**

| Variable                                                                | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |  |
|-------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                                                         | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Carnegie classification code                                            |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| Doctorate-granting/research universities—extensive                      | 10                            | #                          | 26.32                    | 21.43                        | 2.31           | 0.10          | 24.24                            | 21.54                           | 2.70           | 0.11          |  |
| Doctorate-granting/research universities—intensive                      | #                             | #                          | 5.26                     | 7.14                         | -0.89          | -0.14         | 6.06                             | 4.47                            | 1.59           | 0.26          |  |
| Master's colleges and universities I                                    | 10                            | 10                         | 63.16                    | 50.00                        | 6.23           | 0.11          | 57.58                            | 69.60                           | -12.02         | -0.21         |  |
| Master's (comprehensive) colleges and universities II                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Baccalaureate colleges—liberal arts                                     | #                             | #                          | #                        | 7.14                         | -3.38          | -1.00         | 3.03                             | †                               | †              | †             |  |
| Baccalaureate colleges—general                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Baccalaureate/associate's colleges                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Associate's colleges                                                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Theological seminaries and other specialized faith-related institutions | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Medical schools and medical centers                                     | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Other separate health profession schools                                | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Schools of engineering and technology                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Schools of business and management                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Schools of art, music, and design                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Schools of law                                                          | #                             | #                          | 5.26                     | #                            | #              | #             | 3.03                             | 4.40                            | -1.37          | -0.45         |  |
| Teachers colleges                                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Other specialized institutions                                          | #                             | #                          | #                        | 7.14                         | -3.38          | -1.00         | 3.03                             | †                               | †              | †             |  |
| Tribal colleges and universities                                        | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                                                  | #                             | #                          | #                        | 7.14                         | -3.38          | -1.00         | 3.03                             | †                               | †              | †             |  |
| Degree of urbanization                                                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| Large city                                                              | 10                            | 10                         | 31.58                    | 42.86                        | -5.34          | -0.14         | 36.36                            | 26.07                           | 10.30          | 0.28          |  |
| Mid-size city                                                           | 10                            | #                          | 42.11                    | 21.43                        | 9.78           | 0.30          | 33.33                            | 39.53                           | -6.20          | -0.19         |  |

See notes at end of table.

**Table K-9. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for California public 4-year institutions: 2004—Continued**

| Variable                                  | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |  |
|-------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                           | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Urban fringe of large city                | #                             | #                          | 21.05                    | 14.29                        | 3.20           | 0.18          | 18.18                            | 25.97                           | -7.79          | -0.43         |  |
| Urban fringe of mid-size city             | #                             | #                          | #                        | 14.29                        | -6.76          | -1.00         | 6.06                             | †                               | †              | †             |  |
| Large town                                | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Small town                                | #                             | #                          | 5.26                     | #                            | #              | #             | 3.03                             | 8.43                            | -5.40          | -1.78         |  |
| Rural                                     | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Not assigned                              | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                    | #                             | #                          | #                        | 7.14                         | -3.38          | -1.00         | 3.03                             | †                               | †              | †             |  |
| Historically Black college or university  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| Yes                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| No                                        | 20                            | 10                         | 100.00                   | 100.00                       | # <sup>1</sup> | #             | 100.00                           | 100.00                          | # <sup>1</sup> | #             |  |
| Percent receiving federal grant aid       |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                      | 10                            | #                          | 26.32                    | 28.57                        | -1.07          | -0.04         | 27.27                            | 30.10                           | -2.82          | -0.10         |  |
| >25, <=50                                 | 10                            | 10                         | 57.89                    | 57.14                        | 0.36           | 0.01          | 57.58                            | 56.66                           | 0.91           | 0.02          |  |
| >50, <=75                                 | #                             | #                          | 5.26                     | 7.14                         | -0.89          | -0.14         | 6.06                             | 4.38                            | 1.68           | 0.28          |  |
| >75                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                    | #                             | #                          | 10.53                    | 7.14                         | 1.60           | 0.18          | 9.09                             | 8.86                            | 0.23           | 0.03          |  |
| Percent receiving state/local grant aid   |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                      | #                             | #                          | 10.53                    | 14.29                        | -1.78          | -0.14         | 12.12                            | 13.77                           | -1.65          | -0.14         |  |
| >25, <=50                                 | 10                            | 10                         | 73.68                    | 78.57                        | -2.31          | -0.03         | 75.76                            | 73.99                           | 1.76           | 0.02          |  |
| >50, <=75                                 | #                             | #                          | 5.26                     | #                            | #              | #             | 3.03                             | 3.38                            | -0.35          | -0.11         |  |
| >75                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                    | #                             | #                          | 10.53                    | 7.14                         | 1.60           | 0.18          | 9.09                             | 8.86                            | 0.23           | 0.03          |  |
| Percent receiving institutional grant aid |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                      | #                             | #                          | 15.79                    | 14.29                        | 0.71           | 0.05          | 15.15                            | 21.94                           | -6.79          | -0.45         |  |
| >25, <=50                                 | 10                            | 10                         | 57.89                    | 71.43                        | -6.40          | -0.10         | 63.64                            | 54.61                           | 9.02           | 0.14          |  |
| >50, <=75                                 | #                             | #                          | 15.79                    | 7.14                         | 4.09           | 0.35          | 12.12                            | 14.58                           | -2.46          | -0.20         |  |
| >75                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                    | #                             | #                          | 10.53                    | 7.14                         | 1.60           | 0.18          | 9.09                             | 8.86                            | 0.23           | 0.03          |  |

See notes at end of table.

K-41

**Table K-9. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for California public 4-year institutions: 2004—Continued**

| Variable                                    | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |  |
|---------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                             | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Percent receiving institutional grant aid   |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                        | 10                            | #                          | 36.84                    | 21.43                        | 7.29           | 0.25          | 30.30                            | 37.05                           | -6.74          | -0.22         |  |
| >25, <=50                                   | 10                            | 10                         | 52.63                    | 71.43                        | -8.89          | -0.14         | 60.61                            | 54.09                           | 6.52           | 0.11          |  |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                      | #                             | #                          | 10.53                    | 7.14                         | 1.60           | 0.18          | 9.09                             | 8.86                            | 0.23           | 0.03          |  |
| Percent receiving student loan aid          |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                        | #                             | #                          |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                        | 20                            | 10                         | 94.74                    | 100.00                       | -2.49          | -0.03         | 96.97                            | 95.62                           | 1.35           | 0.01          |  |
| >25, <=50                                   | #                             | #                          | 5.26                     | #                            | #              | #             | 3.03                             | 4.38                            | -1.35          | -0.45         |  |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Percent enrolled: Black, non-Hispanic       |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                        | 10                            | 10                         | 68.42                    | 71.43                        | -1.42          | -0.02         | 69.70                            | 73.42                           | -3.72          | -0.05         |  |
| >25, <=50                                   | 10                            | #                          | 31.58                    | 28.57                        | 1.42           | 0.05          | 30.30                            | 26.58                           | 3.72           | 0.12          |  |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Percent enrolled: Asian or Pacific Islander |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                        | 20                            | 10                         | 78.95                    | 78.57                        | 0.18           | #             | 78.79                            | 79.44                           | -0.65          | -0.01         |  |
| >25, <=50                                   | #                             | #                          | 21.05                    | 14.29                        | 3.20           | 0.18          | 18.18                            | 20.56                           | -2.38          | -0.13         |  |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >75                                         | #                             | #                          | #                        | 7.14                         | -3.38          | -1.00         | 3.03                             | †                               | †              | †             |  |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Percent enrolled: Hispanic                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=7,404                                     | 10                            | #                          | 31.58                    | 21.43                        | 4.80           | 0.18          | 27.27                            | 36.04                           | -8.77          | -0.32         |  |
| >7,404, <=18,214                            | 10                            | #                          | 31.58                    | 14.29                        | 8.18           | 0.35          | 24.24                            | 33.18                           | -8.94          | -0.37         |  |
| >18,214, <=25,093                           | #                             | #                          | 21.05                    | 28.57                        | -3.56          | -0.14         | 24.24                            | 16.43                           | 7.81           | 0.32          |  |
| >25,093                                     | #                             | 10                         | 15.79                    | 35.71                        | -9.43          | -0.37         | 24.24                            | 14.35                           | 9.89           | 0.41          |  |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |

See notes at end of table.



**Table K-9. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for California public 4-year institutions: 2004—Continued**

| Variable                                                       | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |
|----------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                                                | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Total undergraduate enrollment <sup>2</sup>                    |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=2,818                                                        | 10                            | #                          | 31.58                    | 21.43                        | 4.80           | 0.18          | 27.27                            | 36.04                           | -8.77          | -0.32         |
| >2,818, <=7,245                                                | 10                            | #                          | 31.58                    | 14.29                        | 8.18           | 0.35          | 24.24                            | 33.18                           | -8.94          | -0.37         |
| >7,245, <=11,069                                               | 10                            | #                          | 26.32                    | 21.43                        | 2.31           | 0.10          | 24.24                            | 20.61                           | 3.63           | 0.15          |
| >11,069                                                        | #                             | 10                         | 10.53                    | 42.86                        | -15.30         | -0.59         | 24.24                            | 10.16                           | 14.08          | 0.58          |
| Unavailable or unknown                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Total male undergraduate enrollment <sup>2</sup>               |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=4,452                                                        | 10                            | #                          | 31.58                    | 21.43                        | 4.80           | 0.18          | 27.27                            | 35.60                           | -8.33          | -0.31         |
| >4,452, <=8,523                                                | 10                            | #                          | 31.58                    | 14.29                        | 8.18           | 0.35          | 24.24                            | 33.62                           | -9.38          | -0.39         |
| >8,523, <=13,893                                               | #                             | 10                         | 15.79                    | 35.71                        | -9.43          | -0.37         | 24.24                            | 11.53                           | 12.71          | 0.52          |
| >13,893                                                        | #                             | #                          | 21.05                    | 28.57                        | -3.56          | -0.14         | 24.24                            | 19.24                           | 5.00           | 0.21          |
| Unavailable or unknown                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Total female undergraduate enrollment <sup>2</sup>             |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=4,255                                                        | 10                            | 10                         | 52.63                    | 42.86                        | 4.62           | 0.10          | 48.48                            | 58.87                           | -10.39         | -0.21         |
| >4,255                                                         | 10                            | 10                         | 47.37                    | 50.00                        | -1.25          | -0.03         | 48.48                            | 41.13                           | 7.36           | 0.15          |
| Total enrollment = 0                                           | #                             | #                          | #                        | 7.14                         | -3.38          | -1.00         | 3.03                             | †                               | †              | †             |
| Total graduate/first-professional enrollment <sup>3</sup>      |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=1,804                                                        | 10                            | 10                         | 57.89                    | 35.71                        | 10.49          | 0.22          | 48.48                            | 62.25                           | -13.76         | -0.28         |
| >1,804                                                         | 10                            | 10                         | 42.11                    | 57.14                        | -7.11          | -0.14         | 48.48                            | 37.75                           | 10.73          | 0.22          |
| Total enrollment = 0                                           | #                             | #                          | #                        | 7.14                         | -3.38          | -1.00         | 3.03                             | †                               | †              | †             |
| Total male graduate/first-professional enrollment <sup>3</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=1,966                                                        | 10                            | 10                         | 52.63                    | 42.86                        | 4.62           | 0.10          | 48.48                            | 56.36                           | -7.88          | -0.16         |
| >1,966                                                         | 10                            | 10                         | 47.37                    | 50.00                        | -1.25          | -0.03         | 48.48                            | 43.64                           | 4.85           | 0.10          |
| Total enrollment = 0                                           | #                             | #                          | #                        | 7.14                         | -3.38          | -1.00         | 3.03                             | †                               | †              | †             |

† Not applicable.

# Rounds to zero.

<sup>1</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>2</sup> Undergraduate enrollment categories were defined by quartiles.

<sup>3</sup> Graduate/first-professional enrollment categories were defined by the median.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

K-43

**Table K-10. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for California private not-for-profit 4-year institutions: 2004**

| Variable                                                                | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |  |
|-------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                                                         | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Carnegie classification code                                            |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| Doctorate-granting/research universities—extensive                      | #                             | #                          | 3.05                     | 3.18                         | -0.03          | -0.01         | 3.08                             | 2.88                            | 0.20           | 0.06          |  |
| Doctorate-granting/research universities—intensive                      | 10                            | #                          | 6.09                     | 3.18                         | 0.62           | 0.11          | 5.39                             | 6.58                            | -1.19          | -0.22         |  |
| Master's colleges and universities I                                    | 10                            | #                          | 19.61                    | 6.57                         | 2.79           | 0.17          | 16.46                            | 20.58                           | -4.12          | -0.25         |  |
| Master's (comprehensive) colleges and universities II                   | #                             | #                          | #                        | 19.19                        | -4.11          | -1.00         | 4.65                             | †                               | †              | †             |  |
| Baccalaureate colleges—liberal arts                                     | #                             | #                          | 2.36                     | 13.33                        | -2.35          | -0.50         | 5.01                             | 2.84                            | 2.17           | 0.43          |  |
| Baccalaureate colleges—general                                          | #                             | #                          | 11.49                    | #                            | #              | #             | 8.71                             | 12.57                           | -3.86          | -0.44         |  |
| Baccalaureate/associate's colleges                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Associate's colleges                                                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Theological seminaries and other specialized faith-related institutions | #                             | #                          | 28.75                    | #                            | #              | #             | 21.79                            | 29.25                           | -7.46          | -0.34         |  |
| Medical schools and medical centers                                     | #                             | #                          | 1.02                     | #                            | #              | #             | 0.77                             | 0.87                            | -0.10          | -0.13         |  |
| Other separate health profession schools                                | #                             | #                          | 7.89                     | #                            | #              | #             | 5.98                             | 7.70                            | -1.71          | -0.29         |  |
| Schools of engineering and technology                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Schools of business and management                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Schools of art, music, and design                                       | #                             | #                          | 9.86                     | #                            | #              | #             | 7.47                             | 8.18                            | -0.71          | -0.09         |  |
| Schools of law                                                          | #                             | #                          | #                        | 22.48                        | -4.82          | -1.00         | 5.44                             | †                               | †              | †             |  |
| Teachers colleges                                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Other specialized institutions                                          | #                             | #                          | 9.87                     | 8.69                         | 0.25           | 0.03          | 9.59                             | 8.55                            | 1.04           | 0.11          |  |
| Tribal colleges and universities                                        | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                                                  | #                             | #                          | #                        | 23.39                        | -5.01          | -1.00         | 5.66                             | †                               | †              | †             |  |
| Degree of urbanization                                                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| Large city                                                              | 10                            | #                          | 28.40                    | 50.09                        | -4.64          | -0.14         | 33.65                            | 27.76                           | 5.89           | 0.18          |  |
| Mid-size city                                                           | 10                            | #                          | 31.17                    | 16.78                        | 3.08           | 0.11          | 27.69                            | 31.92                           | -4.24          | -0.15         |  |

See notes at end of table.

**Table K-10. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for California private not-for-profit 4-year institutions: 2004—Continued**

| Variable                                  | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |
|-------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                           | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Urban fringe of large city                | 10                            | 10                         | 40.42                    | 33.13                        | 1.56           | 0.04          | 38.66                            | 40.31                           | -1.66          | -0.04         |
| Urban fringe of mid-size city             | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Large town                                | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Small town                                | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Rural                                     | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Not assigned                              | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Historically Black college or university  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| Yes                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| No                                        | 30                            | 10                         | 100.00                   | 100.00                       | # <sup>1</sup> | #             | 100.00                           | 100.00                          | # <sup>1</sup> | #             |
| Percent receiving federal grant aid       |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=25                                      | 10                            | #                          | 23.22                    | 15.33                        | 1.69           | 0.08          | 21.31                            | 24.55                           | -3.24          | -0.15         |
| >25, <=50                                 | 10                            | #                          | 25.25                    | 16.51                        | 1.87           | 0.08          | 23.13                            | 24.79                           | -1.66          | -0.07         |
| >50, <=75                                 | #                             | #                          | 13.86                    | #                            | #              | #             | 10.50                            | 13.37                           | -2.87          | -0.27         |
| >75                                       | #                             | #                          | 22.93                    | 13.60                        | 2.00           | 0.10          | 20.67                            | 24.23                           | -3.56          | -0.17         |
| Unavailable or unknown                    | 10                            | #                          | 14.74                    | 54.56                        | -8.53          | -0.37         | 24.38                            | 13.05                           | 11.34          | 0.46          |
| Percent receiving state/local grant aid   |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=25                                      | 20                            | #                          | 45.64                    | 25.48                        | 4.32           | 0.10          | 40.76                            | 45.68                           | -4.92          | -0.12         |
| >25, <=50                                 | 10                            | #                          | 39.62                    | 6.36                         | 7.12           | 0.22          | 31.57                            | 41.27                           | -9.71          | -0.31         |
| >50, <=75                                 | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| >75                                       | #                             | #                          | #                        | 13.60                        | -2.91          | -1.00         | 3.29                             | †                               | †              | †             |
| Unavailable or unknown                    | 10                            | #                          | 14.74                    | 54.56                        | -8.53          | -0.37         | 24.38                            | 13.05                           | 11.34          | 0.46          |
| Percent receiving institutional grant aid |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=25                                      | #                             | #                          | 8.91                     | #                            | #              | #             | 6.75                             | 9.13                            | -2.38          | -0.35         |
| >25, <=50                                 | #                             | #                          | 3.05                     | #                            | #              | #             | 2.31                             | 3.26                            | -0.96          | -0.41         |
| >50, <=75                                 | 10                            | #                          | 19.03                    | 8.76                         | 2.20           | 0.13          | 16.54                            | 21.41                           | -4.87          | -0.29         |
| >75                                       | 10                            | 10                         | 54.27                    | 36.67                        | 3.77           | 0.07          | 50.01                            | 53.15                           | -3.13          | -0.06         |
| Unavailable or unknown                    | 10                            | #                          | 14.74                    | 54.56                        | -8.53          | -0.37         | 24.38                            | 13.05                           | 11.34          | 0.46          |

See notes at end of table.

K-45

**Table K-10. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for California private not-for-profit 4-year institutions: 2004—Continued**

| Variable                                    | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |  |
|---------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                             | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Percent receiving student loan aid          |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                        | #                             | #                          | 23.95                    | 3.18                         | 4.45           | 0.23          | 18.92                            | 25.67                           | -6.75          | -0.36         |  |
| >25, <=50                                   | 10                            | #                          | 17.29                    | 8.76                         | 1.83           | 0.12          | 15.23                            | 17.01                           | -1.78          | -0.12         |  |
| >50, <=75                                   | 10                            | #                          | 29.67                    | 3.39                         | 5.63           | 0.23          | 23.31                            | 30.14                           | -6.83          | -0.29         |  |
| >75                                         | #                             | #                          | 14.34                    | 30.11                        | -3.38          | -0.19         | 18.16                            | 14.13                           | 4.03           | 0.22          |  |
| Unavailable or unknown                      | 10                            | #                          | 14.74                    | 54.56                        | -8.53          | -0.37         | 24.38                            | 13.05                           | 11.34          | 0.46          |  |
| Percent enrolled: Black, non-Hispanic       |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                        | 30                            | 10                         | 94.77                    | 79.79                        | 3.21           | 0.04          | 91.14                            | 95.81                           | -4.67          | -0.05         |  |
| >25, <=50                                   | #                             | #                          | 5.23                     | #                            | #              | #             | 3.96                             | 4.19                            | -0.23          | -0.06         |  |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                      | #                             | #                          | #                        | 20.21                        | -4.33          | -1.00         | 4.89                             | †                               | †              | †             |  |
| Percent enrolled: Asian or Pacific Islander |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                        | 30                            | 10                         | 97.97                    | 79.79                        | 3.89           | 0.04          | 93.57                            | 98.18                           | -4.61          | -0.05         |  |
| >25, <=50                                   | #                             | #                          | 2.03                     | #                            | #              | #             | 1.54                             | 1.82                            | -0.28          | -0.18         |  |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                      | #                             | #                          | #                        | 20.21                        | -4.33          | -1.00         | 4.89                             | †                               | †              | †             |  |
| Percent enrolled: Hispanic                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                        | 30                            | 10                         | 98.98                    | 79.79                        | 4.11           | 0.04          | 94.34                            | 99.10                           | -4.76          | -0.05         |  |
| >25, <=50                                   | #                             | #                          | 1.02                     | #                            | #              | #             | 0.77                             | 0.90                            | -0.13          | -0.17         |  |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                      | #                             | #                          | #                        | 20.21                        | -4.33          | -1.00         | 4.89                             | †                               | †              | †             |  |
| Total undergraduate enrollment <sup>2</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=237.5                                     | 10                            | #                          | 44.55                    | 31.17                        | 2.87           | 0.07          | 41.31                            | 43.93                           | -2.61          | -0.06         |  |
| >237.5, <=1,956.5                           | 10                            | #                          | 35.57                    | 30.11                        | 1.17           | 0.03          | 34.25                            | 34.72                           | -0.47          | -0.01         |  |
| >1,956.5, <=4,168.5                         | 10                            | #                          | 11.75                    | 12.15                        | -0.09          | -0.01         | 11.85                            | 12.18                           | -0.33          | -0.03         |  |
| >4,168.5                                    | 10                            | #                          | 8.12                     | 6.36                         | 0.38           | 0.05          | 7.69                             | 9.17                            | -1.47          | -0.19         |  |
| Unavailable or unknown                      | #                             | #                          | #                        | 20.21                        | -4.33          | -1.00         | 4.89                             | †                               | †              | †             |  |

See notes at end of table.

**Table K-10. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for California private not-for-profit 4-year institutions: 2004—Continued**

| Variable                                                               | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |  |
|------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                                                        | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| <b>Total male undergraduate enrollment<sup>2</sup></b>                 |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=66.5                                                                 | 10                            | #                          | 36.66                    | 44.50                        | -1.68          | -0.04         | 38.56                            | 36.23                           | 2.33           | 0.06          |  |
| >66.5, <=751                                                           | 10                            | #                          | 43.85                    | 16.78                        | 5.80           | 0.15          | 37.30                            | 42.28                           | -4.98          | -0.13         |  |
| >751, <=1,618.5                                                        | 10                            | #                          | 11.37                    | 12.15                        | -0.17          | -0.01         | 11.56                            | 12.32                           | -0.76          | -0.07         |  |
| >1,618.5                                                               | 10                            | #                          | 8.12                     | 6.36                         | 0.38           | 0.05          | 7.69                             | 9.17                            | -1.47          | -0.19         |  |
| Unavailable or unknown                                                 | #                             | #                          | #                        | 20.21                        | -4.33          | -1.00         | 4.89                             | †                               | †              | †             |  |
| <b>Total female undergraduate enrollment<sup>2</sup></b>               |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=110.5                                                                | 10                            | #                          | 44.55                    | 31.17                        | 2.87           | 0.07          | 41.31                            | 43.93                           | -2.61          | -0.06         |  |
| >110.5, <=1,155                                                        | 10                            | #                          | 35.57                    | 30.11                        | 1.17           | 0.03          | 34.25                            | 34.72                           | -0.47          | -0.01         |  |
| >1,155, <=2,423.5                                                      | 10                            | #                          | 10.64                    | 15.33                        | -1.01          | -0.09         | 11.77                            | 10.86                           | 0.92           | 0.08          |  |
| >2,423.5                                                               | 10                            | #                          | 9.24                     | 3.18                         | 1.30           | 0.16          | 7.77                             | 10.50                           | -2.72          | -0.35         |  |
| Unavailable or unknown                                                 | #                             | #                          | #                        | 20.21                        | -4.33          | -1.00         | 4.89                             | †                               | †              | †             |  |
| <b>Total graduate/first-professional enrollment<sup>3</sup></b>        |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=1,668                                                                | 10                            | 10                         | 74.31                    | 87.08                        | -2.73          | -0.04         | 77.40                            | 75.07                           | 2.33           | 0.03          |  |
| >1,668                                                                 | 20                            | #                          | 15.83                    | 12.92                        | 0.62           | 0.04          | 15.12                            | 16.75                           | -1.63          | -0.11         |  |
| Total enrollment = 0                                                   | #                             | #                          | 9.86                     | #                            | #              | #             | 7.47                             | 8.18                            | -0.71          | -0.09         |  |
| <b>Total male graduate/first-professional enrollment<sup>3</sup></b>   |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=636                                                                  | 20                            | 10                         | 75.43                    | 83.90                        | -1.81          | -0.02         | 77.48                            | 76.40                           | 1.08           | 0.01          |  |
| >636                                                                   | 10                            | 10                         | 14.71                    | 16.10                        | -0.30          | -0.02         | 15.05                            | 15.42                           | -0.38          | -0.02         |  |
| Total enrollment = 0                                                   | #                             | #                          | 9.86                     | #                            | #              | #             | 7.47                             | 8.18                            | -0.71          | -0.09         |  |
| <b>Total female graduate/first-professional enrollment<sup>3</sup></b> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=1,073                                                                | 10                            | 10                         | 70.31                    | 90.26                        | -4.27          | -0.06         | 75.14                            | 71.75                           | 3.39           | 0.05          |  |
| >1,073                                                                 | 20                            | #                          | 19.82                    | 9.74                         | 2.16           | 0.12          | 17.38                            | 20.07                           | -2.68          | -0.15         |  |
| Total enrollment = 0                                                   | #                             | #                          | 9.86                     | #                            | #              | #             | 7.47                             | 8.18                            | -0.71          | -0.09         |  |

† Not applicable.

# Rounds to zero.

<sup>1</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>2</sup> Undergraduate enrollment categories were defined by quartiles.

<sup>3</sup> Graduate/first-professional enrollment categories were defined by the median.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table K-11. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for Illinois private not-for-profit 4-year institutions: 2004**

| Variable                                                                | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |  |
|-------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                                                         | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Carnegie classification code                                            |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| Doctorate-granting/research universities—extensive                      | #                             | #                          | 2.21                     | 7.74                         | -1.31          | -0.37         | 2.90                             | 2.75                            | 0.15           | 0.05          |  |
| Doctorate-granting/research universities—intensive                      | #                             | #                          | 3.31                     | #                            | #              | #             | 2.90                             | 3.37                            | -0.47          | -0.16         |  |
| Master's colleges and universities I                                    | 10                            | #                          | 9.98                     | 21.57                        | -2.75          | -0.22         | 11.42                            | 9.99                            | 1.43           | 0.13          |  |
| Master's (comprehensive) colleges and universities II                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Baccalaureate colleges—liberal arts                                     | #                             | #                          | 5.70                     | #                            | #              | #             | 4.99                             | 5.49                            | -0.50          | -0.10         |  |
| Baccalaureate colleges—general                                          | #                             | #                          | 6.46                     | 42.24                        | -8.48          | -0.57         | 10.93                            | 5.91                            | 5.02           | 0.46          |  |
| Baccalaureate/associate's colleges                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Associate's colleges                                                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Theological seminaries and other specialized faith-related institutions | #                             | #                          | 63.20                    | 11.15                        | 12.33          | 0.24          | 56.70                            | 61.29                           | -4.59          | -0.08         |  |
| Medical schools and medical centers                                     | #                             | #                          | 2.21                     | 7.74                         | -1.31          | -0.37         | 2.90                             | 2.55                            | 0.35           | 0.12          |  |
| Other separate health profession schools                                | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Schools of engineering and technology                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Schools of business and management                                      | #                             | #                          | 6.93                     | #                            | #              | #             | 6.07                             | 8.65                            | -2.59          | -0.43         |  |
| Schools of art, music, and design                                       | #                             | #                          | #                        | 9.55                         | -2.26          | -1.00         | 1.19                             | †                               | †              | †             |  |
| Schools of law                                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Teachers colleges                                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Other specialized institutions                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Tribal colleges and universities                                        | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                                                  | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Degree of urbanization                                                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| Large city                                                              | 10                            | #                          | 9.41                     | 17.29                        | -1.87          | -0.17         | 10.39                            | 10.55                           | -0.16          | -0.02         |  |
| Mid-size city                                                           | 10                            | #                          | 13.96                    | 7.74                         | 1.47           | 0.12          | 13.19                            | 13.52                           | -0.33          | -0.03         |  |

See notes at end of table.

**Table K-11. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for Illinois private not-for-profit 4-year institutions: 2004—Continued**

| Variable                                  | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |
|-------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                           | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Urban fringe of large city                | 10                            | #                          | 70.66                    | 32.72                        | 8.99           | 0.15          | 65.92                            | 65.03                           | 0.89           | 0.01          |
| Urban fringe of mid-size city             | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Large town                                | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Small town                                | #                             | #                          | 5.98                     | 42.24                        | -8.59          | -0.59         | 10.50                            | 10.90                           | -0.40          | -0.04         |
| Rural                                     | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Not assigned                              | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Historically Black college or university  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| Yes                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| No                                        | 20                            | 10                         | 100.00                   | 100.00                       | # <sup>1</sup> | #             | 100.00                           | 100.00                          | # <sup>1</sup> | #             |
| Percent receiving federal grant aid       |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=25                                      | 10                            | #                          | 11.14                    | 17.29                        | -1.46          | -0.12         | 11.91                            | 11.27                           | 0.64           | 0.05          |
| >25, <=50                                 | 10                            | #                          | 21.39                    | 32.72                        | -2.68          | -0.11         | 22.81                            | 26.13                           | -3.33          | -0.15         |
| >50, <=75                                 | #                             | #                          | 59.75                    | 42.24                        | 4.15           | 0.07          | 57.56                            | 53.29                           | 4.27           | 0.07          |
| >75                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                    | #                             | #                          | 7.72                     | 7.74                         | -0.01          | #             | 7.72                             | 9.30                            | -1.58          | -0.20         |
| Percent receiving state/local grant aid   |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=25                                      | 10                            | #                          | 64.92                    | 17.29                        | 11.28          | 0.21          | 58.98                            | 58.35                           | 0.63           | 0.01          |
| >25, <=50                                 | 10                            | #                          | 18.16                    | 32.72                        | -3.45          | -0.16         | 19.97                            | 23.26                           | -3.29          | -0.16         |
| >50, <=75                                 | #                             | #                          | 7.78                     | 42.24                        | -8.16          | -0.51         | 12.08                            | 7.19                            | 4.90           | 0.41          |
| >75                                       | #                             | #                          | 1.42                     | #                            | #              | #             | 1.25                             | 1.90                            | -0.65          | -0.52         |
| Unavailable or unknown                    | #                             | #                          | 7.72                     | 7.74                         | -0.01          | #             | 7.72                             | 9.30                            | -1.58          | -0.20         |
| Percent receiving institutional grant aid |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=25                                      | #                             | #                          | 58.33                    | #                            | #              | #             | 51.05                            | 51.40                           | -0.35          | -0.01         |
| >25, <=50                                 | #                             | #                          | 9.84                     | 7.74                         | 0.50           | 0.05          | 9.57                             | 14.57                           | -5.00          | -0.52         |
| >50, <=75                                 | 10                            | #                          | 7.23                     | 17.29                        | -2.38          | -0.25         | 8.49                             | 8.38                            | 0.10           | 0.01          |
| >75                                       | 10                            | #                          | 16.89                    | 67.22                        | -11.92         | -0.41         | 23.17                            | 16.35                           | 6.82           | 0.29          |
| Unavailable or unknown                    | #                             | #                          | 7.72                     | 7.74                         | -0.01          | #             | 7.72                             | 9.30                            | -1.58          | -0.20         |

See notes at end of table.

K-49

**Table K-11. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for Illinois private not-for-profit 4-year institutions: 2004—Continued**

| Variable                                    | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |  |
|---------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                             | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Percent receiving student loan aid          |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                        | #                             | #                          | 60.30                    | #                            | #              | #             | 52.77                            | 53.27                           | -0.50          | -0.01         |  |
| >25, <=50                                   | 10                            | #                          | 9.91                     | 15.49                        | -1.32          | -0.12         | 10.60                            | 10.30                           | 0.30           | 0.03          |  |
| >50, <=75                                   | 10                            | #                          | 20.66                    | 34.52                        | -3.29          | -0.14         | 22.39                            | 25.22                           | -2.84          | -0.13         |  |
| >75                                         | #                             | #                          | 1.42                     | 42.24                        | -9.67          | -0.87         | 6.52                             | 1.90                            | 4.62           | 0.71          |  |
| Unavailable or unknown                      | #                             | #                          | 7.72                     | 7.74                         | -0.01          | #             | 7.72                             | 9.30                            | -1.58          | -0.20         |  |
| Percent enrolled: Black, non-Hispanic       |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                        | 20                            | 10                         | 98.58                    | 100.00                       | -0.34          | #             | 98.75                            | 98.10                           | 0.65           | 0.01          |  |
| >25, <=50                                   | #                             | #                          | 1.42                     | #                            | #              | #             | 1.25                             | 1.90                            | -0.65          | -0.52         |  |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Percent enrolled: Asian or Pacific Islander |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                        | 20                            | 10                         | 41.67                    | 100.00                       | -13.82         | -0.25         | 48.95                            | 48.37                           | 0.58           | 0.01          |  |
| >25, <=50                                   | #                             | #                          | 58.33                    | #                            | #              | #             | 51.05                            | 51.63                           | -0.58          | -0.01         |  |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Percent enrolled: Hispanic                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                        | #                             | #                          | 100.00                   | 100.00                       | #              | #             | 100.00                           | 100.00                          | #              | #             |  |
| >25, <=50                                   | 20                            | 10                         | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Total undergraduate enrollment <sup>2</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=1,168                                     | 10                            | #                          | 70.91                    | 61.13                        | 2.32           | 0.03          | 69.69                            | 70.59                           | -0.90          | -0.01         |  |
| >1,168, <=2,411                             | 10                            | #                          | 13.88                    | 9.55                         | 1.03           | 0.08          | 13.34                            | 13.25                           | 0.09           | 0.01          |  |
| >2,411, <=5,287                             | 10                            | #                          | 9.37                     | 13.83                        | -1.06          | -0.10         | 9.92                             | 9.52                            | 0.41           | 0.04          |  |
| >5,287                                      | 10                            | #                          | 5.84                     | 15.49                        | -2.29          | -0.28         | 7.04                             | 6.64                            | 0.40           | 0.06          |  |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |

See notes at end of table.



**Table K-11. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for Illinois private not-for-profit 4-year institutions: 2004—Continued**

| Variable                                                         | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |  |
|------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                                                  | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Total male undergraduate enrollment <sup>2</sup>                 |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=496                                                            | 10                            | #                          | 70.91                    | 61.13                        | 2.32           | 0.03          | 69.69                            | 70.59                           | -0.90          | -0.01         |  |
| >496, <=1,017                                                    | 10                            | #                          | 14.13                    | 9.55                         | 1.09           | 0.08          | 13.56                            | 13.46                           | 0.10           | 0.01          |  |
| >1,017, <=1,928                                                  | 10                            | #                          | 8.01                     | 21.57                        | -3.21          | -0.29         | 9.70                             | 7.80                            | 1.90           | 0.20          |  |
| >1,928                                                           | 10                            | #                          | 6.94                     | 7.74                         | -0.19          | -0.03         | 7.04                             | 8.15                            | -1.10          | -0.16         |  |
| Unavailable or unknown                                           | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Total female undergraduate enrollment <sup>2</sup>               |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=462                                                            | 10                            | #                          | 72.02                    | 49.99                        | 5.22           | 0.08          | 69.27                            | 71.61                           | -2.34          | -0.03         |  |
| >462, <=1,398                                                    | 10                            | #                          | 14.41                    | 11.15                        | 0.77           | 0.06          | 14.00                            | 13.99                           | 0.01           | #             |  |
| >1,398, <=2,958                                                  | 10                            | #                          | 7.74                     | 23.38                        | -3.71          | -0.32         | 9.69                             | 7.91                            | 1.78           | 0.18          |  |
| >2,958                                                           | 10                            | #                          | 5.84                     | 15.49                        | -2.29          | -0.28         | 7.04                             | 6.49                            | 0.55           | 0.08          |  |
| Unavailable or unknown                                           | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Total graduate/first-professional enrollment <sup>3</sup>        |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=1,441                                                          | 10                            | #                          | 25.08                    | 20.70                        | 1.04           | 0.04          | 24.54                            | 31.68                           | -7.14          | -0.29         |  |
| >1,441                                                           | 10                            | #                          | 9.60                     | 37.06                        | -6.51          | -0.40         | 13.02                            | 10.06                           | 2.96           | 0.23          |  |
| Total enrollment = 0                                             | 10                            | #                          | 65.32                    | 42.24                        | 5.47           | 0.09          | 62.44                            | 58.26                           | 4.18           | 0.07          |  |
| Total male graduate/first-professional enrollment <sup>3</sup>   |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=628                                                            | 10                            | #                          | 25.34                    | 17.29                        | 1.91           | 0.08          | 24.33                            | 31.67                           | -7.34          | -0.30         |  |
| >628                                                             | 10                            | #                          | 9.34                     | 40.46                        | -7.37          | -0.44         | 13.23                            | 10.07                           | 3.16           | 0.24          |  |
| Total enrollment = 0                                             | 10                            | #                          | 65.32                    | 42.24                        | 5.47           | 0.09          | 62.44                            | 58.26                           | 4.18           | 0.07          |  |
| Total female graduate/first-professional enrollment <sup>3</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=890                                                            | 10                            | #                          | 23.98                    | 28.44                        | -1.06          | -0.04         | 24.54                            | 30.37                           | -5.83          | -0.24         |  |
| >890                                                             | 10                            | #                          | 10.70                    | 29.32                        | -4.41          | -0.29         | 13.02                            | 11.37                           | 1.65           | 0.13          |  |
| Total enrollment = 0                                             | 10                            | #                          | 65.32                    | 42.24                        | 5.47           | 0.09          | 62.44                            | 58.26                           | 4.18           | 0.07          |  |

† Not applicable.

# Rounds to zero.

<sup>1</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>2</sup> Undergraduate enrollment categories were defined by quartiles.

<sup>3</sup> Graduate/first-professional enrollment categories were defined by the median.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

K-51

**Table K-12. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for Nebraska public 2-year institutions: 2004**

| Variable                                                                | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |   |
|-------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|---|
|                                                                         | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |   |
| Carnegie classification code                                            |                               |                            |                          |                              |                |               |                                  |                                 |                |               |   |
| Doctorate-granting/research universities—extensive                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Doctorate-granting/research universities—intensive                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Master's colleges and universities I                                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Master's (comprehensive) colleges and universities II                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Baccalaureate colleges—liberal arts                                     | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Baccalaureate colleges—general                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Baccalaureate/associate's colleges                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Associate's colleges                                                    | #                             | #                          | 80.00                    | 50.00                        | 9.89           | 0.14          | 71.43                            | 81.40                           | -9.97          | -0.14         |   |
| Theological seminaries and other specialized faith-related institutions | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Medical schools and medical centers                                     | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Other separate health profession schools                                | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Schools of engineering and technology                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Schools of business and management                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Schools of art, music, and design                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Schools of law                                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Teachers colleges                                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Other specialized institutions                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Tribal colleges and universities                                        | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Unavailable or unknown                                                  | #                             | #                          | 20.00                    | 50.00                        | -9.89          | -0.33         | 28.57                            | 18.60                           | 9.97           | 0.35          |   |

See notes at end of table.

**Table K-12. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for Nebraska public 2-year institutions: 2004—Continued**

| Variable                                  | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |
|-------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                           | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Degree of urbanization                    |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| Large city                                | #                             | #                          | #                        | 50.00                        | -16.49         | -1.00         | 14.29                            | †                               | †              | †             |
| Mid-size city                             | #                             | #                          | 20.00                    | #                            | #              | #             | 14.29                            | 14.11                           | 0.18           | 0.01          |
| Urban fringe of large city                | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Urban fringe of mid-size city             | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Large town                                | #                             | #                          | 20.00                    | #                            | #              | #             | 14.29                            | 15.11                           | -0.83          | -0.06         |
| Small town                                | #                             | #                          | 60.00                    | #                            | #              | #             | 42.86                            | 70.78                           | -27.92         | -0.65         |
| Rural                                     | #                             | #                          | #                        | 50.00                        | -16.49         | -1.00         | 14.29                            | †                               | †              | †             |
| Not assigned                              | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Historically Black college or university  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| Yes                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| No                                        | 10                            | #                          | 100.00                   | 100.00                       | # <sup>1</sup> | #             | 100.00                           | 100.00                          | # <sup>1</sup> | #             |
| Percent receiving federal grant aid       |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=25                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| >25, <=50                                 | #                             | #                          | 80.00                    | 50.00                        | 9.89           | 0.14          | 71.43                            | 68.06                           | 3.37           | 0.05          |
| >50, <=75                                 | #                             | #                          | 20.00                    | 50.00                        | -9.89          | -0.33         | 28.57                            | 31.94                           | -3.37          | -0.12         |
| >75                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Percent receiving state/local grant aid   |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=25                                      | #                             | #                          | 80.00                    | 50.00                        | 9.89           | 0.14          | 71.43                            | 84.89                           | -13.46         | -0.19         |
| >25, <=50                                 | #                             | #                          | 20.00                    | 50.00                        | -9.89          | -0.33         | 28.57                            | 15.11                           | 13.46          | 0.47          |
| >50, <=75                                 | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| >75                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Percent receiving institutional grant aid |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=25                                      | #                             | #                          | 40.00                    | #                            | #              | #             | 28.57                            | 35.34                           | -6.77          | -0.24         |
| >25, <=50                                 | #                             | #                          | 40.00                    | 50.00                        | -3.30          | -0.08         | 42.86                            | 32.71                           | 10.15          | 0.24          |
| >50, <=75                                 | #                             | #                          | 20.00                    | 50.00                        | -9.89          | -0.33         | 28.57                            | 31.94                           | -3.37          | -0.12         |
| >75                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |

See notes at end of table.

K-53

**Table K-12. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for Nebraska public 2-year institutions: 2004—Continued**

| Variable                                    | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |
|---------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                             | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Percent receiving student loan aid          |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=25                                        | #                             | #                          | 40.00                    | 50.00                        | -3.30          | -0.08         | 42.86                            | 46.05                           | -3.20          | -0.07         |
| >25, <=50                                   | #                             | #                          | 60.00                    | #                            | # <sup>1</sup> | #             | 42.86                            | 53.95                           | -11.09         | -0.26         |
| >50, <=75                                   | #                             | #                          | #                        | 50.00                        | -16.49         | -1.00         | 14.29                            | †                               | †              | †             |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Percent enrolled: Black, non-Hispanic       |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=25                                        | 10                            | #                          | 100.00                   | 100.00                       | #              | #             | 100.00                           | 100.00                          | #              | #             |
| >25, <=50                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Percent enrolled: Asian or Pacific Islander |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=25                                        | 10                            | #                          | 100.00                   | 100.00                       | #              | #             | 100.00                           | 100.00                          | #              | #             |
| >25, <=50                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Percent enrolled: Hispanic                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=25                                        | 10                            | #                          | 100.00                   | 100.00                       | #              | #             | 100.00                           | 100.00                          | #              | #             |
| >25, <=50                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Total undergraduate enrollment <sup>2</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=3,964                                     | #                             | #                          | 20.00                    | 50.00                        | -9.89          | -0.33         | 28.57                            | 31.94                           | -3.37          | -0.12         |
| >3,964, <=7,267                             | #                             | #                          | 40.00                    | #                            | #              | #             | 28.57                            | 38.84                           | -10.26         | -0.36         |
| >7,267, <=15,568                            | #                             | #                          | 40.00                    | #                            | #              | #             | 28.57                            | 29.22                           | -0.65          | -0.02         |
| >15,568                                     | #                             | #                          | #                        | 50.00                        | -16.49         | -1.00         | 14.29                            | †                               | †              | †             |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |

See notes at end of table.

**Table K-12. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for Nebraska public 2-year institutions: 2004—Continued**

| Variable                                           | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |
|----------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                                    | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Total male undergraduate enrollment <sup>2</sup>   |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=1,500                                            | #                             | #                          | 20.00                    | 50.00                        | -9.89          | -0.33         | 28.57                            | 31.94                           | -3.37          | -0.12         |
| >1,500, <=3,393                                    | #                             | #                          | 40.00                    | #                            | #              | #             | 28.57                            | 38.84                           | -10.26         | -0.36         |
| >3,393, <=7,064                                    | #                             | #                          | 40.00                    | #                            | #              | #             | 28.57                            | 29.22                           | -0.65          | -0.02         |
| >7,064                                             | #                             | #                          | #                        | 50.00                        | -16.49         | -1.00         | 14.29                            | †                               | †              | †             |
| Unavailable or unknown                             | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Total female undergraduate enrollment <sup>2</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=2,464                                            | #                             | #                          | 20.00                    | 50.00                        | -9.89          | -0.33         | 28.57                            | 31.94                           | -3.37          | -0.12         |
| >2,464, <=3,874                                    | #                             | #                          | 40.00                    | #                            | #              | #             | 28.57                            | 38.84                           | -10.26         | -0.36         |
| >3,874, <=8,504                                    | #                             | #                          | 40.00                    | #                            | #              | #             | 28.57                            | 29.22                           | -0.65          | -0.02         |
| >8,504                                             | #                             | #                          | #                        | 50.00                        | -16.49         | -1.00         | 14.29                            | †                               | †              | †             |
| Unavailable or unknown                             | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |

† Not applicable.

# Rounds to zero.

<sup>1</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>2</sup> Undergraduate enrollment categories were defined by quartiles.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table K-13. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for Nebraska private not-for-profit 4-year institutions: 2004**

| Variable                                                                | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |   |
|-------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|---|
|                                                                         | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |   |
| <b>Carnegie classification code</b>                                     |                               |                            |                          |                              |                |               |                                  |                                 |                |               |   |
| Doctorate-granting/research universities—extensive                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Doctorate-granting/research universities—intensive                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| Master's colleges and universities I                                    | #                             | #                          | 7.69                     | 50.00                        | -13.95         | -0.64         | 13.33                            | 7.99                            | 5.35           | 0.40          |   |
| Master's (comprehensive) colleges and universities II                   | #                             | #                          | 15.38                    | #                            | #              | #             | 13.33                            | 15.11                           | -1.78          | -0.13         |   |
| Baccalaureate colleges—liberal arts                                     | #                             | #                          | 15.38                    | #                            | #              | #             | 13.33                            | 18.39                           | -5.06          | -0.38         |   |
| Baccalaureate colleges—general                                          | 10                            | #                          | 38.46                    | 50.00                        | -3.81          | -0.09         | 40.00                            | 38.22                           | 1.78           | 0.04          |   |
| Baccalaureate/associate's colleges                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| Associate's colleges                                                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| Theological seminaries and other specialized faith-related institutions | #                             | #                          | 7.69                     | #                            | #              | #             | 6.67                             | 6.30                            | 0.36           | 0.05          |   |
| Medical schools and medical centers                                     | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| Other separate health profession schools                                | #                             | #                          | 15.38                    | #                            | #              | #             | 13.33                            | 14.00                           | -0.66          | -0.05         |   |
| Schools of engineering and technology                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| Schools of business and management                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| Schools of art, music, and design                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| Schools of law                                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| Teachers colleges                                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| Other specialized institutions                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| Tribal colleges and universities                                        | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| Unavailable or unknown                                                  | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| <b>Degree of urbanization</b>                                           |                               |                            |                          |                              |                |               |                                  |                                 |                |               |   |
| Large city                                                              | #                             | #                          | 30.77                    | 50.00                        | -6.34          | -0.17         | 33.33                            | 30.26                           | 3.08           | 0.09          |   |
| Mid-size city                                                           | #                             | #                          | 7.69                     | 50.00                        | -13.95         | -0.64         | 13.33                            | 7.93                            | 5.40           | 0.41          |   |

See notes at end of table.

**Table K-13. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for Nebraska private not-for-profit 4-year institutions: 2004—Continued**

| Variable                                  | Before nonresponse adjustment |                            |                          |                              |                     |               | After nonresponse adjustment     |                                 |                |               |
|-------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|---------------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                           | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias      | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Urban fringe of large city                | #                             | #                          | 15.38                    | #                            | #                   | #             | 13.33                            | 16.24                           | -2.91          | -0.22         |
| Urban fringe of mid-size city             | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| Large town                                | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| Small town                                | 10                            | #                          | 46.15                    | #                            | # <sup>1</sup>      | #             | 40.00                            | 45.57                           | -5.57          | -0.14         |
| Rural                                     | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| Not assigned                              | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                    | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| Historically Black college or university  |                               |                            |                          |                              |                     |               |                                  |                                 |                |               |
| Yes                                       | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| No                                        | 10                            | #                          | 100.00                   | 100.00                       | # <sup>1</sup>      | #             | 100.00                           | 100.00                          | # <sup>1</sup> | #             |
| Percent receiving federal grant aid       |                               |                            |                          |                              |                     |               |                                  |                                 |                |               |
| <=25                                      | #                             | #                          | 23.08                    | #                            | #                   | #             | 20.00                            | 21.98                           | -1.98          | -0.10         |
| >25, <=50                                 | 10                            | #                          | 69.23                    | 100.00                       | -10.15              | -0.13         | 73.33                            | 72.14                           | 1.19           | 0.02          |
| >50, <=75                                 | #                             | #                          | 7.69                     | #                            | #                   | #             | 6.67                             | 5.88                            | 0.79           | 0.12          |
| >75                                       | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                    | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| Percent receiving state/local grant aid   |                               |                            |                          |                              |                     |               |                                  |                                 |                |               |
| <=25                                      | 10                            | #                          | 53.85                    | 100.00                       | -15.22 <sup>1</sup> | -0.22         | 60.00                            | 53.50                           | 6.50           | 0.11          |
| >25, <=50                                 | 10                            | #                          | 46.15                    | #                            | # <sup>1</sup>      | #             | 40.00                            | 46.50                           | -6.50          | -0.16         |
| >50, <=75                                 | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| >75                                       | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                    | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| Percent receiving institutional grant aid |                               |                            |                          |                              |                     |               |                                  |                                 |                |               |
| <=25                                      | #                             | #                          | 15.38                    | #                            | #                   | #             | 13.33                            | 14.15                           | -0.82          | -0.06         |
| >25, <=50                                 | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| >50, <=75                                 | #                             | #                          | 7.69                     | 50.00                        | -13.95              | -0.64         | 13.33                            | 10.38                           | 2.95           | 0.22          |
| >75                                       | 10                            | #                          | 76.92                    | 50.00                        | 8.88                | 0.13          | 73.33                            | 75.47                           | -2.13          | -0.03         |
| Unavailable or unknown                    | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |

See notes at end of table.

K-57

**Table K-13. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for Nebraska private not-for-profit 4-year institutions: 2004—Continued**

| Variable                                    | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |  |
|---------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                             | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Percent receiving student loan aid          |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                        | #                             | #                          | 15.38                    | #                            | #              | #             | 13.33                            | 14.15                           | -0.82          | -0.06         |  |
| >25, <=50                                   | #                             | #                          | #                        | 100.00                       | -32.98         | -1.00         | 13.33                            | †                               | †              | †             |  |
| >50, <=75                                   | 10                            | #                          | 38.46                    | #                            | # <sup>1</sup> | #             | 33.33                            | 40.06                           | -6.72          | -0.20         |  |
| >75                                         | 10                            | #                          | 46.15                    | #                            | # <sup>1</sup> | #             | 40.00                            | 45.79                           | -5.79          | -0.14         |  |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Percent enrolled: Black, non-Hispanic       |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                        | 10                            | #                          | 100.00                   | 100.00                       | #              | #             | 100.00                           | 100.00                          | #              | #             |  |
| >25, <=50                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Percent enrolled: Asian or Pacific Islander |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                        | 10                            | #                          | 100.00                   | 100.00                       | #              | #             | 100.00                           | 100.00                          | #              | #             |  |
| >25, <=50                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Percent enrolled: Hispanic                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=25                                        | 10                            | #                          | 100.00                   | 100.00                       | #              | #             | 100.00                           | 100.00                          | #              | #             |  |
| >25, <=50                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Total undergraduate enrollment <sup>2</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| <=528                                       | #                             | #                          | 30.77                    | #                            | #              | #             | 26.67                            | 27.09                           | -0.43          | -0.02         |  |
| >528, <=1,040                               | #                             | #                          | 30.77                    | #                            | #              | #             | 26.67                            | 31.42                           | -4.75          | -0.18         |  |
| >1,040, <=2,199                             | #                             | #                          | 23.08                    | 50.00                        | -8.88          | -0.28         | 26.67                            | 26.93                           | -0.26          | -0.01         |  |
| >2,199                                      | #                             | #                          | 15.38                    | 50.00                        | -11.42         | -0.43         | 20.00                            | 14.56                           | 5.44           | 0.27          |  |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |

See notes at end of table.



**Table K-13. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for Nebraska private not-for-profit 4-year institutions: 2004—Continued**

| Variable                                                         | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |
|------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                                                  | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Total male undergraduate enrollment <sup>2</sup>                 |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=93                                                             | #                             | #                          | 30.77                    | #                            | #              | #             | 26.67                            | 26.18                           | 0.49           | 0.02          |
| >93, <=408                                                       | #                             | #                          | 30.77                    | #                            | #              | #             | 26.67                            | 32.34                           | -5.67          | -0.21         |
| >408, <=914                                                      | #                             | #                          | 23.08                    | 50.00                        | -8.88          | -0.28         | 26.67                            | 26.93                           | -0.26          | -0.01         |
| >914                                                             | #                             | #                          | 15.38                    | 50.00                        | -11.42         | -0.43         | 20.00                            | 14.56                           | 5.44           | 0.27          |
| Unavailable or unknown                                           | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Total female undergraduate enrollment <sup>2</sup>               |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=333                                                            | #                             | #                          | 30.77                    | #                            | #              | #             | 26.67                            | 31.74                           | -5.07          | -0.19         |
| >333, <=567                                                      | #                             | #                          | 30.77                    | #                            | #              | #             | 26.67                            | 31.36                           | -4.69          | -0.18         |
| >567, <=1,267                                                    | #                             | #                          | 23.08                    | 50.00                        | -8.88          | -0.28         | 26.67                            | 20.99                           | 5.68           | 0.21          |
| >1,267                                                           | #                             | #                          | 15.38                    | 50.00                        | -11.42         | -0.43         | 20.00                            | 15.92                           | 4.08           | 0.20          |
| Unavailable or unknown                                           | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Total graduate/first-professional enrollment <sup>3</sup>        |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=164.5                                                          | 10                            | #                          | 38.46                    | #                            | # <sup>1</sup> | #             | 33.33                            | 40.72                           | -7.38          | -0.22         |
| >164.5                                                           | #                             | #                          | 30.77                    | 50.00                        | -6.34          | -0.17         | 33.33                            | 31.02                           | 2.31           | 0.07          |
| Total enrollment = 0                                             | #                             | #                          | 30.77                    | 50.00                        | -6.34          | -0.17         | 33.33                            | 28.26                           | 5.08           | 0.15          |
| Total male graduate/first-professional enrollment <sup>3</sup>   |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=58.5                                                           | #                             | #                          | 30.77                    | #                            | # <sup>1</sup> | #             | 26.67                            | 34.84                           | -8.17          | -0.31         |
| >58.5                                                            | #                             | #                          | 30.77                    | 50.00                        | -6.34          | -0.17         | 33.33                            | 31.02                           | 2.31           | 0.07          |
| Total enrollment = 0                                             | 10                            | #                          | 38.46                    | 50.00                        | -3.81          | -0.09         | 40.00                            | 34.14                           | 5.86           | 0.15          |
| Total female graduate/first-professional enrollment <sup>3</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=127.5                                                          | 10                            | #                          | 38.46                    | #                            | # <sup>1</sup> | #             | 33.33                            | 40.72                           | -7.38          | -0.22         |
| >127.5                                                           | #                             | #                          | 30.77                    | 50.00                        | -6.34          | -0.17         | 33.33                            | 31.02                           | 2.31           | 0.07          |
| Total enrollment = 0                                             | #                             | #                          | 30.77                    | 50.00                        | -6.34          | -0.17         | 33.33                            | 28.26                           | 5.08           | 0.15          |

† Not applicable.

# Rounds to zero.

<sup>1</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>2</sup> Undergraduate enrollment categories were defined by quartiles.

<sup>3</sup> Graduate/first-professional enrollment categories were defined by the median.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table K-14. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for New York private not-for-profit 4-year institutions: 2004**

| Variable                                                                | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |  |
|-------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                                                         | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Carnegie classification code                                            |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| Doctorate-granting/research universities—extensive                      | 10                            | #                          | 11.35                    | 4.76                         | 1.22           | 0.12          | 9.83                             | 11.75                           | -1.91          | -0.19         |  |
| Doctorate-granting/research universities—intensive                      | 10                            | #                          | 9.93                     | 4.76                         | 0.96           | 0.11          | 8.74                             | 10.67                           | -1.93          | -0.22         |  |
| Master's colleges and universities I                                    | 10                            | #                          | 38.63                    | 6.56                         | 5.94           | 0.18          | 31.26                            | 37.72                           | -6.46          | -0.21         |  |
| Master's (comprehensive) colleges and universities II                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Baccalaureate colleges—liberal arts                                     | #                             | #                          | 5.49                     | 65.16                        | -11.06         | -0.67         | 19.19                            | 4.76                            | 14.43          | 0.75          |  |
| Baccalaureate colleges—general                                          | #                             | #                          | 15.01                    | #                            | #              | #             | 11.56                            | 15.91                           | -4.35          | -0.38         |  |
| Baccalaureate/associate's colleges                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Associate's colleges                                                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Theological seminaries and other specialized faith-related institutions | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Medical schools and medical centers                                     | #                             | #                          | 2.84                     | 4.76                         | -0.36          | -0.11         | 3.28                             | 2.99                            | 0.29           | 0.09          |  |
| Other separate health profession schools                                | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Schools of engineering and technology                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Schools of business and management                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Schools of art, music, and design                                       | #                             | #                          | #                        | 14.00                        | -2.59          | -1.00         | 3.21                             | †                               | †              | †             |  |
| Schools of law                                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Teachers colleges                                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Other specialized institutions                                          | #                             | #                          | 13.80                    | #                            | #              | #             | 10.63                            | 13.04                           | -2.41          | -0.23         |  |
| Tribal colleges and universities                                        | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                                                  | #                             | #                          | 2.96                     | #                            | #              | #             | 2.28                             | 3.17                            | -0.88          | -0.39         |  |
| Degree of urbanization                                                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |  |
| Large city                                                              | 10                            | #                          | 40.15                    | 23.52                        | 3.08           | 0.08          | 36.33                            | 40.00                           | -3.68          | -0.10         |  |
| Mid-size city                                                           | 10                            | #                          | 24.22                    | #                            | #              | #             | 18.66                            | 23.71                           | -5.06          | -0.27         |  |

See notes at end of table.

**Table K-14. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for New York private not-for-profit 4-year institutions: 2004—Continued**

| Variable                                  | Before nonresponse adjustment |                            |                          |                              |                     |               | After nonresponse adjustment     |                                 |                |               |  |  |
|-------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|---------------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|--|
|                                           | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias      | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |  |
| Urban fringe of large city                | 10                            | #                          | 27.31                    | 11.32                        | 2.96                | 0.12          | 23.64                            | 28.62                           | -4.99          | -0.21         |  |  |
| Urban fringe of mid-size city             | #                             | #                          | 5.49                     | 28.20                        | -4.21               | -0.43         | 10.70                            | 4.76                            | 5.94           | 0.56          |  |  |
| Large town                                | #                             | #                          | 1.42                     | #                            | #                   | #             | 1.09                             | 1.50                            | -0.41          | -0.37         |  |  |
| Small town                                | #                             | #                          | 1.42                     | #                            | #                   | #             | 1.09                             | 1.39                            | -0.30          | -0.28         |  |  |
| Rural                                     | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |  |  |
| Not assigned                              | #                             | #                          | #                        | 36.96                        | -6.85               | -1.00         | 8.49                             | †                               | †              | †             |  |  |
| Unavailable or unknown                    | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |  |  |
| Historically Black college or university  |                               |                            |                          |                              |                     |               |                                  |                                 |                |               |  |  |
| Yes                                       | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |  |  |
| No                                        | 30                            | 10                         | 100.00                   | 100.00                       | # <sup>1</sup>      | #             | 100.00                           | 100.00                          | # <sup>1</sup> | #             |  |  |
| Percent receiving federal grant aid       |                               |                            |                          |                              |                     |               |                                  |                                 |                |               |  |  |
| <=25                                      | 10                            | #                          | 24.82                    | 69.92                        | -8.36               | -0.25         | 35.18                            | 25.02                           | 10.16          | 0.29          |  |  |
| >25, <=50                                 | 10                            | #                          | 34.53                    | 25.32                        | 1.71                | 0.05          | 32.41                            | 35.24                           | -2.83          | -0.09         |  |  |
| >50, <=75                                 | #                             | #                          | 23.45                    | #                            | #                   | #             | 18.06                            | 21.85                           | -3.79          | -0.21         |  |  |
| >75                                       | #                             | #                          | 4.31                     | #                            | #                   | #             | 3.32                             | 3.91                            | -0.59          | -0.18         |  |  |
| Unavailable or unknown                    | 10                            | #                          | 12.89                    | 4.76                         | 1.51                | 0.13          | 11.02                            | 13.98                           | -2.96          | -0.27         |  |  |
| Percent receiving state/local grant aid   |                               |                            |                          |                              |                     |               |                                  |                                 |                |               |  |  |
| <=25                                      | #                             | #                          | 9.74                     | 60.48                        | -9.40               | -0.49         | 21.39                            | 9.34                            | 12.05          | 0.56          |  |  |
| >25, <=50                                 | 10                            | #                          | 11.35                    | 28.20                        | -3.12               | -0.22         | 15.22                            | 11.99                           | 3.22           | 0.21          |  |  |
| >50, <=75                                 | 10                            | #                          | 50.34                    | 6.56                         | 8.11 <sup>1</sup>   | 0.19          | 40.29                            | 48.71                           | -8.42          | -0.21         |  |  |
| >75                                       | #                             | #                          | 15.68                    | #                            | #                   | #             | 12.08                            | 15.97                           | -3.89          | -0.32         |  |  |
| Unavailable or unknown                    | 10                            | #                          | 12.89                    | 4.76                         | 1.51                | 0.13          | 11.02                            | 13.98                           | -2.96          | -0.27         |  |  |
| Percent receiving institutional grant aid |                               |                            |                          |                              |                     |               |                                  |                                 |                |               |  |  |
| <=25                                      | #                             | #                          | 16.26                    | #                            | #                   | #             | 12.53                            | 15.19                           | -2.66          | -0.21         |  |  |
| >25, <=50                                 | #                             | #                          | 11.07                    | 4.76                         | 1.17                | 0.12          | 9.62                             | 10.09                           | -0.46          | -0.05         |  |  |
| >50, <=75                                 | 10                            | #                          | 15.08                    | 76.48                        | -11.38 <sup>1</sup> | -0.43         | 29.18                            | 16.72                           | 12.46          | 0.43          |  |  |
| >75                                       | 10                            | #                          | 44.69                    | 14.00                        | 5.69                | 0.15          | 37.64                            | 44.02                           | -6.38          | -0.17         |  |  |
| Unavailable or unknown                    | 10                            | #                          | 12.89                    | 4.76                         | 1.51                | 0.13          | 11.02                            | 13.98                           | -2.96          | -0.27         |  |  |

See notes at end of table.

K-61

**Table K-14. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for New York private not-for-profit 4-year institutions: 2004—Continued**

| Variable                                    | Before nonresponse adjustment |                            |                          |                              |                     |               | After nonresponse adjustment     |                                 |                |               |
|---------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|---------------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                             | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias      | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Percent receiving student loan aid          |                               |                            |                          |                              |                     |               |                                  |                                 |                |               |
| <=25                                        | #                             | #                          | 4.31                     | #                            | #                   | #             | 3.32                             | 3.91                            | -0.59          | -0.18         |
| >25, <=50                                   | 10                            | #                          | 21.90                    | 4.76                         | 3.18                | 0.17          | 17.97                            | 21.80                           | -3.84          | -0.21         |
| >50, <=75                                   | 10                            | 10                         | 30.62                    | 90.48                        | -11.09 <sup>1</sup> | -0.27         | 44.37                            | 29.81                           | 14.56          | 0.33          |
| >75                                         | 10                            | #                          | 30.27                    | #                            | #                   | #             | 23.32                            | 30.50                           | -7.18          | -0.31         |
| Unavailable or unknown                      | 10                            | #                          | 12.89                    | 4.76                         | 1.51                | 0.13          | 11.02                            | 13.98                           | -2.96          | -0.27         |
| Percent enrolled: Black, non-Hispanic       |                               |                            |                          |                              |                     |               |                                  |                                 |                |               |
| <=25                                        | 30                            | 10                         | 80.98                    | 100.00                       | -3.52               | -0.04         | 85.35                            | 82.51                           | 2.84           | 0.03          |
| >25, <=50                                   | #                             | #                          | 5.21                     | #                            | #                   | #             | 4.02                             | 4.45                            | -0.43          | -0.11         |
| >50, <=75                                   | #                             | #                          | 13.80                    | #                            | #                   | #             | 10.63                            | 13.04                           | -2.41          | -0.23         |
| >75                                         | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| Percent enrolled: Asian or Pacific Islander |                               |                            |                          |                              |                     |               |                                  |                                 |                |               |
| <=25                                        | 30                            | 10                         | 98.58                    | 100.00                       | -0.26               | #             | 98.91                            | 98.50                           | 0.40           | #             |
| >25, <=50                                   | #                             | #                          | 1.42                     | #                            | #                   | #             | 1.09                             | 1.50                            | -0.40          | -0.37         |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| >75                                         | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| Percent enrolled: Hispanic                  |                               |                            |                          |                              |                     |               |                                  |                                 |                |               |
| <=25                                        | 30                            | 10                         | 97.25                    | 100.00                       | -0.51               | -0.01         | 97.88                            | 97.70                           | 0.18           | #             |
| >25, <=50                                   | #                             | #                          | 2.75                     | #                            | #                   | #             | 2.12                             | 2.30                            | -0.18          | -0.09         |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| >75                                         | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |
| Total undergraduate enrollment <sup>2</sup> |                               |                            |                          |                              |                     |               |                                  |                                 |                |               |
| <=1,806                                     | 10                            | #                          | 40.26                    | 41.72                        | -0.27               | -0.01         | 40.59                            | 38.98                           | 1.61           | 0.04          |
| >1,806, <=3,828.5                           | 10                            | #                          | 29.08                    | 42.20                        | -2.43               | -0.08         | 32.10                            | 29.81                           | 2.29           | 0.07          |
| >3,828.5, <=8,159                           | 10                            | #                          | 16.13                    | 16.08                        | 0.01                | #             | 16.12                            | 17.04                           | -0.93          | -0.06         |
| >8,159                                      | 10                            | #                          | 14.53                    | #                            | # <sup>1</sup>      | #             | 11.20                            | 14.17                           | -2.97          | -0.27         |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †              | †             |

See notes at end of table.

**Table K-14. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for New York private not-for-profit 4-year institutions: 2004—Continued**

| Variable                                                         | Before nonresponse adjustment |                            |                          |                              |                   |               | After nonresponse adjustment     |                                 |                |               |
|------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|-------------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                                                  | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias    | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Total male undergraduate enrollment <sup>2</sup>                 |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |
| <=528                                                            | 10                            | #                          | 48.00                    | 4.76                         | 8.01 <sup>1</sup> | 0.20          | 38.07                            | 47.80                           | -9.73          | -0.26         |
| >528, <=1,548                                                    | 10                            | #                          | 27.08                    | 65.16                        | -7.06             | -0.21         | 35.83                            | 27.28                           | 8.55           | 0.24          |
| >1,548, <=3,863                                                  | 10                            | #                          | 11.71                    | 30.08                        | -3.40             | -0.23         | 15.93                            | 11.73                           | 4.20           | 0.26          |
| >3,863                                                           | 10                            | #                          | 13.20                    | #                            | # <sup>1</sup>    | #             | 10.17                            | 13.19                           | -3.02          | -0.30         |
| Unavailable or unknown                                           | †                             | †                          | †                        | †                            | †                 | †             | †                                | †                               | †              | †             |
| Total female undergraduate enrollment <sup>2</sup>               |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |
| <=918                                                            | 10                            | #                          | 16.95                    | 41.72                        | -4.59             | -0.21         | 22.64                            | 17.00                           | 5.63           | 0.25          |
| >918, <=1,925                                                    | 10                            | #                          | 50.98                    | 28.20                        | 4.22              | 0.09          | 45.75                            | 49.83                           | -4.08          | -0.09         |
| >1,925, <=4,813                                                  | 10                            | #                          | 16.50                    | 30.08                        | -2.52             | -0.13         | 19.62                            | 18.16                           | 1.46           | 0.07          |
| >4,813                                                           | 10                            | #                          | 15.58                    | #                            | # <sup>1</sup>    | #             | 12.00                            | 15.01                           | -3.01          | -0.25         |
| Unavailable or unknown                                           | †                             | †                          | †                        | †                            | †                 | †             | †                                | †                               | †              | †             |
| Total graduate/first-professional enrollment <sup>3</sup>        |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |
| <=3,042                                                          | 20                            | #                          | 73.08                    | 55.72                        | 3.22              | 0.05          | 69.10                            | 72.23                           | -3.13          | -0.05         |
| >3,042                                                           | 20                            | #                          | 26.92                    | 16.08                        | 2.01              | 0.08          | 24.43                            | 27.77                           | -3.34          | -0.14         |
| Total enrollment = 0                                             | #                             | #                          | #                        | 28.20                        | -5.23             | -1.00         | 6.48                             | †                               | †              | †             |
| Total male graduate/first-professional enrollment <sup>3</sup>   |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |
| <=1,249                                                          | 20                            | #                          | 74.12                    | 55.72                        | 3.41              | 0.05          | 69.90                            | 73.62                           | -3.72          | -0.05         |
| >1,249                                                           | 20                            | #                          | 25.88                    | 16.08                        | 1.82              | 0.08          | 23.63                            | 26.38                           | -2.76          | -0.12         |
| Total enrollment = 0                                             | #                             | #                          | #                        | 28.20                        | -5.23             | -1.00         | 6.48                             | †                               | †              | †             |
| Total female graduate/first-professional enrollment <sup>3</sup> |                               |                            |                          |                              |                   |               |                                  |                                 |                |               |
| <=1,394                                                          | 20                            | #                          | 73.08                    | 55.72                        | 3.22              | 0.05          | 69.10                            | 72.23                           | -3.13          | -0.05         |
| >1,394                                                           | 20                            | #                          | 26.92                    | 16.08                        | 2.01              | 0.08          | 24.43                            | 27.77                           | -3.34          | -0.14         |
| Total enrollment = 0                                             | #                             | #                          | #                        | 28.20                        | -5.23             | -1.00         | 6.48                             | †                               | †              | †             |

† Not applicable.

# Rounds to zero.

<sup>1</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>2</sup> Undergraduate enrollment categories were defined by quartiles.

<sup>3</sup> Graduate/first-professional enrollment categories were defined by the median.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table K-15. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for Texas private not-for-profit 4-year institutions: 2004**

| Variable                                                                | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |
|-------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                                                         | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Carnegie classification code                                            |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| Doctorate-granting/research universities—extensive                      | #                             | #                          | 6.19                     | #                            | #              | #             | 4.16                             | 6.38                            | -2.22          | -0.53         |
| Doctorate-granting/research universities—intensive                      | #                             | #                          | 6.19                     | #                            | #              | #             | 4.16                             | 5.20                            | -1.04          | -0.25         |
| Master's colleges and universities I                                    | 10                            | #                          | 32.35                    | 6.36                         | 4.14           | 0.15          | 23.85                            | 32.09                           | -8.24          | -0.35         |
| Master's (comprehensive) colleges and universities II                   | #                             | #                          | 3.09                     | 12.72                        | -1.53          | -0.33         | 6.24                             | 3.81                            | 2.44           | 0.39          |
| Baccalaureate colleges—liberal arts                                     | #                             | #                          | 11.61                    | 6.36                         | 0.84           | 0.08          | 9.89                             | 11.46                           | -1.57          | -0.16         |
| Baccalaureate colleges—general                                          | #                             | #                          | 10.70                    | 15.48                        | -0.76          | -0.07         | 12.26                            | 9.39                            | 2.87           | 0.23          |
| Baccalaureate/associate's colleges                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Associate's colleges                                                    | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Theological seminaries and other specialized faith-related institutions | #                             | #                          | 13.68                    | 59.08                        | -7.23          | -0.35         | 28.54                            | 16.28                           | 12.25          | 0.43          |
| Medical schools and medical centers                                     | #                             | #                          | 3.09                     | #                            | #              | #             | 2.08                             | 2.94                            | -0.86          | -0.41         |
| Other separate health profession schools                                | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Schools of engineering and technology                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Schools of business and management                                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Schools of art, music, and design                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Schools of law                                                          | #                             | #                          | 13.10                    | #                            | #              | #             | 8.82                             | 12.45                           | -3.64          | -0.41         |
| Teachers colleges                                                       | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Other specialized institutions                                          | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Tribal colleges and universities                                        | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Unavailable or unknown                                                  | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Degree of urbanization                                                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| Large city                                                              | 10                            | #                          | 56.30                    | 71.80                        | -2.47          | -0.04         | 61.38                            | 55.58                           | 5.80           | 0.09          |
| Mid-size city                                                           | #                             | #                          | 17.92                    | 12.72                        | 0.83           | 0.05          | 16.22                            | 16.33                           | -0.11          | -0.01         |

See notes at end of table.

**Table K-15. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for Texas private not-for-profit 4-year institutions: 2004—Continued**

| Variable                                  | Before nonresponse adjustment |                            |                          |                              |                    |               | After nonresponse adjustment     |                                 |                |               |  |
|-------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|--------------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                           | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias     | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Urban fringe of large city                | #                             | #                          | 10.57                    | 15.48                        | -0.78              | -0.07         | 12.18                            | 13.82                           | -1.65          | -0.14         |  |
| Urban fringe of mid-size city             | #                             | #                          | 3.09                     | #                            | #                  | #             | 2.08                             | 3.11                            | -1.03          | -0.50         |  |
| Large town                                | #                             | #                          | 3.82                     | #                            | #                  | #             | 2.57                             | 4.13                            | -1.56          | -0.61         |  |
| Small town                                | #                             | #                          | 8.29                     | #                            | #                  | #             | 5.58                             | 7.02                            | -1.45          | -0.26         |  |
| Rural                                     | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †              | †             |  |
| Not assigned                              | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                    | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †              | †             |  |
| Historically Black college or university  |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |  |
| Yes                                       | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †              | †             |  |
| No                                        | 20                            | 10                         | 100.00                   | 100.00                       | # <sup>1</sup>     | #             | 100.00                           | 100.00                          | # <sup>1</sup> | #             |  |
| Percent receiving federal grant aid       |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |  |
| <=25                                      | 10                            | #                          | 27.03                    | 12.72                        | 2.28               | 0.09          | 22.35                            | 25.38                           | -3.03          | -0.14         |  |
| >25, <=50                                 | 10                            | #                          | 39.69                    | 80.92                        | -6.56              | -0.14         | 53.18                            | 43.27                           | 9.91           | 0.19          |  |
| >50, <=75                                 | #                             | #                          | 8.60                     | 6.36                         | 0.36               | 0.04          | 7.86                             | 7.81                            | 0.05           | 0.01          |  |
| >75                                       | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †              | †             |  |
| Unavailable or unknown                    | #                             | #                          | 24.68                    | #                            | #                  | #             | 16.61                            | 23.53                           | -6.93          | -0.42         |  |
| Percent receiving state/local grant aid   |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |  |
| <=25                                      | #                             | #                          | 6.19                     | 12.72                        | -1.04              | -0.14         | 8.32                             | 6.38                            | 1.94           | 0.23          |  |
| >25, <=50                                 | 10                            | #                          | 39.15                    | 80.92                        | -6.65              | -0.15         | 52.81                            | 41.85                           | 10.97          | 0.21          |  |
| >50, <=75                                 | 10                            | #                          | 26.89                    | 6.36                         | 3.27               | 0.14          | 20.17                            | 25.78                           | -5.61          | -0.28         |  |
| >75                                       | #                             | #                          | 3.09                     | #                            | #                  | #             | 2.08                             | 2.46                            | -0.38          | -0.18         |  |
| Unavailable or unknown                    | #                             | #                          | 24.68                    | #                            | #                  | #             | 16.61                            | 23.53                           | -6.93          | -0.42         |  |
| Percent receiving institutional grant aid |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |  |
| <=25                                      | #                             | #                          | #                        | 6.36                         | -1.01              | -1.00         | 2.08                             | †                               | †              | †             |  |
| >25, <=50                                 | #                             | #                          | 3.82                     | #                            | #                  | #             | 2.57                             | 4.13                            | -1.56          | -0.61         |  |
| >50, <=75                                 | 10                            | #                          | 46.71                    | 6.36                         | 6.42 <sup>1</sup>  | 0.16          | 33.51                            | 50.75                           | -17.24         | -0.51         |  |
| >75                                       | 10                            | #                          | 24.79                    | 87.28                        | -9.95 <sup>1</sup> | -0.29         | 45.24                            | 21.59                           | 23.65          | 0.52          |  |
| Unavailable or unknown                    | #                             | #                          | 24.68                    | #                            | #                  | #             | 16.61                            | 23.53                           | -6.93          | -0.42         |  |

See notes at end of table.

K-65

**Table K-15. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for Texas private not-for-profit 4-year institutions: 2004—Continued**

| Variable                                    | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |   |
|---------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|---|
|                                             | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |   |
| Percent receiving student loan aid          |                               |                            |                          |                              |                |               |                                  |                                 |                |               |   |
| <=25                                        | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             | † |
| >25, <=50                                   | 10                            | #                          | 21.65                    | #                            | # <sup>1</sup> | #             | 14.57                            | 20.42                           | -5.85          | -0.40         |   |
| >50, <=75                                   | 10                            | #                          | 40.00                    | 34.56                        | 0.87           | 0.02          | 38.22                            | 39.23                           | -1.01          | -0.03         |   |
| >75                                         | #                             | #                          | 13.67                    | 65.44                        | -8.24          | -0.38         | 30.61                            | 16.82                           | 13.79          | 0.45          |   |
| Unavailable or unknown                      | #                             | #                          | 24.68                    | #                            | #              | #             | 16.61                            | 23.53                           | -6.93          | -0.42         |   |
| Percent enrolled: Black, non-Hispanic       |                               |                            |                          |                              |                |               |                                  |                                 |                |               |   |
| <=25                                        | 20                            | 10                         | 100.00                   | 100.00                       | #              | #             | 100.00                           | 100.00                          | #              | #             |   |
| >25, <=50                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| Percent enrolled: Asian or Pacific Islander |                               |                            |                          |                              |                |               |                                  |                                 |                |               |   |
| <=25                                        | 20                            | 10                         | 100.00                   | 100.00                       | #              | #             | 100.00                           | 100.00                          | #              | #             |   |
| >25, <=50                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| >50, <=75                                   | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| Percent enrolled: Hispanic                  |                               |                            |                          |                              |                |               |                                  |                                 |                |               |   |
| <=25                                        | 20                            | 10                         | 87.63                    | 100.00                       | -1.97          | -0.02         | 91.68                            | 87.04                           | 4.64           | 0.05          |   |
| >25, <=50                                   | #                             | #                          | 3.09                     | #                            | #              | #             | 2.08                             | 3.81                            | -1.72          | -0.83         |   |
| >50, <=75                                   | #                             | #                          | 9.28                     | #                            | #              | #             | 6.24                             | 9.16                            | -2.91          | -0.47         |   |
| >75                                         | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |
| Total undergraduate enrollment <sup>2</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |   |
| <=1,318                                     | 10                            | #                          | 36.29                    | 74.56                        | -6.09          | -0.14         | 48.81                            | 34.99                           | 13.82          | 0.28          |   |
| >1,318, <=2,284.5                           | 10                            | #                          | 22.77                    | 12.72                        | 1.60           | 0.08          | 19.48                            | 25.17                           | -5.69          | -0.29         |   |
| >2,284.5, <=3,991                           | 10                            | #                          | 22.38                    | 6.36                         | 2.55           | 0.13          | 17.14                            | 22.52                           | -5.38          | -0.31         |   |
| >3,991                                      | 10                            | #                          | 18.56                    | 6.36                         | 1.94           | 0.12          | 14.57                            | 17.32                           | -2.75          | -0.19         |   |
| Unavailable or unknown                      | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |   |

See notes at end of table.



**Table K-15. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for Texas private not-for-profit 4-year institutions: 2004—Continued**

| Variable                                                         | Before nonresponse adjustment |                            |                          |                              |                |               | After nonresponse adjustment     |                                 |                |               |
|------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|----------------|---------------|----------------------------------|---------------------------------|----------------|---------------|
|                                                                  | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |
| Total male undergraduate enrollment <sup>2</sup>                 |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=566                                                            | 10                            | #                          | 36.29                    | 74.56                        | -6.09          | -0.14         | 48.81                            | 34.99                           | 13.82          | 0.28          |
| >566, <=858.5                                                    | 10                            | #                          | 20.67                    | 12.72                        | 1.27           | 0.07          | 18.07                            | 23.60                           | -5.53          | -0.31         |
| >858.5, <=1,712                                                  | 10                            | #                          | 24.48                    | 6.36                         | 2.88           | 0.13          | 18.55                            | 23.67                           | -5.12          | -0.28         |
| >1,712                                                           | 10                            | #                          | 18.56                    | 6.36                         | 1.94           | 0.12          | 14.57                            | 17.74                           | -3.17          | -0.22         |
| Unavailable or unknown                                           | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Total female undergraduate enrollment <sup>2</sup>               |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=777                                                            | 10                            | #                          | 36.29                    | 74.56                        | -6.09          | -0.14         | 48.81                            | 34.99                           | 13.82          | 0.28          |
| >777, <=1,323                                                    | 10                            | #                          | 22.81                    | 12.72                        | 1.61           | 0.08          | 19.51                            | 24.17                           | -4.67          | -0.24         |
| >1,323, <=2,243                                                  | 10                            | #                          | 22.34                    | 6.36                         | 2.54           | 0.13          | 17.11                            | 23.52                           | -6.40          | -0.37         |
| >2,243                                                           | 10                            | #                          | 18.56                    | 6.36                         | 1.94           | 0.12          | 14.57                            | 17.32                           | -2.75          | -0.19         |
| Unavailable or unknown                                           | †                             | †                          | †                        | †                            | †              | †             | †                                | †                               | †              | †             |
| Total graduate/first-professional enrollment <sup>3</sup>        |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=1,241                                                          | 10                            | #                          | 37.59                    | 28.20                        | 1.50           | 0.04          | 34.52                            | 41.53                           | -7.02          | -0.20         |
| >1,241                                                           | 10                            | #                          | 46.33                    | 12.72                        | 5.35           | 0.13          | 35.34                            | 43.40                           | -8.06          | -0.23         |
| Total enrollment = 0                                             | #                             | #                          | 16.08                    | 59.08                        | -6.85          | -0.30         | 30.15                            | 15.07                           | 15.08          | 0.50          |
| Total male graduate/first-professional enrollment <sup>3</sup>   |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=510                                                            | 10                            | #                          | 37.59                    | 28.20                        | 1.50           | 0.04          | 34.52                            | 42.07                           | -7.56          | -0.22         |
| >510                                                             | 10                            | #                          | 46.33                    | 12.72                        | 5.35           | 0.13          | 35.34                            | 42.86                           | -7.52          | -0.21         |
| Total enrollment = 0                                             | #                             | #                          | 16.08                    | 59.08                        | -6.85          | -0.30         | 30.15                            | 15.07                           | 15.08          | 0.50          |
| Total female graduate/first-professional enrollment <sup>3</sup> |                               |                            |                          |                              |                |               |                                  |                                 |                |               |
| <=664                                                            | 10                            | #                          | 49.21                    | 28.20                        | 3.34           | 0.07          | 42.33                            | 49.79                           | -7.45          | -0.18         |
| >664                                                             | 10                            | #                          | 34.72                    | 12.72                        | 3.50           | 0.11          | 27.52                            | 35.15                           | -7.63          | -0.28         |
| Total enrollment = 0                                             | #                             | #                          | 16.08                    | 59.08                        | -6.85          | -0.30         | 30.15                            | 15.07                           | 15.08          | 0.50          |

† Not applicable.

# Rounds to zero.

<sup>1</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>2</sup> Undergraduate enrollment categories were defined by quartiles.

<sup>3</sup> Graduate/first-professional enrollment categories were defined by the median.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

K-67



## Student Nonresponse Bias Analysis

---

**Table K-16. Student nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for students in public 2-year institutions: 2004**

| Variable                                                                                        | Before nonresponse adjustment |                            |                          |                              |                    |               | After nonresponse adjustment     |                                 |                    |               |  |
|-------------------------------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|--------------------|---------------|----------------------------------|---------------------------------|--------------------|---------------|--|
|                                                                                                 | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias     | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias     | Relative bias |  |
| <b>Bureau of Economic Analysis Code (Office of Business Economics [OBE]) Region<sup>1</sup></b> |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |  |
| New England                                                                                     | 810                           | 310                        | 2.47                     | 3.84                         | -0.14              | -0.05         | 2.72                             | 2.36                            | 0.36               | 0.13          |  |
| Mid East                                                                                        | 3,000                         | 920                        | 9.64                     | 7.73                         | 0.20               | 0.02          | 9.29                             | 9.85                            | -0.55              | -0.06         |  |
| Great Lakes                                                                                     | 4,290                         | 700                        | 18.64                    | 12.41                        | 0.64               | 0.04          | 17.50                            | 18.26                           | -0.76              | -0.04         |  |
| Plains                                                                                          | 2,090                         | 610                        | 6.32                     | 6.09                         | 0.02               | #             | 6.28                             | 6.00                            | 0.28               | 0.04          |  |
| Southeast                                                                                       | 7,250                         | 820                        | 24.20                    | 12.17                        | 1.23 <sup>2</sup>  | 0.05          | 22.00                            | 22.08                           | -0.08              | #             |  |
| Southwest                                                                                       | 3,770                         | 460                        | 15.72                    | 8.40                         | 0.75 <sup>2</sup>  | 0.05          | 14.37                            | 14.72                           | -0.35              | -0.02         |  |
| Rocky Mountains                                                                                 | 370                           | 210                        | 1.34                     | 0.88                         | 0.05               | 0.04          | 1.26                             | 0.52                            | 0.74               | 0.59          |  |
| Far West                                                                                        | 4,730                         | 2,130                      | 21.64                    | 48.33                        | -2.73 <sup>2</sup> | -0.11         | 26.54                            | 26.20                           | 0.34               | 0.01          |  |
| Outlying areas                                                                                  | 10                            | 80                         | 0.02                     | 0.15                         | -0.01              | -0.44         | 0.04                             | 0.01                            | 0.03               | 0.65          |  |
| <b>Student type</b>                                                                             |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |  |
| Undergraduate student                                                                           | 26,320                        | 6,220                      | 100.00                   | 100.00                       | #                  | #             | 100.00                           | 100.00                          | #                  | #             |  |
| Graduate student                                                                                | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                  | †             |  |
| First-professional                                                                              | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                  | †             |  |
| Unknown                                                                                         | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                  | †             |  |
| <b>CPS record available</b>                                                                     |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |  |
| No                                                                                              | 14,190                        | #                          | 51.63                    | #                            | #                  | #             | 42.16                            | 40.48                           | 1.68 <sup>2</sup>  | 0.04          |  |
| Yes                                                                                             | 12,130                        | 6,220                      | 48.37                    | 100.00                       | -5.29 <sup>2</sup> | -0.10         | 57.84                            | 59.52                           | -1.68 <sup>2</sup> | -0.03         |  |
| <b>Applied for federal aid</b>                                                                  |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |  |
| No                                                                                              | 16,300                        | 300                        | 57.93                    | 3.19                         | 5.61 <sup>2</sup>  | 0.11          | 47.89                            | 48.80                           | -0.91              | -0.02         |  |
| Yes                                                                                             | 10,020                        | 4,330                      | 42.07                    | 77.35                        | -3.61 <sup>2</sup> | -0.08         | 48.54                            | 51.20                           | -2.66 <sup>2</sup> | -0.05         |  |
| Unknown                                                                                         | #                             | 1,590                      | #                        | 19.46                        | -1.99 <sup>2</sup> | -1.00         | 3.57                             | †                               | †                  | †             |  |
| <b>Pell Grant status</b>                                                                        |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |  |
| Received                                                                                        | 8,610                         | 190                        | 31.31                    | 2.09                         | 2.99 <sup>2</sup>  | 0.11          | 25.95                            | 23.23                           | 2.72 <sup>2</sup>  | 0.10          |  |
| Did not receive                                                                                 | 17,700                        | 5,580                      | 68.62                    | 90.78                        | -2.27 <sup>2</sup> | -0.03         | 72.68                            | 76.66                           | -3.98 <sup>2</sup> | -0.05         |  |
| Unknown                                                                                         | 16                            | 450                        | 0.07                     | 7.14                         | -0.72              | -0.91         | 1.37                             | 0.10                            | 1.26               | 0.92          |  |
| <b>Total Pell amount received<sup>3</sup></b>                                                   |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |  |
| <=\$1,300                                                                                       | 2,160                         | 60                         | 23.22                    | 28.85                        | -0.58              | -0.02         | 23.31                            | 26.32                           | -3.01 <sup>2</sup> | -0.13         |  |
| >1,300, <=2,025                                                                                 | 2,110                         | 50                         | 23.52                    | 22.82                        | 0.07               | #             | 23.51                            | 24.81                           | -1.29 <sup>2</sup> | -0.05         |  |
| >2,025, <=3,544                                                                                 | 2,160                         | 50                         | 25.95                    | 28.73                        | -0.28              | -0.01         | 25.99                            | 24.40                           | 1.59 <sup>2</sup>  | 0.06          |  |
| >3,544                                                                                          | 2,100                         | 30                         | 26.25                    | 16.04                        | 1.05 <sup>2</sup>  | 0.04          | 26.10                            | 22.57                           | 3.53 <sup>2</sup>  | 0.14          |  |
| Unknown                                                                                         | 80                            | #                          | 1.05                     | 3.56                         | -0.26              | -0.20         | 1.08                             | 1.90                            | -0.81              | -0.75         |  |

See notes at end of table.

K-70

**Table K-16. Student nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for students in public 2-year institutions: 2004—Continued**

| Variable                                          | Before nonresponse adjustment |                            |                          |                              |                    |               | After nonresponse adjustment     |                                 |                    |               |  |
|---------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|--------------------|---------------|----------------------------------|---------------------------------|--------------------|---------------|--|
|                                                   | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias     | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias     | Relative bias |  |
| Stafford Loan status                              |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |  |
| Received                                          | 4,590                         | 190                        | 17.89                    | 2.03                         | 1.62 <sup>2</sup>  | 0.10          | 14.98                            | 13.17                           | 1.82 <sup>2</sup>  | 0.12          |  |
| Did not receive                                   | 21,710                        | 5,580                      | 82.04                    | 90.83                        | -0.90              | -0.01         | 83.65                            | 86.74                           | -3.08 <sup>2</sup> | -0.04         |  |
| Unknown                                           | 20                            | 450                        | 0.07                     | 7.14                         | -0.72              | -0.91         | 1.37                             | 0.10                            | 1.27               | 0.93          |  |
| Total Stafford amount received <sup>3</sup>       |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |  |
| <=\$2,200                                         | 1,140                         | 60                         | 23.11                    | 25.81                        | -0.28              | -0.01         | 23.17                            | 24.32                           | -1.15 <sup>2</sup> | -0.05         |  |
| >2,200, <=2,625                                   | 1,330                         | 60                         | 23.45                    | 21.87                        | 0.16               | 0.01          | 23.41                            | 24.17                           | -0.76              | -0.03         |  |
| >2,625, <=5,023.5                                 | 950                           | 30                         | 24.24                    | 22.86                        | 0.14               | 0.01          | 24.20                            | 23.15                           | 1.06 <sup>2</sup>  | 0.04          |  |
| >5,023.5                                          | 1,140                         | 50                         | 28.56                    | 28.33                        | 0.02               | #             | 28.55                            | 27.05                           | 1.50 <sup>2</sup>  | 0.05          |  |
| Unknown                                           | 40                            | #                          | 0.65                     | 1.13                         | -0.05              | -0.07         | 0.66                             | 1.31                            | -0.65              | -0.98         |  |
| Institution undergraduate enrollment <sup>3</sup> |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |  |
| <=7,053                                           | 7,270                         | 960                        | 26.63                    | 11.39                        | 1.56 <sup>2</sup>  | 0.06          | 23.83                            | 22.73                           | 1.11               | 0.05          |  |
| >7,053, <=12,179                                  | 6,420                         | 1,610                      | 22.67                    | 19.50                        | 0.33               | 0.01          | 22.09                            | 22.68                           | -0.59              | -0.03         |  |
| >12,179, <=26,798                                 | 6,110                         | 1,900                      | 21.66                    | 32.60                        | -1.12              | -0.05         | 23.67                            | 23.71                           | -0.05              | #             |  |
| >26,798                                           | 6,380                         | 1,710                      | 28.56                    | 36.04                        | -0.77              | -0.03         | 29.93                            | 30.47                           | -0.54              | -0.02         |  |
| Unknown                                           | 140                           | 50                         | 0.48                     | 0.46                         | #                  | #             | 0.48                             | 0.41                            | 0.07               | 0.14          |  |
| Tuition <sup>4</sup>                              |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |  |
| Low                                               | 8,170                         | 2,280                      | 34.10                    | 47.96                        | -1.42 <sup>2</sup> | -0.04         | 36.64                            | 36.74                           | -0.10              | #             |  |
| Medium                                            | 8,700                         | 1,520                      | 28.84                    | 17.68                        | 1.14 <sup>2</sup>  | 0.04          | 26.79                            | 27.35                           | -0.56              | -0.02         |  |
| High                                              | 8,370                         | 1,970                      | 33.21                    | 28.73                        | 0.46               | 0.01          | 32.39                            | 32.70                           | -0.31              | -0.01         |  |
| Unknown                                           | 1,070                         | 450                        | 3.85                     | 5.64                         | -0.18              | -0.05         | 4.18                             | 3.20                            | 0.97               | 0.23          |  |
| Percent PT enrollment                             |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |  |
| <= 25                                             | 220                           | 80                         | 0.37                     | 0.16                         | 0.02               | 0.06          | 0.33                             | 0.35                            | -0.02              | -0.05         |  |
| >25, <=50                                         | 6,190                         | 810                        | 21.82                    | 10.83                        | 1.13 <sup>2</sup>  | 0.05          | 19.81                            | 19.71                           | 0.09               | #             |  |
| >50, <=75                                         | 18,200                        | 4,590                      | 70.23                    | 72.51                        | -0.23              | #             | 70.64                            | 71.51                           | -0.86              | -0.01         |  |
| >75                                               | 1,570                         | 700                        | 7.08                     | 16.04                        | -0.92              | -0.11         | 8.73                             | 8.01                            | 0.72               | 0.08          |  |
| Unknown                                           | 150                           | 50                         | 0.50                     | 0.46                         | #                  | 0.01          | 0.49                             | 0.43                            | 0.07               | 0.13          |  |

† Not applicable.

# Rounds to zero.

<sup>1</sup> New England = Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; Mid East = Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania; Great Lakes = Illinois, Indiana, Michigan, Ohio, Wisconsin; Plains = Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota; Southeast = Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia; Southwest = Arizona, New Mexico, Oklahoma, Texas; Rocky Mountains = Colorado, Idaho, Montana, Utah, Wyoming; Far West = Alaska, California, Hawaii, Nevada, Oregon, Washington; Outlying Areas = American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana Islands, Puerto Rico, Palau, Virgin Islands.

<sup>2</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>3</sup> Undergraduate enrollment, Pell grant amount, and Stafford loan amount categories were defined by quartiles.

<sup>4</sup> Tuition categories were defined by thirds.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

K-71

**Table K-17. Student nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for students in California public 2-year institutions: 2004**

| Variable                                          | Before nonresponse adjustment |                            |                          |                              |                    |               | After nonresponse adjustment     |                                 |                     |               |
|---------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|--------------------|---------------|----------------------------------|---------------------------------|---------------------|---------------|
|                                                   | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias     | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias      | Relative bias |
| <b>Student type</b>                               |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| Undergraduate student                             | 2,850                         | 2,960                      | 100.00                   | 100.00                       | # <sup>1</sup>     | #             | 100.00                           | 100.00                          | # <sup>1</sup>      | #             |
| Graduate student                                  | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |
| First-professional                                | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |
| Unknown                                           | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |
| <b>CPS record available</b>                       |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| No                                                | 1,270                         | #                          | 43.26                    | #                            | # <sup>1</sup>     | #             | 26.53                            | 29.44                           | -2.92               | -0.11         |
| Yes                                               | 1,590                         | #                          | 56.74                    | #                            | # <sup>1</sup>     | #             | 34.80                            | 70.56                           | -35.76 <sup>1</sup> | -1.03         |
| Unknown                                           | #                             | 1,960                      | #                        | 100.00                       | -10.24             | -1.00         | 38.67                            | †                               | †                   | †             |
| <b>Applied for federal aid</b>                    |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| No                                                | 1,500                         | 10                         | 50.33                    | 0.45                         | 5.11 <sup>1</sup>  | 0.11          | 31.04                            | 39.73                           | -8.69 <sup>1</sup>  | -0.28         |
| Yes                                               | 1,360                         | 1,600                      | 49.67                    | 83.81                        | -3.50 <sup>1</sup> | -0.07         | 62.87                            | 60.27                           | 2.60                | 0.04          |
| Unknown                                           | #                             | 350                        | #                        | 15.75                        | -1.61              | -1.00         | 6.09                             | †                               | †                   | †             |
| <b>Pell Grant status</b>                          |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| Received                                          | 660                           | #                          | 22.70                    | 0.21                         | 2.30 <sup>1</sup>  | 0.11          | 14.00                            | 15.20                           | -1.20               | -0.09         |
| Did not receive                                   | 2,200                         | 1,800                      | 77.23                    | 92.49                        | -1.56 <sup>1</sup> | -0.02         | 83.13                            | 84.70                           | -1.57               | -0.02         |
| Unknown                                           | #                             | 180                        | 0.08                     | 7.30                         | -0.74              | -0.91         | 2.87                             | 0.10                            | 2.77                | 0.96          |
| <b>Total Pell amount received<sup>2</sup></b>     |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| <=\$1,425                                         | 2,360                         | 1,770                      | 82.80                    | 92.55                        | -1.00              | -0.01         | 86.57                            | 88.63                           | -2.06               | -0.02         |
| >1,425, <=2,462                                   | 160                           | #                          | 5.54                     | 0.06                         | 0.56 <sup>1</sup>  | 0.11          | 3.42                             | 3.70                            | -0.28               | -0.08         |
| >2,462, <=3,750                                   | 170                           | #                          | 5.97                     | 0.06                         | 0.61 <sup>1</sup>  | 0.11          | 3.69                             | 3.94                            | -0.26               | -0.07         |
| >3,750                                            | 160                           | #                          | 5.70                     | 0.02                         | 0.58 <sup>1</sup>  | 0.11          | 3.50                             | 3.74                            | -0.24               | -0.07         |
| Unknown                                           | #                             | 180                        | #                        | 7.30                         | -0.75              | -1.00         | 2.82                             | †                               | †                   | †             |
| <b>Stafford Loan status</b>                       |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| Received                                          | 200                           | 10                         | 7.13                     | 0.30                         | 0.70 <sup>1</sup>  | 0.11          | 4.49                             | 4.38                            | 0.12                | 0.03          |
| Did not receive                                   | 2,650                         | 1,770                      | 92.79                    | 92.39                        | 0.04               | #             | 92.64                            | 95.52                           | -2.88               | -0.03         |
| Unknown                                           | #                             | 180                        | 0.08                     | 7.30                         | -0.74              | -0.91         | 2.87                             | 0.10                            | 2.77                | 0.96          |
| <b>Total Stafford amount received<sup>2</sup></b> |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| <=\$2,625                                         | 2,720                         | 1,770                      | 95.21                    | 92.49                        | 0.28               | #             | 94.16                            | 96.90                           | -2.74               | -0.03         |
| >2,625, <=3,500                                   | 40                            | #                          | 1.23                     | #                            | # <sup>1</sup>     | #             | 0.76                             | 0.82                            | -0.06               | -0.08         |
| >3,500, <=6,125                                   | 50                            | #                          | 1.62                     | 0.17                         | 0.15 <sup>1</sup>  | 0.10          | 1.06                             | 0.80                            | 0.27 <sup>1</sup>   | 0.25          |
| >6,125                                            | 50                            | #                          | 1.93                     | 0.04                         | 0.19 <sup>1</sup>  | 0.11          | 1.20                             | 1.49                            | -0.29               | -0.24         |
| Unknown                                           | #                             | 180                        | #                        | 7.30                         | -0.75              | -1.00         | 2.82                             | †                               | †                   | †             |

See notes at end of table.

**Table K-17. Student nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for students in California public 2-year institutions: 2004—Continued**

| Variable                                          | Before nonresponse adjustment |                            |                          |                              |                   |               | After nonresponse adjustment     |                                 |                    |               |
|---------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|-------------------|---------------|----------------------------------|---------------------------------|--------------------|---------------|
|                                                   | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias    | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias     | Relative bias |
| Institution undergraduate enrollment <sup>2</sup> |                               |                            |                          |                              |                   |               |                                  |                                 |                    |               |
| <=17,925                                          | 810                           | 530                        | 32.01                    | 32.10                        | -0.01             | #             | 32.04                            | 33.47                           | -1.43              | -0.04         |
| >17,925, <=29,583                                 | 740                           | 470                        | 24.68                    | 22.00                        | 0.27              | 0.01          | 23.64                            | 24.03                           | -0.39              | -0.02         |
| >29,583, <=46,027                                 | 750                           | 560                        | 19.79                    | 23.00                        | -0.33             | -0.02         | 21.03                            | 20.14                           | 0.89               | 0.04          |
| >46,027                                           | 560                           | 390                        | 23.52                    | 22.90                        | 0.06              | #             | 23.28                            | 22.36                           | 0.92               | 0.04          |
| Unknown                                           | †                             | †                          | †                        | †                            | †                 | †             | †                                | †                               | †                  | †             |
| Tuition <sup>2</sup>                              |                               |                            |                          |                              |                   |               |                                  |                                 |                    |               |
| Low                                               | 1,470                         | 1,170                      | 47.95                    | 53.36                        | -0.55             | -0.01         | 50.04                            | 49.62                           | 0.42               | 0.01          |
| Medium                                            | 260                           | 70                         | 11.02                    | 4.15                         | 0.70 <sup>1</sup> | 0.07          | 8.36                             | 10.64                           | -2.28 <sup>1</sup> | -0.27         |
| High                                              | 930                           | 570                        | 31.93                    | 32.09                        | -0.02             | #             | 32.00                            | 32.14                           | -0.14              | #             |
| Unknown                                           | 200                           | 150                        | 9.09                     | 10.40                        | -0.13             | -0.01         | 9.60                             | 7.59                            | 2.00               | 0.21          |
| Percent PT enrollment                             |                               |                            |                          |                              |                   |               |                                  |                                 |                    |               |
| <= 25                                             | †                             | †                          | †                        | †                            | †                 | †             | †                                | †                               | †                  | †             |
| >25, <=50                                         | †                             | †                          | †                        | †                            | †                 | †             | †                                | †                               | †                  | †             |
| >50, <=75                                         | 2,430                         | 1,480                      | 83.58                    | 74.27                        | 0.95              | 0.01          | 79.98                            | 84.17                           | -4.19              | -0.05         |
| >75                                               | 420                           | 480                        | 16.42                    | 25.73                        | -0.95             | -0.05         | 20.02                            | 15.83                           | 4.19               | 0.21          |
| Unknown                                           | †                             | †                          | †                        | †                            | †                 | †             | †                                | †                               | †                  | †             |

† Not applicable.

# Rounds to zero.

<sup>1</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>2</sup> Undergraduate enrollment, Pell grant amount, and Stafford loan amount categories were defined by quartiles.

<sup>3</sup> Tuition categories were defined by thirds.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table K-18. Student nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for students in Connecticut public 2-year institutions: 2004**

| Variable                                | Before nonresponse adjustment |                            |                          |                              |                    |               | After nonresponse adjustment     |                                 |                     |               |
|-----------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|--------------------|---------------|----------------------------------|---------------------------------|---------------------|---------------|
|                                         | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias     | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias      | Relative bias |
| Student type                            |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| Undergraduate student                   | 420                           | 150                        | 100.00                   | 100.00                       | # <sup>1</sup>     | #             | 100.00                           | 100.00                          | # <sup>1</sup>      | #             |
| Graduate student                        | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |
| First-professional                      | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |
| Unknown                                 | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |
| CPS record available                    |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| No                                      | 270                           | #                          | 63.37                    | #                            | # <sup>1</sup>     | #             | 47.25                            | 48.19                           | -0.93               | -0.02         |
| Yes                                     | 150                           | #                          | 36.63                    | #                            | # <sup>1</sup>     | #             | 27.32                            | 51.81                           | -24.50 <sup>1</sup> | -0.90         |
| Unknown                                 | #                             | 150                        | #                        | 100.00                       | -10.24             | -1.00         | 25.43                            | †                               | †                   | †             |
| Applied for federal aid                 |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| No                                      | 290                           | #                          | 65.60                    | #                            | # <sup>1</sup>     | #             | 48.92                            | 51.19                           | -2.27               | -0.05         |
| Yes                                     | 130                           | 140                        | 34.40                    | 98.55                        | -6.57 <sup>1</sup> | -0.16         | 50.71                            | 48.81                           | 1.91                | 0.04          |
| Unknown                                 | #                             | 20                         | #                        | 1.45                         | -0.15 <sup>1</sup> | -1.00         | 0.37                             | †                               | †                   | †             |
| Pell Grant status                       |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| Received                                | 160                           | #                          | 35.86                    | #                            | # <sup>1</sup>     | #             | 26.74                            | 23.89                           | 2.85 <sup>1</sup>   | 0.11          |
| Did not receive                         | 260                           | 140                        | 64.14                    | 99.69                        | -3.64 <sup>1</sup> | -0.05         | 73.18                            | 76.11                           | -2.93 <sup>1</sup>  | -0.04         |
| Unknown                                 | #                             | 10                         | #                        | 0.31                         | -0.03 <sup>1</sup> | -1.00         | 0.08                             | †                               | †                   | †             |
| Total Pell amount received <sup>2</sup> |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| <=\$1,012                               | 300                           | 140                        | 74.28                    | 99.69                        | -2.60 <sup>1</sup> | -0.03         | 80.74                            | 84.13                           | -3.39 <sup>1</sup>  | -0.04         |
| >1,012, <=1,975                         | 40                            | #                          | 8.23                     | #                            | # <sup>1</sup>     | #             | 6.13                             | 5.79                            | 0.34 <sup>1</sup>   | 0.06          |
| >1,975, <=2,906                         | 40                            | #                          | 8.23                     | #                            | # <sup>1</sup>     | #             | 6.13                             | 5.19                            | 0.95 <sup>1</sup>   | 0.15          |
| >2,906                                  | 40                            | #                          | 9.27                     | #                            | # <sup>1</sup>     | #             | 6.91                             | 4.90                            | 2.02 <sup>1</sup>   | 0.29          |
| Unknown                                 | #                             | 10                         | #                        | 0.31                         | -0.03 <sup>1</sup> | -1.00         | 0.08                             | †                               | †                   | †             |
| Stafford Loan status                    |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| Received                                | 30                            | #                          | 8.82                     | #                            | # <sup>1</sup>     | #             | 6.57                             | 5.87                            | 0.70                | 0.11          |
| Did not receive                         | 390                           | 140                        | 91.18                    | 99.69                        | -0.87 <sup>1</sup> | -0.01         | 93.35                            | 94.13                           | -0.78               | -0.01         |
| Unknown                                 | #                             | 10                         | #                        | 0.31                         | -0.03 <sup>1</sup> | -1.00         | 0.08                             | †                               | †                   | †             |

See notes at end of table.



**Table K-18. Student nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for students in Connecticut public 2-year institutions: 2004—Continued**

| Variable                                          | Before nonresponse adjustment |                            |                          |                              |                    |               | After nonresponse adjustment     |                                 |                |               |  |
|---------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|--------------------|---------------|----------------------------------|---------------------------------|----------------|---------------|--|
|                                                   | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias     | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias | Relative bias |  |
| Total Stafford amount received <sup>2</sup>       |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |  |
| <=\$2,500                                         | 400                           | 140                        | 93.39                    | 99.69                        | -0.64 <sup>1</sup> | -0.01         | 94.99                            | 96.03                           | -1.04          | -0.01         |  |
| >2,500, <=2,625                                   | 10                            | #                          | 2.68                     | #                            | # <sup>1</sup>     | #             | 2.00                             | 1.91                            | 0.09           | 0.05          |  |
| >2,625, <=4,500                                   | 10                            | #                          | 1.46                     | #                            | #                  | #             | 1.09                             | 0.76                            | 0.33           | 0.30          |  |
| >4,500                                            | 10                            | #                          | 2.46                     | #                            | # <sup>1</sup>     | #             | 1.84                             | 1.30                            | 0.54           | 0.29          |  |
| Unknown                                           | #                             | 10                         | #                        | 0.31                         | -0.03 <sup>1</sup> | -1.00         | 0.08                             | †                               | †              | †             |  |
| Institution undergraduate enrollment <sup>2</sup> |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |  |
| <=5,178                                           | 130                           | 40                         | 34.76                    | 30.89                        | 0.40               | 0.01          | 33.77                            | 34.95                           | -1.18          | -0.03         |  |
| >5,178, <=7,353                                   | 140                           | 40                         | 32.79                    | 30.47                        | 0.24               | 0.01          | 32.20                            | 31.45                           | 0.75           | 0.02          |  |
| >7,353, <=8,220                                   | 50                            | 20                         | 11.54                    | 10.38                        | 0.12               | 0.01          | 11.24                            | 11.78                           | -0.54          | -0.05         |  |
| >8,220                                            | 90                            | 40                         | 20.86                    | 27.95                        | -0.73 <sup>1</sup> | -0.03         | 22.66                            | 21.69                           | 0.97           | 0.04          |  |
| Unknown                                           | 10                            | 10                         | 0.06                     | 0.31                         | -0.03 <sup>1</sup> | -0.31         | 0.12                             | 0.11                            | 0.01           | 0.06          |  |
| Tuition <sup>3</sup>                              |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |  |
| Low                                               | 410                           | 140                        | 99.94                    | 99.69                        | 0.03 <sup>1</sup>  | #             | 99.88                            | 99.89                           | -0.01          | #             |  |
| Medium                                            | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †              | †             |  |
| High                                              | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †              | †             |  |
| Unknown                                           | 10                            | 10                         | 0.06                     | 0.31                         | -0.03 <sup>1</sup> | -0.31         | 0.12                             | 0.11                            | 0.01           | 0.06          |  |
| Percent PT enrollment                             |                               |                            |                          |                              |                    |               |                                  |                                 |                |               |  |
| <= 25                                             | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †              | †             |  |
| >25, <=50                                         | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †              | †             |  |
| >50, <=75                                         | 410                           | 140                        | 99.94                    | 99.69                        | 0.03 <sup>1</sup>  | #             | 99.88                            | 99.89                           | -0.01          | #             |  |
| >75                                               | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †              | †             |  |
| Unknown                                           | 10                            | 10                         | 0.06                     | 0.31                         | -0.03 <sup>1</sup> | -0.31         | 0.12                             | 0.11                            | 0.01           | 0.06          |  |

† Not applicable.

# Rounds to zero.

<sup>1</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>2</sup> Undergraduate enrollment, Pell grant amount, and Stafford loan amount categories were defined by quartiles.

<sup>3</sup> Tuition categories were defined by thirds.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table K-19. Student nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for students in Delaware public 2-year institutions: 2004**

| Variable                                          | Before nonresponse adjustment |                            |                          |                              |                     |               | After nonresponse adjustment     |                                 |                     |               |  |
|---------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|---------------------|---------------|----------------------------------|---------------------------------|---------------------|---------------|--|
|                                                   | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias      | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias      | Relative bias |  |
| <b>Student type</b>                               |                               |                            |                          |                              |                     |               |                                  |                                 |                     |               |  |
| Undergraduate student                             | 460                           | 380                        | 100.00                   | 100.00                       | # <sup>1</sup>      | #             | 100.00                           | 100.00                          | # <sup>1</sup>      | #             |  |
| Graduate student                                  | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †                   | †             |  |
| First-professional                                | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †                   | †             |  |
| Unknown                                           | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †                   | †             |  |
| <b>CPS record available</b>                       |                               |                            |                          |                              |                     |               |                                  |                                 |                     |               |  |
| No                                                | 40                            | #                          | 8.22                     | #                            | # <sup>1</sup>      | #             | 4.57                             | 9.95                            | -5.38 <sup>1</sup>  | -1.18         |  |
| Yes                                               | 420                           | #                          | 91.78                    | #                            | # <sup>1</sup>      | #             | 51.09                            | 90.05                           | -38.96 <sup>1</sup> | -0.76         |  |
| Unknown                                           | #                             | 380                        | #                        | 100.00                       | -10.24              | -1.00         | 44.34                            | †                               | †                   | †             |  |
| <b>Applied for federal aid</b>                    |                               |                            |                          |                              |                     |               |                                  |                                 |                     |               |  |
| No                                                | 430                           | #                          | 93.19                    | #                            | # <sup>1</sup>      | #             | 51.87                            | 92.68                           | -40.81 <sup>1</sup> | -0.79         |  |
| Yes                                               | 30                            | #                          | 6.81                     | #                            | # <sup>1</sup>      | #             | 3.79                             | 7.32                            | -3.52 <sup>1</sup>  | -0.93         |  |
| Unknown                                           | #                             | 380                        | #                        | 100.00                       | -10.24 <sup>1</sup> | -1.00         | 44.34                            | †                               | †                   | †             |  |
| <b>Pell Grant status</b>                          |                               |                            |                          |                              |                     |               |                                  |                                 |                     |               |  |
| Received                                          | 30                            | #                          | 6.01                     | #                            | # <sup>1</sup>      | #             | 3.35                             | 9.91                            | -6.56 <sup>1</sup>  | -1.96         |  |
| Did not receive                                   | 430                           | 380                        | 93.99                    | 100.00                       | -0.62 <sup>1</sup>  | -0.01         | 96.65                            | 90.09                           | 6.56 <sup>1</sup>   | 0.07          |  |
| Unknown                                           | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †                   | †             |  |
| <b>Total Pell amount received<sup>2</sup></b>     |                               |                            |                          |                              |                     |               |                                  |                                 |                     |               |  |
| <=\$1,000                                         | 440                           | 380                        | 95.59                    | 100.00                       | -0.45 <sup>1</sup>  | #             | 97.55                            | 91.10                           | 6.45 <sup>1</sup>   | 0.07          |  |
| >1,000, <=2,055.5                                 | 10                            | #                          | 1.40                     | #                            | # <sup>1</sup>      | #             | 0.78                             | 1.57                            | -0.79 <sup>1</sup>  | -1.01         |  |
| >2,055.5, <=3,544                                 | 10                            | #                          | 1.80                     | #                            | # <sup>1</sup>      | #             | 1.00                             | 4.03                            | -3.02               | -3.01         |  |
| >3,544                                            | 10                            | #                          | 1.20                     | #                            | # <sup>1</sup>      | #             | 0.67                             | 3.31                            | -2.64               | -3.94         |  |
| Unknown                                           | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †                   | †             |  |
| <b>Stafford Loan status</b>                       |                               |                            |                          |                              |                     |               |                                  |                                 |                     |               |  |
| Received                                          | 20                            | #                          | 3.61                     | #                            | # <sup>1</sup>      | #             | 2.01                             | 4.92                            | -2.91               | -1.45         |  |
| Did not receive                                   | 450                           | 380                        | 96.39                    | 100.00                       | -0.37 <sup>1</sup>  | #             | 97.99                            | 95.08                           | 2.91                | 0.03          |  |
| Unknown                                           | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †                   | †             |  |
| <b>Total Stafford amount received<sup>2</sup></b> |                               |                            |                          |                              |                     |               |                                  |                                 |                     |               |  |
| <=\$1,661                                         | 450                           | 380                        | 97.40                    | 100.00                       | -0.27 <sup>1</sup>  | #             | 98.55                            | 96.72                           | 1.83                | 0.02          |  |
| >1,661, <=2,625                                   | 10                            | #                          | 2.20                     | #                            | # <sup>1</sup>      | #             | 1.23                             | 2.89                            | -1.66               | -1.35         |  |
| >2,625, <=2,625                                   | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †                   | †             |  |
| >2,625                                            | #                             | #                          | 0.40                     | #                            | #                   | #             | 0.22                             | 0.39                            | -0.17               | -0.75         |  |
| Unknown                                           | †                             | †                          | †                        | †                            | †                   | †             | †                                | †                               | †                   | †             |  |

† Not applicable.

# Rounds to zero.

<sup>1</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>2</sup> Pell grant amount and Stafford loan amount categories were defined by quartiles.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table K-20. Student nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for students in Minnesota public 2-year institutions: 2004**

| Variable                                    | Before nonresponse adjustment |                            |                          |                              |                    |               | After nonresponse adjustment     |                                 |                     |               |
|---------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|--------------------|---------------|----------------------------------|---------------------------------|---------------------|---------------|
|                                             | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias     | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias      | Relative bias |
| Student type                                |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| Undergraduate student                       | 790                           | 530                        | 100.00                   | 100.00                       | # <sup>1</sup>     | #             | 100.00                           | 100.00                          | # <sup>1</sup>      | #             |
| Graduate student                            | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |
| First-professional                          | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |
| Unknown                                     | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |
| CPS record available                        |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| No                                          | 480                           | #                          | 60.22                    | #                            | # <sup>1</sup>     | #             | 35.72                            | 47.37                           | -11.65 <sup>1</sup> | -0.33         |
| Yes                                         | 310                           | #                          | 39.78                    | #                            | # <sup>1</sup>     | #             | 23.60                            | 52.63                           | -29.04 <sup>1</sup> | -1.23         |
| Unknown                                     | #                             | 530                        | #                        | 100.00                       | -10.24             | -1.00         | 40.68                            | †                               | †                   | †             |
| Applied for federal aid                     |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| No                                          | 750                           | 200                        | 95.85                    | 37.26                        | 6.00 <sup>1</sup>  | 0.07          | 72.01                            | 94.16                           | -22.15 <sup>1</sup> | -0.31         |
| Yes                                         | 50                            | 50                         | 4.15                     | 9.83                         | -0.58 <sup>1</sup> | -0.12         | 6.46                             | 5.84                            | 0.62                | 0.10          |
| Unknown                                     | #                             | 270                        | #                        | 52.91                        | -5.42 <sup>1</sup> | -1.00         | 21.53                            | †                               | †                   | †             |
| Pell Grant status                           |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| Received                                    | 220                           | 120                        | 28.66                    | 21.86                        | 0.70 <sup>1</sup>  | 0.02          | 25.89                            | 23.21                           | 2.69                | 0.10          |
| Did not receive                             | 570                           | 410                        | 71.34                    | 78.14                        | -0.70 <sup>1</sup> | -0.01         | 74.11                            | 76.79                           | -2.69               | -0.04         |
| Unknown                                     | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |
| Total Pell amount received <sup>2</sup>     |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| <=\$1,100                                   | 630                           | 440                        | 78.44                    | 84.59                        | -0.63 <sup>1</sup> | -0.01         | 80.95                            | 82.52                           | -1.57               | -0.02         |
| >1,100, <=2,025                             | 50                            | 40                         | 6.20                     | 7.41                         | -0.12              | -0.02         | 6.69                             | 5.23                            | 1.47                | 0.22          |
| >2,025, <=3,544                             | 60                            | 30                         | 7.14                     | 4.69                         | 0.25               | 0.04          | 6.15                             | 5.76                            | 0.38                | 0.06          |
| >3,544                                      | 60                            | 20                         | 8.21                     | 3.31                         | 0.50 <sup>1</sup>  | 0.07          | 6.21                             | 6.49                            | -0.27               | -0.04         |
| Unknown                                     | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |
| Stafford Loan status                        |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| Received                                    | 290                           | 150                        | 39.20                    | 29.11                        | 1.03 <sup>1</sup>  | 0.03          | 35.09                            | 31.62                           | 3.47 <sup>1</sup>   | 0.10          |
| Did not receive                             | 500                           | 380                        | 60.80                    | 70.89                        | -1.03 <sup>1</sup> | -0.02         | 64.91                            | 68.38                           | -3.47 <sup>1</sup>  | -0.05         |
| Unknown                                     | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |
| Total Stafford amount received <sup>2</sup> |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| <=\$2,500                                   | 560                           | 430                        | 69.90                    | 80.55                        | -1.09 <sup>1</sup> | -0.02         | 74.23                            | 75.64                           | -1.41               | -0.02         |
| >2,500, <=2,625                             | 110                           | 50                         | 10.36                    | 7.47                         | 0.30               | 0.03          | 9.18                             | 8.54                            | 0.64                | 0.07          |
| >2,625, <=4,455                             | 50                            | 20                         | 8.65                     | 5.46                         | 0.33               | 0.04          | 7.35                             | 7.24                            | 0.11                | 0.01          |
| >4,455                                      | 70                            | 40                         | 11.10                    | 6.53                         | 0.47               | 0.04          | 9.24                             | 8.58                            | 0.66                | 0.07          |
| Unknown                                     | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |

See notes at end of table.

**Table K-20. Student nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for students in Minnesota public 2-year institutions: 2004—Continued**

| Variable                                          | Before nonresponse adjustment |                            |                          |                              |                    |               | After nonresponse adjustment     |                                 |                    |               |
|---------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|--------------------|---------------|----------------------------------|---------------------------------|--------------------|---------------|
|                                                   | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias     | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias     | Relative bias |
| Institution undergraduate enrollment <sup>2</sup> |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |
| <=5,012                                           | 200                           | 130                        | 26.25                    | 22.11                        | 0.42               | 0.02          | 24.57                            | 25.00                           | -0.44              | -0.02         |
| >5,012, <=8,175                                   | 190                           | 160                        | 23.24                    | 31.39                        | -0.83 <sup>1</sup> | -0.03         | 26.56                            | 23.40                           | 3.15 <sup>1</sup>  | 0.12          |
| >8,175, <=9,038                                   | 180                           | 100                        | 22.69                    | 18.58                        | 0.42 <sup>1</sup>  | 0.02          | 21.02                            | 24.15                           | -3.13 <sup>1</sup> | -0.15         |
| >9,038                                            | 190                           | 120                        | 21.24                    | 21.54                        | -0.03              | #             | 21.36                            | 22.86                           | -1.50              | -0.07         |
| Unknown                                           | 30                            | 20                         | 6.58                     | 6.38                         | 0.02               | #             | 6.50                             | 4.58                            | 1.92               | 0.30          |
| Tuition <sup>3</sup>                              |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |
| Low                                               | 270                           | 170                        | 34.88                    | 35.02                        | -0.01              | #             | 34.94                            | 34.66                           | 0.27               | 0.01          |
| Medium                                            | 290                           | 210                        | 31.52                    | 36.45                        | -0.50 <sup>1</sup> | -0.02         | 33.53                            | 33.17                           | 0.35               | 0.01          |
| High                                              | 240                           | 140                        | 33.60                    | 28.53                        | 0.52 <sup>1</sup>  | 0.02          | 31.54                            | 32.16                           | -0.62              | -0.02         |
| Unknown                                           | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                  | †             |
| Percent PT Enrollment                             |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |
| <= 25                                             | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                  | †             |
| >25, <=50                                         | 230                           | 160                        | 28.09                    | 29.38                        | -0.13              | #             | 28.62                            | 28.57                           | 0.04               | #             |
| >50, <=75                                         | 530                           | 350                        | 65.33                    | 64.24                        | 0.11               | #             | 64.89                            | 66.85                           | -1.96              | -0.03         |
| >75                                               | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                  | †             |
| Unknown                                           | 30                            | 20                         | 6.58                     | 6.38                         | 0.02               | #             | 6.50                             | 4.58                            | 1.92               | 0.30          |

† Not applicable.

# Rounds to zero.

<sup>1</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>2</sup> Undergraduate enrollment, Pell grant amount, and Stafford loan amount categories were defined by quartiles.

<sup>3</sup> Tuition categories were defined by thirds.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table K-21. Student nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for students in Minnesota public 4-year institutions: 2004**

| Variable                                    | Before nonresponse adjustment |                            |                          |                              |                    |               | After nonresponse adjustment     |                                 |                     |               |
|---------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|--------------------|---------------|----------------------------------|---------------------------------|---------------------|---------------|
|                                             | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias     | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias      | Relative bias |
| Student type                                |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| Undergraduate student                       | 490                           | 130                        | 80.00                    | 87.23                        | -0.74 <sup>1</sup> | -0.01         | 81.46                            | 79.31                           | 2.15 <sup>1</sup>   | 0.03          |
| Graduate student                            | 110                           | 10                         | 17.68                    | 12.77                        | 0.50               | 0.03          | 16.69                            | 17.55                           | -0.86               | -0.05         |
| First-professional                          | 20                            | #                          | 2.32                     | #                            | # <sup>1</sup>     | #             | 1.85                             | 3.14                            | -1.29 <sup>1</sup>  | -0.70         |
| Unknown                                     | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |
| CPS record available                        |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| No                                          | 390                           | #                          | 61.23                    | #                            | # <sup>1</sup>     | #             | 48.86                            | 58.37                           | -9.51 <sup>1</sup>  | -0.19         |
| Yes                                         | 230                           | #                          | 38.77                    | #                            | # <sup>1</sup>     | #             | 30.94                            | 41.63                           | -10.69 <sup>1</sup> | -0.35         |
| Unknown                                     | #                             | 140                        | #                        | 100.00                       | -10.24             | -1.00         | 20.20                            | †                               | †                   | †             |
| Applied for federal aid                     |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| No                                          | 460                           | 70                         | 76.65                    | 47.89                        | 2.94 <sup>1</sup>  | 0.04          | 70.84                            | 75.20                           | -4.36 <sup>1</sup>  | -0.06         |
| Yes                                         | 160                           | 20                         | 23.35                    | 10.50                        | 1.32 <sup>1</sup>  | 0.06          | 20.76                            | 24.80                           | -4.04 <sup>1</sup>  | -0.19         |
| Unknown                                     | #                             | 50                         | #                        | 41.60                        | -4.26 <sup>1</sup> | -1.00         | 8.40                             | †                               | †                   | †             |
| Pell Grant status                           |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| Received                                    | 110                           | 30                         | 17.47                    | 19.63                        | -0.22              | -0.01         | 17.91                            | 16.27                           | 1.64 <sup>1</sup>   | 0.09          |
| Did not receive                             | 510                           | 110                        | 82.53                    | 80.37                        | 0.22               | #             | 82.09                            | 83.73                           | -1.64 <sup>1</sup>  | -0.02         |
| Unknown                                     | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |
| Total Pell amount received <sup>2</sup>     |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| <=\$1,400                                   | 540                           | 110                        | 87.54                    | 85.92                        | 0.17               | #             | 87.21                            | 88.40                           | -1.18               | -0.01         |
| >1,400, <=2,300                             | 20                            | 10                         | 4.14                     | 5.68                         | -0.16              | -0.04         | 4.45                             | 4.21                            | 0.24                | 0.05          |
| >2,300, <=3,800                             | 30                            | 10                         | 4.05                     | 5.26                         | -0.12              | -0.03         | 4.29                             | 3.62                            | 0.67                | 0.16          |
| >3,800                                      | 30                            | #                          | 4.27                     | 3.14                         | 0.12               | 0.03          | 4.04                             | 3.77                            | 0.27                | 0.07          |
| Unknown                                     | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |
| Stafford Loan status                        |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| Received                                    | 320                           | 60                         | 51.13                    | 42.95                        | 0.84               | 0.02          | 49.48                            | 49.71                           | -0.23               | #             |
| Did not receive                             | 300                           | 80                         | 48.87                    | 57.05                        | -0.84              | -0.02         | 50.52                            | 50.29                           | 0.23                | #             |
| Unknown                                     | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |
| Total Stafford amount received <sup>2</sup> |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| <=\$2,625                                   | 440                           | 100                        | 65.58                    | 69.16                        | -0.37              | -0.01         | 66.31                            | 65.43                           | 0.87                | 0.01          |
| >2,625, <=3,500                             | 40                            | 10                         | 8.23                     | 5.97                         | 0.23               | 0.03          | 7.77                             | 7.93                            | -0.16               | -0.02         |
| >3,500, <=5,500                             | 70                            | 20                         | 12.93                    | 12.94                        | #                  | #             | 12.93                            | 12.12                           | 0.82                | 0.06          |
| >5,500                                      | 80                            | 10                         | 13.26                    | 11.93                        | 0.14               | 0.01          | 12.99                            | 14.52                           | -1.53               | -0.12         |
| Unknown                                     | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |

See notes at end of table.

K-79

**Table K-21. Student nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for students in Minnesota public 4-year institutions: 2004—Continued**

| Variable                                          | Before nonresponse adjustment |                            |                          |                              |                    |               | After nonresponse adjustment     |                                 |                    |               |
|---------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|--------------------|---------------|----------------------------------|---------------------------------|--------------------|---------------|
|                                                   | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias     | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias     | Relative bias |
| Institution undergraduate enrollment <sup>2</sup> |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |
| <=8,531                                           | 160                           | 50                         | 27.38                    | 39.06                        | -1.20 <sup>1</sup> | -0.04         | 29.74                            | 27.00                           | 2.73 <sup>1</sup>  | 0.09          |
| >8,531, <=17,475                                  | 190                           | 80                         | 30.72                    | 53.78                        | -2.36 <sup>1</sup> | -0.07         | 35.38                            | 30.87                           | 4.50 <sup>1</sup>  | 0.13          |
| >17,475, <=41,272                                 | 270                           | 10                         | 41.91                    | 7.16                         | 3.56 <sup>1</sup>  | 0.09          | 34.89                            | 42.12                           | -7.24 <sup>1</sup> | -0.21         |
| >41,272                                           | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                  | †             |
| Unknown                                           | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                  | †             |
| Tuition <sup>3</sup>                              |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |
| Low                                               | 190                           | 110                        | 35.13                    | 79.24                        | -4.52 <sup>1</sup> | -0.11         | 44.04                            | 35.57                           | 8.48 <sup>1</sup>  | 0.19          |
| Medium                                            | 340                           | 30                         | 53.27                    | 18.75                        | 3.54 <sup>1</sup>  | 0.07          | 46.30                            | 53.44                           | -7.14 <sup>1</sup> | -0.15         |
| High                                              | 90                            | #                          | 11.59                    | 2.00                         | 0.98 <sup>1</sup>  | 0.09          | 9.66                             | 11.00                           | -1.34 <sup>1</sup> | -0.14         |
| Unknown                                           | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                  | †             |
| Percent PT enrollment                             |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |
| <= 25                                             | 540                           | 100                        | 87.71                    | 76.80                        | 1.12 <sup>1</sup>  | 0.01          | 85.50                            | 87.66                           | -2.16 <sup>1</sup> | -0.03         |
| >25, <=50                                         | 30                            | 10                         | 3.04                     | 4.60                         | -0.16 <sup>1</sup> | -0.05         | 3.35                             | 2.95                            | 0.41               | 0.12          |
| >50, <=75                                         | 50                            | 30                         | 9.25                     | 18.60                        | -0.96 <sup>1</sup> | -0.09         | 11.14                            | 9.39                            | 1.75 <sup>1</sup>  | 0.16          |
| >75                                               | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                  | †             |
| Unknown                                           | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                  | †             |

† Not applicable.

# Rounds to zero.

<sup>1</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.<sup>2</sup> Undergraduate enrollment, Pell grant amount, and Stafford loan amount categories were defined by quartiles.<sup>3</sup> Tuition categories were defined by thirds.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table K-22. Student nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for students in New York public 2-year institutions: 2004**

| Variable                                    | Before nonresponse adjustment |                            |                          |                              |                    |               | After nonresponse adjustment     |                                 |                     |               |
|---------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|--------------------|---------------|----------------------------------|---------------------------------|---------------------|---------------|
|                                             | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias     | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias      | Relative bias |
| Student type                                |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| Undergraduate student                       | 1,230                         | 220                        | 81.00                    | 74.77                        | 0.64               | 0.01          | 79.88                            | 82.13                           | -2.25 <sup>1</sup>  | -0.03         |
| Graduate student                            | 280                           | 50                         | 17.60                    | 25.23                        | -0.78              | -0.04         | 18.97                            | 16.05                           | 2.92 <sup>1</sup>   | 0.15          |
| First-professional                          | 40                            | #                          | 1.40                     | #                            | # <sup>1</sup>     | #             | 1.15                             | 1.81                            | -0.67 <sup>1</sup>  | -0.58         |
| Unknown                                     | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |
| CPS record available                        |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| No                                          | 1,050                         | #                          | 65.23                    | #                            | # <sup>1</sup>     | #             | 53.55                            | 61.21                           | -7.66 <sup>1</sup>  | -0.14         |
| Yes                                         | 510                           | #                          | 34.77                    | #                            | # <sup>1</sup>     | #             | 28.55                            | 38.79                           | -10.24 <sup>1</sup> | -0.36         |
| Unknown                                     | #                             | 270                        | #                        | 100.00                       | -10.24             | -1.00         | 17.90                            | †                               | †                   | †             |
| Applied for federal aid                     |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| No                                          | 1,160                         | 10                         | 71.35                    | 1.36                         | 7.17 <sup>1</sup>  | 0.11          | 58.82                            | 68.92                           | -10.10 <sup>1</sup> | -0.17         |
| Yes                                         | 390                           | 190                        | 28.65                    | 74.18                        | -4.66 <sup>1</sup> | -0.14         | 36.80                            | 31.08                           | 5.72 <sup>1</sup>   | 0.16          |
| Unknown                                     | #                             | 80                         | #                        | 24.46                        | -2.50 <sup>1</sup> | -1.00         | 4.38                             | †                               | †                   | †             |
| Pell Grant status                           |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| Received                                    | 446                           | #                          | 29.12                    | 1.03                         | 2.88 <sup>1</sup>  | 0.11          | 24.09                            | 28.27                           | -4.17 <sup>1</sup>  | -0.17         |
| Did not receive                             | 1,100                         | 210                        | 70.74                    | 84.40                        | -1.40              | -0.02         | 73.19                            | 71.56                           | 1.63                | 0.02          |
| Unknown                                     | 2                             | 60                         | 0.14                     | 14.57                        | -1.48              | -0.92         | 2.72                             | 0.17                            | 2.54                | 0.94          |
| Total Pell amount received <sup>2</sup>     |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| <=\$1,500                                   | 1,220                         | 210                        | 78.07                    | 84.83                        | -0.69              | -0.01         | 79.28                            | 78.76                           | 0.52                | 0.01          |
| >1,500, <=2,100                             | 120                           | #                          | 7.55                     | #                            | # <sup>1</sup>     | #             | 6.20                             | 7.26                            | -1.06 <sup>1</sup>  | -0.17         |
| >2,100, <=4,000                             | 220                           | #                          | 14.38                    | 0.60                         | 1.41 <sup>1</sup>  | 0.11          | 11.91                            | 13.98                           | -2.06 <sup>1</sup>  | -0.17         |
| >4,000                                      | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                   | †             |
| Unknown                                     | #                             | 60                         | #                        | 14.57                        | -1.49              | -1.00         | 2.61                             | †                               | †                   | †             |
| Stafford Loan status                        |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| Received                                    | 630                           | #                          | 36.20                    | 0.33                         | 3.67 <sup>1</sup>  | 0.11          | 29.78                            | 35.47                           | -5.69 <sup>1</sup>  | -0.19         |
| Did not receive                             | 920                           | 210                        | 63.61                    | 84.48                        | -2.14              | -0.03         | 67.34                            | 64.26                           | 3.08                | 0.05          |
| Unknown                                     | #                             | 60                         | 0.19                     | 15.20                        | -1.54              | -0.89         | 2.88                             | 0.26                            | 2.61                | 0.91          |
| Total Stafford amount received <sup>2</sup> |                               |                            |                          |                              |                    |               |                                  |                                 |                     |               |
| <=\$2,000                                   | 1,130                         | 210                        | 73.21                    | 84.70                        | -1.18              | -0.02         | 75.26                            | 73.67                           | 1.60                | 0.02          |
| >2,000, <=2,625                             | 110                           | #                          | 7.69                     | #                            | # <sup>1</sup>     | #             | 6.32                             | 7.01                            | -0.69 <sup>1</sup>  | -0.11         |
| >2,625, <=3,500                             | 160                           | #                          | 10.95                    | #                            | # <sup>1</sup>     | #             | 8.99                             | 10.20                           | -1.21 <sup>1</sup>  | -0.13         |
| >3,500                                      | 160                           | #                          | 8.15                     | 0.11                         | 0.82 <sup>1</sup>  | 0.11          | 6.71                             | 9.13                            | -2.42 <sup>1</sup>  | -0.36         |
| Unknown                                     | #                             | 60                         | #                        | 15.20                        | -1.56              | -1.00         | 2.72                             | †                               | †                   | †             |

See notes at end of table.

**Table K-22. Institution nonresponse bias before nonresponse adjustment and after weight adjustments for selected variables for students in New York public 2-year institutions: 2004—Continued**

| Variable                                          | Before nonresponse adjustment |                            |                          |                              |                    |               | After nonresponse adjustment     |                                 |                    |               |
|---------------------------------------------------|-------------------------------|----------------------------|--------------------------|------------------------------|--------------------|---------------|----------------------------------|---------------------------------|--------------------|---------------|
|                                                   | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Non-respondent mean weighted | Estimated bias     | Relative bias | Overall mean, before adjustments | Overall mean, after adjustments | Estimated bias     | Relative bias |
| Institution undergraduate enrollment <sup>2</sup> |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |
| <=6,638                                           | 460                           | 40                         | 19.33                    | 6.48                         | 1.32 <sup>1</sup>  | 0.07          | 17.03                            | 18.92                           | -1.89 <sup>1</sup> | -0.11         |
| >6,638, <=15,635                                  | 350                           | 70                         | 23.71                    | 28.45                        | -0.48              | -0.02         | 24.56                            | 24.48                           | 0.08               | #             |
| >15,635, <=24,010                                 | 370                           | 110                        | 29.81                    | 43.60                        | -1.41              | -0.05         | 32.28                            | 30.30                           | 1.98 <sup>1</sup>  | 0.06          |
| >24,010                                           | 380                           | 50                         | 27.14                    | 21.48                        | 0.58               | 0.02          | 26.13                            | 26.30                           | -0.17              | -0.01         |
| Unknown                                           | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                  | †             |
| Tuition <sup>3</sup>                              |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |
| low                                               | 480                           | 150                        | 41.89                    | 67.49                        | -2.62              | -0.06         | 46.47                            | 42.21                           | 4.27 <sup>1</sup>  | 0.09          |
| medium                                            | 1,020                         | 100                        | 56.83                    | 29.85                        | 2.76               | 0.05          | 52.00                            | 56.66                           | -4.66 <sup>1</sup> | -0.09         |
| high                                              | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                  | †             |
| Unknown                                           | 50                            | 30                         | 1.27                     | 2.65                         | -0.14 <sup>1</sup> | -0.10         | 1.52                             | 1.13                            | 0.39 <sup>1</sup>  | 0.26          |
| Percent PT enrollment                             |                               |                            |                          |                              |                    |               |                                  |                                 |                    |               |
| <= 25                                             | 920                           | 50                         | 52.51                    | 17.70                        | 3.56 <sup>1</sup>  | 0.07          | 46.28                            | 51.30                           | -5.02 <sup>1</sup> | -0.11         |
| >25, <=50                                         | 520                           | 150                        | 43.05                    | 67.49                        | -2.50              | -0.05         | 47.42                            | 43.62                           | 3.81 <sup>1</sup>  | 0.08          |
| >50, <=75                                         | 60                            | 50                         | 3.16                     | 12.15                        | -0.92              | -0.23         | 4.77                             | 3.95                            | 0.83               | 0.17          |
| >75                                               | †                             | †                          | †                        | †                            | †                  | †             | †                                | †                               | †                  | †             |
| Unknown                                           | 50                            | 30                         | 1.27                     | 2.65                         | -0.14 <sup>1</sup> | -0.10         | 1.52                             | 1.13                            | 0.39 <sup>1</sup>  | 0.26          |

† Not applicable.

# Rounds to zero.

<sup>1</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.<sup>2</sup> Undergraduate enrollment, Pell grant amount, and Stafford loan amount categories were defined by quartiles.<sup>3</sup> Tuition categories were defined by thirds.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).



## Item-Level Nonresponse Bias Analysis

---

---

Table K-23. Item nonresponse bias before imputation for DEPCILD for all institutions: 2004

| Characteristic                                                                            | Before nonresponse adjustment |                            |                          |                             | Estimated bias     | Relative bias |
|-------------------------------------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|-----------------------------|--------------------|---------------|
|                                                                                           | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Nonrespondent mean weighted |                    |               |
| Institution strata                                                                        |                               |                            |                          |                             |                    |               |
| Public less-than-2-year                                                                   | 1,560                         | 360                        | 2.01                     | 2.81                        | -0.11 <sup>1</sup> | -0.05         |
| Public 2-year                                                                             | 21,800                        | 4,520                      | 28.01                    | 34.99                       | -0.99 <sup>1</sup> | -0.03         |
| Public 4-year, non-doctorate-granting                                                     | 7,190                         | 970                        | 9.23                     | 7.51                        | 0.25               | 0.03          |
| Public 4-year, doctorate-granting                                                         | 18,140                        | 2,460                      | 23.31                    | 19.02                       | 0.61 <sup>1</sup>  | 0.03          |
| Private not-for-profit, less-than-4 year                                                  | 2,140                         | 430                        | 2.75                     | 3.36                        | -0.09              | -0.03         |
| Private not-for-profit, 4-year, non-doctorate-granting                                    | 7,760                         | 790                        | 9.96                     | 6.15                        | 0.54 <sup>1</sup>  | 0.06          |
| Private not-for-profit, 4-year, doctorate-granting                                        | 8,370                         | 1,150                      | 10.75                    | 8.88                        | 0.27 <sup>1</sup>  | 0.03          |
| Private for-profit, less-than-2-year                                                      | 5,630                         | 1,520                      | 7.24                     | 11.73                       | -0.64 <sup>1</sup> | -0.08         |
| Private for-profit, 2-year or more                                                        | 5,250                         | 720                        | 6.75                     | 5.56                        | 0.17 <sup>1</sup>  | 0.03          |
| Bureau of Economic Analysis Code (Office of Business Economics [OBE]) Region <sup>2</sup> |                               |                            |                          |                             |                    |               |
| New England                                                                               | 4,530                         | 700                        | 5.82                     | 5.41                        | 0.06               | 0.01          |
| Mid East                                                                                  | 12,140                        | 1,720                      | 15.59                    | 13.30                       | 0.33               | 0.02          |
| Great Lakes                                                                               | 11,660                        | 2,110                      | 14.98                    | 16.30                       | -0.19              | -0.01         |
| Plains                                                                                    | 6,310                         | 690                        | 8.11                     | 5.32                        | 0.40               | 0.05          |
| Southeast                                                                                 | 18,690                        | 3,190                      | 24.01                    | 24.67                       | -0.09              | #             |
| Southwest                                                                                 | 8,230                         | 1,890                      | 10.58                    | 14.64                       | -0.58 <sup>1</sup> | -0.05         |
| Rocky Mountains                                                                           | 3,120                         | 540                        | 4.00                     | 4.15                        | -0.02              | -0.01         |
| Far West                                                                                  | 11,580                        | 1,910                      | 14.88                    | 14.75                       | 0.02               | #             |
| Outlying areas                                                                            | 1,570                         | 190                        | 2.02                     | 1.46                        | 0.08 <sup>1</sup>  | 0.04          |
| Student type                                                                              |                               |                            |                          |                             |                    |               |
| Undergraduate student                                                                     | 68,570                        | 11,280                     | 88.11                    | 87.32                       | 0.11               | #             |
| Graduate student                                                                          | 8,100                         | 1,520                      | 10.41                    | 11.73                       | -0.19              | -0.02         |
| First-professional                                                                        | 1,160                         | 120                        | 1.49                     | 0.95                        | 0.08 <sup>1</sup>  | 0.05          |
| Gender                                                                                    |                               |                            |                          |                             |                    |               |
| Male                                                                                      | 32,230                        | 5,240                      | 41.41                    | 40.54                       | 0.12 <sup>1</sup>  | #             |
| Female                                                                                    | 45,600                        | 7,670                      | 58.59                    | 59.38                       | -0.11 <sup>1</sup> | #             |
| Unknown                                                                                   | #                             | 10                         | #                        | 0.09                        | -0.01              | -0.90         |
| Age group                                                                                 |                               |                            |                          |                             |                    |               |
| 15-23                                                                                     | 45,130                        | 5,680                      | 57.99                    | 43.94                       | 2.00 <sup>1</sup>  | 0.04          |
| 24-29                                                                                     | 14,350                        | 2,900                      | 18.44                    | 22.48                       | -0.57 <sup>1</sup> | -0.03         |
| 30 or above                                                                               | 18,340                        | 4,330                      | 23.57                    | 33.49                       | -1.41 <sup>1</sup> | -0.06         |
| Unknown                                                                                   | #                             | 10                         | #                        | 0.10                        | -0.01              | -1.00         |
| CPS record available                                                                      |                               |                            |                          |                             |                    |               |
| No                                                                                        | 53,700                        | 3,200                      | 69.00                    | 24.73                       | 6.30 <sup>1</sup>  | 0.10          |
| Yes                                                                                       | 24,130                        | 9,730                      | 31.00                    | 75.27                       | -6.30 <sup>1</sup> | -0.17         |

See notes at end of table.

**Table K-23. Item nonresponse bias before imputation for DEPCCHILD for all institutions: 2004—Continued**

| Characteristic                                                  | Before nonresponse adjustment |                            |                          |                             | Estimated bias     | Relative bias |
|-----------------------------------------------------------------|-------------------------------|----------------------------|--------------------------|-----------------------------|--------------------|---------------|
|                                                                 | Unweighted respondents        | Unweighted non-respondents | Respondent mean weighted | Nonrespondent mean weighted |                    |               |
| Applied for federal aid                                         |                               |                            |                          |                             |                    |               |
| No                                                              | 55,380                        | 3,570                      | 71.16                    | 27.64                       | 6.20 <sup>1</sup>  | 0.10          |
| Yes                                                             | 19,930                        | 8,880                      | 25.61                    | 68.69                       | -6.14 <sup>1</sup> | -0.19         |
| Unknown                                                         | 2,510                         | 470                        | 3.23                     | 3.67                        | -0.06              | -0.02         |
| Pell Grant status                                               |                               |                            |                          |                             |                    |               |
| Received                                                        | 26,290                        | 2,960                      | 33.78                    | 22.89                       | 1.55 <sup>1</sup>  | 0.05          |
| Did not receive                                                 | 51,350                        | 9,960                      | 65.98                    | 77.09                       | -1.58 <sup>1</sup> | -0.02         |
| Unknown                                                         | 190                           | #                          | 0.24                     | 0.02                        | 0.03               | 0.15          |
| Total Pell amount received <sup>2</sup>                         |                               |                            |                          |                             |                    |               |
| \$0-1,487                                                       | 6,550                         | 760                        | 24.92                    | 25.79                       | -0.12              | #             |
| 1,488-2,500                                                     | 6,500                         | 850                        | 24.72                    | 28.77                       | -0.58              | -0.02         |
| 2,501-4,000                                                     | 6,770                         | 590                        | 25.76                    | 19.84                       | 0.84 <sup>1</sup>  | 0.03          |
| 4,001 or more                                                   | 6,470                         | 760                        | 24.60                    | 25.59                       | -0.14              | -0.01         |
| Stafford loan status                                            |                               |                            |                          |                             |                    |               |
| Received                                                        | 32,270                        | 1,670                      | 41.47                    | 12.96                       | 4.06 <sup>1</sup>  | 0.11          |
| Did not receive                                                 | 45,330                        | 11,250                     | 58.25                    | 87.03                       | -4.10 <sup>1</sup> | -0.07         |
| Unknown                                                         | 220                           | #                          | 0.29                     | 0.02                        | 0.04 <sup>1</sup>  | 0.16          |
| Total Stafford amount received <sup>2</sup>                     |                               |                            |                          |                             |                    |               |
| \$0-2,625                                                       | 10,950                        | 460                        | 33.94                    | 27.24                       | 0.95 <sup>1</sup>  | 0.03          |
| 2,626-4,237                                                     | 5,230                         | 330                        | 16.21                    | 19.95                       | -0.53              | -0.03         |
| 4,238-6,625                                                     | 9,570                         | 630                        | 29.67                    | 37.46                       | -1.11              | -0.04         |
| 6,626 or more                                                   | 6,520                         | 260                        | 20.19                    | 15.35                       | 0.69               | 0.04          |
| Institution undergraduate enrollment <sup>2</sup>               |                               |                            |                          |                             |                    |               |
| 0-2,103                                                         | 19,030                        | 3,480                      | 24.45                    | 26.90                       | -0.35 <sup>1</sup> | -0.01         |
| 2,104-7,998                                                     | 19,670                        | 2,870                      | 25.28                    | 22.24                       | 0.43 <sup>1</sup>  | 0.02          |
| 7,999-18,375                                                    | 19,360                        | 3,260                      | 24.87                    | 25.21                       | -0.05              | #             |
| 18,376 or more                                                  | 19,150                        | 3,190                      | 24.60                    | 24.66                       | -0.01              | #             |
| Unknown                                                         | 630                           | 130                        | 0.80                     | 0.99                        | -0.03              | -0.03         |
| Institution graduate/first-professional enrollment <sup>3</sup> |                               |                            |                          |                             |                    |               |
| 1-4,087                                                         | 19,980                        | 2,640                      | 25.67                    | 20.44                       | 0.74 <sup>1</sup>  | 0.03          |
| 4,088 or more                                                   | 19,160                        | 2,590                      | 24.61                    | 20.02                       | 0.65 <sup>1</sup>  | 0.03          |
| 0 graduate/first-professional students                          | 38,700                        | 7,690                      | 49.72                    | 59.54                       | -1.40 <sup>1</sup> | -0.03         |

# Rounds to zero.

<sup>1</sup> Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

<sup>2</sup> Undergraduate enrollment, Pell grant amount, and Stafford loan amount categories were defined by quartiles.

<sup>3</sup> Graduate enrollment defined by the median.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004

| Variable                 | Variable label                                              | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|-------------------------------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| ATTENDA                  | Reason for attending NPSAS: complete associate's degree     |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                             | 0.14         | 0.06                    | 0.10          | 0.23                       | 0.25                   | 0.08                                    | 0.21                                       | 0.32                                   | 0.12                                | 0.09                              |
| Median estimated bias    |                                                             | 0.05         | 0.05                    | 0.03          | 0.15                       | 0.16                   | 0.07                                    | 0.13                                       | 0.22                                   | 0.05                                | 0.05                              |
| Percent significant bias |                                                             | 54.55        | 21.62                   | 29.27         | 11.36                      | 30.95                  | 7.69                                    | 16.28                                      | 31.71                                  | 17.95                               | 10.00                             |
| ATTENDB                  | Reason for attending NPSAS: complete certificate            |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                             | 0.14         | 0.06                    | 0.10          | 0.23                       | 0.25                   | 0.08                                    | 0.21                                       | 0.32                                   | 0.12                                | 0.09                              |
| Median estimated bias    |                                                             | 0.05         | 0.05                    | 0.03          | 0.15                       | 0.16                   | 0.07                                    | 0.13                                       | 0.22                                   | 0.05                                | 0.05                              |
| Percent significant bias |                                                             | 54.55        | 21.62                   | 29.27         | 11.36                      | 30.95                  | 7.69                                    | 16.28                                      | 31.71                                  | 17.95                               | 10.00                             |
| ATTENDC                  | Reason for attending NPSAS: learn job skills                |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                             | 0.14         | 0.06                    | 0.10          | 0.23                       | 0.25                   | 0.08                                    | 0.21                                       | 0.32                                   | 0.12                                | 0.09                              |
| Median estimated bias    |                                                             | 0.05         | 0.05                    | 0.03          | 0.15                       | 0.16                   | 0.07                                    | 0.13                                       | 0.22                                   | 0.05                                | 0.05                              |
| Percent significant bias |                                                             | 54.55        | 21.62                   | 29.27         | 11.36                      | 30.95                  | 7.69                                    | 16.28                                      | 31.71                                  | 17.95                               | 10.00                             |
| ATTENDD                  | Reason for attending NPSAS: personal interest or enrichment |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                             | 0.14         | 0.06                    | 0.10          | 0.23                       | 0.25                   | 0.08                                    | 0.21                                       | 0.32                                   | 0.12                                | 0.09                              |
| Median estimated bias    |                                                             | 0.05         | 0.05                    | 0.03          | 0.15                       | 0.16                   | 0.07                                    | 0.13                                       | 0.22                                   | 0.05                                | 0.05                              |
| Percent significant bias |                                                             | 54.55        | 21.62                   | 29.27         | 11.36                      | 30.95                  | 7.69                                    | 16.28                                      | 31.71                                  | 17.95                               | 10.00                             |
| ATTENDE                  | Reason for attending NPSAS: transfer to 2-year school       |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                             | 0.14         | 0.06                    | 0.10          | 0.23                       | 0.25                   | 0.08                                    | 0.21                                       | 0.32                                   | 0.12                                | 0.09                              |
| Median estimated bias    |                                                             | 0.05         | 0.05                    | 0.03          | 0.15                       | 0.16                   | 0.07                                    | 0.13                                       | 0.22                                   | 0.05                                | 0.05                              |
| Percent significant bias |                                                             | 54.55        | 21.62                   | 29.27         | 11.36                      | 30.95                  | 7.69                                    | 16.28                                      | 31.71                                  | 17.95                               | 10.00                             |
| ATTENDF                  | Reason for attending NPSAS: transfer to 4-year school       |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                             | 0.14         | 0.06                    | 0.10          | 0.23                       | 0.25                   | 0.08                                    | 0.21                                       | 0.32                                   | 0.12                                | 0.09                              |
| Median estimated bias    |                                                             | 0.05         | 0.05                    | 0.03          | 0.15                       | 0.16                   | 0.07                                    | 0.13                                       | 0.22                                   | 0.05                                | 0.05                              |
| Percent significant bias |                                                             | 54.55        | 21.62                   | 29.27         | 11.36                      | 30.95                  | 7.69                                    | 16.28                                      | 31.71                                  | 17.95                               | 10.00                             |
| ATTENDG                  | Reason for attending NPSAS: transfer to another school      |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                             | 0.14         | 0.06                    | 0.10          | 0.23                       | 0.25                   | 0.08                                    | 0.21                                       | 0.32                                   | 0.12                                | 0.09                              |
| Median estimated bias    |                                                             | 0.05         | 0.05                    | 0.03          | 0.15                       | 0.16                   | 0.07                                    | 0.13                                       | 0.22                                   | 0.05                                | 0.05                              |
| Percent significant bias |                                                             | 54.55        | 21.62                   | 29.27         | 11.36                      | 30.95                  | 7.69                                    | 16.28                                      | 31.71                                  | 17.95                               | 10.00                             |

See notes at end of table.

**Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued**

| Variable                 | Variable label                                        | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|-------------------------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| BAYEAR                   | Year received bachelor's degree                       |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                       | 0.05         | †                       | †             | 0.06                       | 0.03                   | †                                       | 0.12                                       | 0.06                                   | †                                   | 0.08                              |
| Median estimated bias    |                                                       | 0.01         | †                       | †             | 0.04                       | 0.01                   | †                                       | 0.04                                       | 0.02                                   | †                                   | 0.04                              |
| Percent significant bias |                                                       | 6.98         | †                       | †             | #                          | 14.29                  | †                                       | 2.86                                       | 8.11                                   | †                                   | #                                 |
| CLASSA                   | Type of class: business                               |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                       | 0.19         | 0.33                    | 0.13          | 0.23                       | 0.25                   | 0.34                                    | 0.21                                       | 0.32                                   | 0.69                                | 0.16                              |
| Median estimated bias    |                                                       | 0.11         | 0.20                    | 0.06          | 0.14                       | 0.17                   | 0.25                                    | 0.15                                       | 0.23                                   | 0.56                                | 0.11                              |
| Percent significant bias |                                                       | 41.82        | 11.76                   | 26.83         | 13.64                      | 33.33                  | 2.70                                    | 16.28                                      | 29.27                                  | 20.51                               | 37.50                             |
| CLASSB                   | Type of class: health                                 |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                       | 0.19         | 0.33                    | 0.13          | 0.23                       | 0.25                   | 0.34                                    | 0.21                                       | 0.32                                   | 0.69                                | 0.16                              |
| Median estimated bias    |                                                       | 0.11         | 0.20                    | 0.06          | 0.14                       | 0.17                   | 0.25                                    | 0.15                                       | 0.23                                   | 0.56                                | 0.11                              |
| Percent significant bias |                                                       | 41.82        | 11.76                   | 26.83         | 13.64                      | 33.33                  | 2.70                                    | 16.28                                      | 29.27                                  | 20.51                               | 37.50                             |
| CLASSC                   | Type of class: education                              |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                       | 0.19         | 0.33                    | 0.13          | 0.23                       | 0.25                   | 0.34                                    | 0.21                                       | 0.32                                   | 0.69                                | 0.16                              |
| Median estimated bias    |                                                       | 0.11         | 0.20                    | 0.06          | 0.14                       | 0.17                   | 0.25                                    | 0.15                                       | 0.23                                   | 0.56                                | 0.11                              |
| Percent significant bias |                                                       | 41.82        | 11.76                   | 26.83         | 13.64                      | 33.33                  | 2.70                                    | 16.28                                      | 29.27                                  | 20.51                               | 37.50                             |
| CLASSD                   | Type of class: engineering and engineering technology |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                       | 0.19         | 0.33                    | 0.13          | 0.23                       | 0.25                   | 0.34                                    | 0.21                                       | 0.32                                   | 0.69                                | 0.16                              |
| Median estimated bias    |                                                       | 0.11         | 0.20                    | 0.06          | 0.14                       | 0.17                   | 0.25                                    | 0.15                                       | 0.23                                   | 0.56                                | 0.11                              |
| Percent significant bias |                                                       | 41.82        | 11.76                   | 26.83         | 13.64                      | 33.33                  | 2.70                                    | 16.28                                      | 29.27                                  | 20.51                               | 37.50                             |
| CLASSE                   | Type of class: computer and information sciences      |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                       | 0.19         | 0.33                    | 0.13          | 0.23                       | 0.25                   | 0.34                                    | 0.21                                       | 0.32                                   | 0.69                                | 0.16                              |
| Median estimated bias    |                                                       | 0.11         | 0.20                    | 0.06          | 0.14                       | 0.17                   | 0.25                                    | 0.15                                       | 0.23                                   | 0.56                                | 0.11                              |
| Percent significant bias |                                                       | 41.82        | 11.76                   | 26.83         | 13.64                      | 33.33                  | 2.70                                    | 16.28                                      | 29.27                                  | 20.51                               | 37.50                             |
| CLASSF                   | Type of class: social sciences                        |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                       | 0.19         | 0.33                    | 0.13          | 0.23                       | 0.25                   | 0.34                                    | 0.21                                       | 0.32                                   | 0.69                                | 0.16                              |
| Median estimated bias    |                                                       | 0.11         | 0.20                    | 0.06          | 0.14                       | 0.17                   | 0.25                                    | 0.15                                       | 0.23                                   | 0.56                                | 0.11                              |
| Percent significant bias |                                                       | 41.82        | 11.76                   | 26.83         | 13.64                      | 33.33                  | 2.70                                    | 16.28                                      | 29.27                                  | 20.51                               | 37.50                             |
| CLASSG                   | Type of class: natural sciences and mathematics       |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                       | 0.19         | 0.33                    | 0.13          | 0.23                       | 0.25                   | 0.34                                    | 0.21                                       | 0.32                                   | 0.69                                | 0.16                              |
| Median estimated bias    |                                                       | 0.11         | 0.20                    | 0.06          | 0.14                       | 0.17                   | 0.25                                    | 0.15                                       | 0.23                                   | 0.56                                | 0.11                              |
| Percent significant bias |                                                       | 41.82        | 11.76                   | 26.83         | 13.64                      | 33.33                  | 2.70                                    | 16.28                                      | 29.27                                  | 20.51                               | 37.50                             |

See notes at end of table.

Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued

| Variable                 | Variable label                        | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|---------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| CLASSH                   | Type of class: arts and humanities    |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                       | 0.19         | 0.33                    | 0.13          | 0.23                       | 0.25                   | 0.34                                    | 0.21                                       | 0.32                                   | 0.69                                | 0.16                              |
| Median estimated bias    |                                       | 0.11         | 0.20                    | 0.06          | 0.14                       | 0.17                   | 0.25                                    | 0.15                                       | 0.23                                   | 0.56                                | 0.11                              |
| Percent significant bias |                                       | 41.82        | 11.76                   | 26.83         | 13.64                      | 33.33                  | 2.70                                    | 16.28                                      | 29.27                                  | 20.51                               | 37.50                             |
| CLASSI                   | Type of class: communications         |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                       | 0.19         | 0.33                    | 0.13          | 0.23                       | 0.25                   | 0.34                                    | 0.21                                       | 0.32                                   | 0.69                                | 0.16                              |
| Median estimated bias    |                                       | 0.11         | 0.20                    | 0.06          | 0.14                       | 0.17                   | 0.25                                    | 0.15                                       | 0.23                                   | 0.56                                | 0.11                              |
| Percent significant bias |                                       | 41.82        | 11.76                   | 26.83         | 13.64                      | 33.33                  | 2.70                                    | 16.28                                      | 29.27                                  | 20.51                               | 37.50                             |
| CLASSJ                   | Type of class: vocational program     |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                       | 0.19         | 0.33                    | 0.13          | 0.23                       | 0.25                   | 0.34                                    | 0.21                                       | 0.32                                   | 0.69                                | 0.16                              |
| Median estimated bias    |                                       | 0.11         | 0.20                    | 0.06          | 0.14                       | 0.17                   | 0.25                                    | 0.15                                       | 0.23                                   | 0.56                                | 0.11                              |
| Percent significant bias |                                       | 41.82        | 11.76                   | 26.83         | 13.64                      | 33.33                  | 2.70                                    | 16.28                                      | 29.27                                  | 20.51                               | 37.50                             |
| CLASSK                   | Type of class: university transfer    |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                       | 0.19         | 0.33                    | 0.13          | 0.23                       | 0.25                   | 0.34                                    | 0.21                                       | 0.32                                   | 0.69                                | 0.16                              |
| Median estimated bias    |                                       | 0.11         | 0.20                    | 0.06          | 0.14                       | 0.17                   | 0.25                                    | 0.15                                       | 0.23                                   | 0.56                                | 0.11                              |
| Percent significant bias |                                       | 41.82        | 11.76                   | 26.83         | 13.64                      | 33.33                  | 2.70                                    | 16.28                                      | 29.27                                  | 20.51                               | 37.50                             |
| CLASSL                   | Type of class: general education      |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                       | 0.19         | 0.33                    | 0.13          | 0.23                       | 0.25                   | 0.34                                    | 0.21                                       | 0.32                                   | 0.69                                | 0.16                              |
| Median estimated bias    |                                       | 0.11         | 0.20                    | 0.06          | 0.14                       | 0.17                   | 0.25                                    | 0.15                                       | 0.23                                   | 0.56                                | 0.11                              |
| Percent significant bias |                                       | 41.82        | 11.76                   | 26.83         | 13.64                      | 33.33                  | 2.70                                    | 16.28                                      | 29.27                                  | 20.51                               | 37.50                             |
| CLASSX                   | Type of class: other                  |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                       | 0.19         | 0.33                    | 0.13          | 0.23                       | 0.25                   | 0.34                                    | 0.21                                       | 0.32                                   | 0.69                                | 0.16                              |
| Median estimated bias    |                                       | 0.11         | 0.20                    | 0.06          | 0.14                       | 0.17                   | 0.25                                    | 0.15                                       | 0.23                                   | 0.56                                | 0.11                              |
| Percent significant bias |                                       | 41.82        | 11.76                   | 26.83         | 13.64                      | 33.33                  | 2.70                                    | 16.28                                      | 29.27                                  | 20.51                               | 37.50                             |
| COMHOUR                  | Number of hours volunteered per month |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                       | 0.25         | 0.18                    | 0.20          | 0.22                       | 0.15                   | 0.45                                    | 0.13                                       | 0.14                                   | 0.23                                | 0.37                              |
| Median estimated bias    |                                       | 0.14         | 0.14                    | 0.10          | 0.11                       | 0.07                   | 0.20                                    | 0.08                                       | 0.06                                   | 0.13                                | 0.19                              |
| Percent significant bias |                                       | 60.00        | 8.33                    | 36.59         | 27.27                      | 40.91                  | 17.95                                   | 13.95                                      | 13.33                                  | 20.51                               | 41.86                             |
| COMONE                   | One time event                        |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                       | 0.24         | 0.18                    | 0.18          | 0.20                       | 0.13                   | 0.40                                    | 0.11                                       | 0.13                                   | 0.23                                | 0.35                              |
| Median estimated bias    |                                       | 0.13         | 0.13                    | 0.08          | 0.09                       | 0.05                   | 0.19                                    | 0.06                                       | 0.06                                   | 0.13                                | 0.19                              |
| Percent significant bias |                                       | 58.18        | 11.11                   | 34.15         | 25.00                      | 40.91                  | 12.82                                   | 13.95                                      | 13.33                                  | 20.51                               | 46.51                             |

See notes at end of table.

**Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued**

| Variable | Variable label                                       | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|----------|------------------------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| COMREQ   | Volunteer work required for graduation/class         |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
|          | Mean estimated bias                                  | 0.24         | 0.18                    | 0.19          | 0.20                       | 0.13                   | 0.39                                    | 0.12                                       | 0.14                                   | 0.23                                | 0.30                              |
|          | Median estimated bias                                | 0.13         | 0.13                    | 0.09          | 0.09                       | 0.05                   | 0.17                                    | 0.07                                       | 0.06                                   | 0.09                                | 0.17                              |
|          | Percent significant bias                             | 54.72        | 25.00                   | 31.71         | 25.58                      | 30.95                  | 15.38                                   | 30.95                                      | 18.60                                  | 12.82                               | 40.48                             |
| COMSERV  | Community service/volunteer in last year             |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
|          | Mean estimated bias                                  | 0.12         | 0.09                    | 0.12          | 0.12                       | 0.09                   | 0.18                                    | 0.06                                       | 0.08                                   | 0.10                                | 0.12                              |
|          | Median estimated bias                                | 0.06         | 0.06                    | 0.04          | 0.05                       | 0.02                   | 0.10                                    | 0.03                                       | 0.03                                   | 0.05                                | 0.05                              |
|          | Percent significant bias                             | 50.91        | 32.43                   | 24.39         | 18.18                      | 28.26                  | 15.38                                   | 13.95                                      | 13.33                                  | 17.95                               | 30.23                             |
| COMSERVA | Volunteer: fundraising (political and non-political) |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
|          | Mean estimated bias                                  | 0.23         | 0.18                    | 0.19          | 0.20                       | 0.13                   | 0.38                                    | 0.11                                       | 0.13                                   | 0.24                                | 0.34                              |
|          | Median estimated bias                                | 0.13         | 0.12                    | 0.08          | 0.10                       | 0.05                   | 0.17                                    | 0.07                                       | 0.05                                   | 0.12                                | 0.19                              |
|          | Percent significant bias                             | 58.18        | 13.89                   | 36.59         | 25.00                      | 38.64                  | 15.38                                   | 13.95                                      | 15.56                                  | 20.51                               | 48.84                             |
| COMSERVB | Volunteer: homeless shelter/soup kitchen             |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
|          | Mean estimated bias                                  | 0.23         | 0.18                    | 0.19          | 0.20                       | 0.13                   | 0.38                                    | 0.11                                       | 0.13                                   | 0.24                                | 0.34                              |
|          | Median estimated bias                                | 0.13         | 0.12                    | 0.08          | 0.10                       | 0.05                   | 0.17                                    | 0.07                                       | 0.05                                   | 0.12                                | 0.19                              |
|          | Percent significant bias                             | 58.18        | 13.89                   | 36.59         | 25.00                      | 38.64                  | 15.38                                   | 13.95                                      | 15.56                                  | 20.51                               | 48.84                             |
| COMSERVC | Volunteer: health services                           |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
|          | Mean estimated bias                                  | 0.23         | 0.18                    | 0.19          | 0.20                       | 0.13                   | 0.38                                    | 0.11                                       | 0.13                                   | 0.24                                | 0.34                              |
|          | Median estimated bias                                | 0.13         | 0.12                    | 0.08          | 0.10                       | 0.05                   | 0.17                                    | 0.07                                       | 0.05                                   | 0.12                                | 0.19                              |
|          | Percent significant bias                             | 58.18        | 13.89                   | 36.59         | 25.00                      | 38.64                  | 15.38                                   | 13.95                                      | 15.56                                  | 20.51                               | 48.84                             |
| COMSERVD | Volunteer: neighborhood improvement                  |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
|          | Mean estimated bias                                  | 0.23         | 0.18                    | 0.19          | 0.20                       | 0.13                   | 0.38                                    | 0.11                                       | 0.13                                   | 0.24                                | 0.34                              |
|          | Median estimated bias                                | 0.13         | 0.12                    | 0.08          | 0.10                       | 0.05                   | 0.17                                    | 0.07                                       | 0.05                                   | 0.12                                | 0.19                              |
|          | Percent significant bias                             | 58.18        | 13.89                   | 36.59         | 25.00                      | 38.64                  | 15.38                                   | 13.95                                      | 15.56                                  | 20.51                               | 48.84                             |
| COMSERVE | Volunteer: service to the church                     |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
|          | Mean estimated bias                                  | 0.23         | 0.18                    | 0.19          | 0.20                       | 0.13                   | 0.38                                    | 0.11                                       | 0.13                                   | 0.24                                | 0.34                              |
|          | Median estimated bias                                | 0.13         | 0.12                    | 0.08          | 0.10                       | 0.05                   | 0.17                                    | 0.07                                       | 0.05                                   | 0.12                                | 0.19                              |
|          | Percent significant bias                             | 58.18        | 13.89                   | 36.59         | 25.00                      | 38.64                  | 15.38                                   | 13.95                                      | 15.56                                  | 20.51                               | 48.84                             |
| COMSERVF | Volunteer: tutoring/education-related                |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
|          | Mean estimated bias                                  | 0.23         | 0.18                    | 0.19          | 0.20                       | 0.13                   | 0.38                                    | 0.11                                       | 0.13                                   | 0.24                                | 0.34                              |
|          | Median estimated bias                                | 0.13         | 0.12                    | 0.08          | 0.10                       | 0.05                   | 0.17                                    | 0.07                                       | 0.05                                   | 0.12                                | 0.19                              |
|          | Percent significant bias                             | 58.18        | 13.89                   | 36.59         | 25.00                      | 38.64                  | 15.38                                   | 13.95                                      | 15.56                                  | 20.51                               | 48.84                             |

See notes at end of table.

Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued

| Variable                 | Variable label                    | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|-----------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| COMSERVG                 | Volunteer: other work with kids   |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                   | 0.23         | 0.18                    | 0.19          | 0.20                       | 0.13                   | 0.38                                    | 0.11                                       | 0.13                                   | 0.24                                | 0.34                              |
| Median estimated bias    |                                   | 0.13         | 0.12                    | 0.08          | 0.10                       | 0.05                   | 0.17                                    | 0.07                                       | 0.05                                   | 0.12                                | 0.19                              |
| Percent significant bias |                                   | 58.18        | 13.89                   | 36.59         | 25.00                      | 38.64                  | 15.38                                   | 13.95                                      | 15.56                                  | 20.51                               | 48.84                             |
| COMSERVX                 | Volunteer: other                  |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                   | 0.23         | 0.18                    | 0.19          | 0.20                       | 0.13                   | 0.38                                    | 0.11                                       | 0.13                                   | 0.24                                | 0.34                              |
| Median estimated bias    |                                   | 0.13         | 0.12                    | 0.08          | 0.10                       | 0.05                   | 0.17                                    | 0.07                                       | 0.05                                   | 0.12                                | 0.19                              |
| Percent significant bias |                                   | 58.18        | 13.89                   | 36.59         | 25.00                      | 38.64                  | 15.38                                   | 13.95                                      | 15.56                                  | 20.51                               | 48.84                             |
| CONSIDRA                 | Consider campus safety            |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                   | 0.13         | 0.09                    | 0.12          | 0.13                       | 0.08                   | 0.17                                    | 0.06                                       | 0.09                                   | 0.10                                | 0.11                              |
| Median estimated bias    |                                   | 0.06         | 0.06                    | 0.04          | 0.04                       | 0.02                   | 0.09                                    | 0.04                                       | 0.03                                   | 0.05                                | 0.05                              |
| Percent significant bias |                                   | 45.28        | 32.43                   | 19.51         | 20.93                      | 25.00                  | 15.38                                   | 16.67                                      | 13.95                                  | 17.95                               | 23.81                             |
| CONSIDRB                 | Consider graduation rate          |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                   | 0.13         | 0.09                    | 0.12          | 0.13                       | 0.08                   | 0.17                                    | 0.06                                       | 0.09                                   | 0.10                                | 0.11                              |
| Median estimated bias    |                                   | 0.06         | 0.06                    | 0.04          | 0.04                       | 0.02                   | 0.09                                    | 0.04                                       | 0.03                                   | 0.05                                | 0.05                              |
| Percent significant bias |                                   | 45.28        | 32.43                   | 19.51         | 20.93                      | 25.00                  | 15.38                                   | 16.67                                      | 13.95                                  | 17.95                               | 23.81                             |
| CONSIDRC                 | Consider job rate                 |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                   | 0.17         | 0.10                    | †             | †                          | †                      | 0.39                                    | †                                          | †                                      | 0.15                                | †                                 |
| Median estimated bias    |                                   | 0.05         | 0.06                    | †             | †                          | †                      | 0.32                                    | †                                          | †                                      | 0.06                                | †                                 |
| Percent significant bias |                                   | 20.00        | 10.81                   | †             | †                          | †                      | 6.25                                    | †                                          | †                                      | 17.95                               | †                                 |
| CRBALDUE                 | Balance due on all credit cards   |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                   | 0.25         | 0.39                    | 0.24          | 0.32                       | 0.12                   | 0.31                                    | 0.24                                       | 0.27                                   | 0.30                                | 0.34                              |
| Median estimated bias    |                                   | 0.15         | 0.31                    | 0.14          | 0.20                       | 0.10                   | 0.22                                    | 0.17                                       | 0.14                                   | 0.17                                | 0.13                              |
| Percent significant bias |                                   | 41.18        | 3.03                    | 30.77         | 36.59                      | 40.54                  | 14.29                                   | 25.00                                      | 22.50                                  | 16.22                               | 12.50                             |
| DEGEARN                  | Earned prior degree/certificates  |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                   | 0.10         | 0.05                    | 0.09          | 0.09                       | 0.08                   | 0.08                                    | 0.04                                       | 0.06                                   | 0.08                                | 0.07                              |
| Median estimated bias    |                                   | 0.04         | 0.04                    | 0.03          | 0.03                       | 0.02                   | 0.08                                    | 0.03                                       | 0.02                                   | 0.04                                | 0.04                              |
| Percent significant bias |                                   | 50.91        | 13.51                   | 34.15         | 18.18                      | 30.43                  | 7.69                                    | 16.28                                      | 15.56                                  | 17.95                               | 27.91                             |
| DEGEARNA                 | Already earned bachelor's degree  |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                   | 0.33         | 0.15                    | 0.23          | 0.32                       | 0.25                   | 0.35                                    | 0.25                                       | 0.23                                   | 0.25                                | 0.31                              |
| Median estimated bias    |                                   | 0.20         | 0.12                    | 0.13          | 0.16                       | 0.14                   | 0.26                                    | 0.14                                       | 0.12                                   | 0.16                                | 0.20                              |
| Percent significant bias |                                   | 60.00        | 5.41                    | 36.59         | 45.45                      | 68.18                  | 23.68                                   | 32.56                                      | 38.64                                  | 24.32                               | 41.86                             |
| DEGEARNB                 | Already earned associate's degree |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                   | 0.33         | 0.15                    | 0.23          | 0.32                       | 0.25                   | 0.35                                    | 0.25                                       | 0.23                                   | 0.25                                | 0.31                              |
| Median estimated bias    |                                   | 0.20         | 0.12                    | 0.13          | 0.16                       | 0.14                   | 0.26                                    | 0.14                                       | 0.12                                   | 0.16                                | 0.20                              |
| Percent significant bias |                                   | 60.00        | 5.41                    | 36.59         | 45.45                      | 68.18                  | 23.68                                   | 32.56                                      | 38.64                                  | 24.32                               | 41.86                             |

See notes at end of table.



**Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued**

| Variable                 | Variable label                                   | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|--------------------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| DEGEARNC                 | Already earned undergraduate certificate/diploma |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                  | 0.33         | 0.15                    | 0.23          | 0.32                       | 0.25                   | 0.35                                    | 0.25                                       | 0.23                                   | 0.25                                | 0.31                              |
| Median estimated bias    |                                                  | 0.20         | 0.12                    | 0.13          | 0.16                       | 0.14                   | 0.26                                    | 0.14                                       | 0.12                                   | 0.16                                | 0.20                              |
| Percent significant bias |                                                  | 60.00        | 5.41                    | 36.59         | 45.45                      | 68.18                  | 23.68                                   | 32.56                                      | 38.64                                  | 24.32                               | 41.86                             |
| DEGEARND                 | Already earned post-BA certificate               |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                  | 0.33         | 0.15                    | 0.23          | 0.32                       | 0.25                   | 0.35                                    | 0.25                                       | 0.23                                   | 0.25                                | 0.31                              |
| Median estimated bias    |                                                  | 0.20         | 0.12                    | 0.13          | 0.16                       | 0.14                   | 0.26                                    | 0.14                                       | 0.12                                   | 0.16                                | 0.20                              |
| Percent significant bias |                                                  | 60.00        | 5.41                    | 36.59         | 45.45                      | 68.18                  | 23.68                                   | 32.56                                      | 38.64                                  | 24.32                               | 41.86                             |
| DEGEARNE                 | Already earned master's degree                   |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                  | 0.33         | 0.15                    | 0.23          | 0.32                       | 0.25                   | 0.35                                    | 0.25                                       | 0.23                                   | 0.25                                | 0.31                              |
| Median estimated bias    |                                                  | 0.20         | 0.12                    | 0.13          | 0.16                       | 0.14                   | 0.26                                    | 0.14                                       | 0.12                                   | 0.16                                | 0.20                              |
| Percent significant bias |                                                  | 60.00        | 5.41                    | 36.59         | 45.45                      | 68.18                  | 23.68                                   | 32.56                                      | 38.64                                  | 24.32                               | 41.86                             |
| DEGEARNF                 | Already earned post-MA certificate               |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                  | 0.33         | 0.15                    | 0.23          | 0.32                       | 0.25                   | 0.35                                    | 0.25                                       | 0.23                                   | 0.25                                | 0.31                              |
| Median estimated bias    |                                                  | 0.20         | 0.12                    | 0.13          | 0.16                       | 0.14                   | 0.26                                    | 0.14                                       | 0.12                                   | 0.16                                | 0.20                              |
| Percent significant bias |                                                  | 60.00        | 5.41                    | 36.59         | 45.45                      | 68.18                  | 23.68                                   | 32.56                                      | 38.64                                  | 24.32                               | 41.86                             |
| DEGEARNG                 | Already earned first professional degree         |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                  | 0.33         | 0.15                    | 0.23          | 0.32                       | 0.25                   | 0.35                                    | 0.25                                       | 0.23                                   | 0.25                                | 0.31                              |
| Median estimated bias    |                                                  | 0.20         | 0.12                    | 0.13          | 0.16                       | 0.14                   | 0.26                                    | 0.14                                       | 0.12                                   | 0.16                                | 0.20                              |
| Percent significant bias |                                                  | 60.00        | 5.41                    | 36.59         | 45.45                      | 68.18                  | 23.68                                   | 32.56                                      | 38.64                                  | 24.32                               | 41.86                             |
| DEGEARNH                 | Already earned doctoral degree                   |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                  | 0.33         | 0.15                    | 0.23          | 0.32                       | 0.25                   | 0.35                                    | 0.25                                       | 0.23                                   | 0.25                                | 0.31                              |
| Median estimated bias    |                                                  | 0.20         | 0.12                    | 0.13          | 0.16                       | 0.14                   | 0.26                                    | 0.14                                       | 0.12                                   | 0.16                                | 0.20                              |
| Percent significant bias |                                                  | 60.00        | 5.41                    | 36.59         | 45.45                      | 68.18                  | 23.68                                   | 32.56                                      | 38.64                                  | 24.32                               | 41.86                             |
| DELIVE                   | Distance education: live                         |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                  | 0.37         | 0.44                    | 0.23          | 0.40                       | 0.23                   | 0.38                                    | 0.31                                       | 0.44                                   | 0.41                                | 0.64                              |
| Median estimated bias    |                                                  | 0.21         | 0.27                    | 0.12          | 0.17                       | 0.12                   | 0.21                                    | 0.18                                       | 0.26                                   | 0.12                                | 0.33                              |
| Percent significant bias |                                                  | 47.27        | 19.44                   | 19.51         | 15.91                      | 29.55                  | 15.79                                   | 23.26                                      | 27.27                                  | 16.22                               | 48.84                             |
| DEPCARE                  | Have dependent children in daycare               |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                  | 0.15         | 0.12                    | 0.12          | 0.10                       | 0.09                   | 0.19                                    | 0.05                                       | 0.11                                   | 0.14                                | 0.10                              |
| Median estimated bias    |                                                  | 0.07         | 0.05                    | 0.05          | 0.05                       | 0.03                   | 0.10                                    | 0.03                                       | 0.05                                   | 0.07                                | 0.06                              |
| Percent significant bias |                                                  | 29.09        | 2.78                    | 7.32          | 11.90                      | 4.35                   | 2.63                                    | #                                          | 13.64                                  | 16.22                               | 13.95                             |

See notes at end of table.

**Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued**

| Variable                 | Variable label                                 | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|------------------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| DEPCHILD                 | Dependents - has dependent children            |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                | 0.08         | 0.08                    | 0.10          | †                          | †                      | 0.07                                    | †                                          | †                                      | 0.06                                | †                                 |
| Median estimated bias    |                                                | 0.03         | 0.05                    | 0.03          | †                          | †                      | 0.04                                    | †                                          | †                                      | 0.04                                | †                                 |
| Percent significant bias |                                                | 56.36        | 32.43                   | 36.59         | †                          | †                      | 15.38                                   | †                                          | †                                      | 33.33                               | †                                 |
| DEPCLAIM                 | Claimed as a dependent                         |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                | 0.12         | 0.15                    | 0.13          | 0.12                       | 0.04                   | 0.11                                    | 0.06                                       | 0.06                                   | 0.13                                | 0.10                              |
| Median estimated bias    |                                                | 0.04         | 0.07                    | 0.03          | 0.04                       | 0.02                   | 0.07                                    | 0.03                                       | 0.03                                   | 0.07                                | 0.04                              |
| Percent significant bias |                                                | 43.14        | #                       | 25.64         | 24.39                      | 27.03                  | 8.11                                    | 17.50                                      | 12.50                                  | 10.81                               | 5.00                              |
| DEPCOST                  | Monthly daycare costs                          |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                | 0.24         | 0.21                    | 0.18          | 0.19                       | 0.15                   | 0.39                                    | 0.13                                       | 0.19                                   | 0.30                                | 0.17                              |
| Median estimated bias    |                                                | 0.12         | 0.14                    | 0.08          | 0.09                       | 0.07                   | 0.19                                    | 0.06                                       | 0.11                                   | 0.13                                | 0.08                              |
| Percent significant bias |                                                | 32.73        | 5.56                    | 19.51         | 11.90                      | 8.70                   | 5.26                                    | #                                          | 15.91                                  | 5.41                                | 11.63                             |
| DEPINC                   | Dependent parent income derived                |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                | 0.09         | 0.06                    | 0.12          | †                          | †                      | †                                       | †                                          | †                                      | 0.09                                | †                                 |
| Median estimated bias    |                                                | 0.03         | 0.01                    | 0.03          | †                          | †                      | †                                       | †                                          | †                                      | 0.03                                | †                                 |
| Percent significant bias |                                                | 50.00        | 27.27                   | 27.50         | †                          | †                      | †                                       | †                                          | †                                      | 37.84                               | †                                 |
| DEPNUMCH                 | Dependents - number of dependent children      |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                | 0.09         | 0.06                    | 0.11          | 0.10                       | †                      | 0.08                                    | 0.05                                       | †                                      | 0.06                                | 0.04                              |
| Median estimated bias    |                                                | 0.05         | 0.04                    | 0.05          | 0.05                       | †                      | 0.06                                    | 0.02                                       | †                                      | 0.04                                | 0.02                              |
| Percent significant bias |                                                | 56.36        | 32.43                   | 39.02         | 34.09                      | †                      | 28.21                                   | 37.21                                      | †                                      | 33.33                               | 18.60                             |
| DEPOLD                   | Dependent children - age of oldest             |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                | 0.09         | 0.08                    | 0.11          | 0.10                       | 0.08                   | 0.09                                    | 0.05                                       | †                                      | 0.06                                | 0.04                              |
| Median estimated bias    |                                                | 0.05         | 0.04                    | 0.06          | 0.05                       | 0.03                   | 0.06                                    | 0.02                                       | †                                      | 0.03                                | 0.03                              |
| Percent significant bias |                                                | 49.09        | 32.43                   | 39.02         | 36.36                      | 41.30                  | 28.21                                   | 37.21                                      | †                                      | 33.33                               | 18.60                             |
| DEPOTHER                 | Dependents - has dependent other than children |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                | 0.08         | 0.08                    | 0.10          | †                          | †                      | 0.07                                    | †                                          | †                                      | 0.06                                | †                                 |
| Median estimated bias    |                                                | 0.03         | 0.05                    | 0.03          | †                          | †                      | 0.04                                    | †                                          | †                                      | 0.04                                | †                                 |
| Percent significant bias |                                                | 54.55        | 32.43                   | 36.59         | †                          | †                      | 15.38                                   | †                                          | †                                      | 33.33                               | †                                 |
| DEPYNG                   | Dependent children - age of youngest           |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                | 0.09         | 0.08                    | 0.11          | 0.10                       | 0.08                   | 0.09                                    | 0.05                                       | †                                      | 0.06                                | 0.04                              |
| Median estimated bias    |                                                | 0.05         | 0.04                    | 0.06          | 0.05                       | 0.03                   | 0.06                                    | 0.02                                       | †                                      | 0.03                                | 0.03                              |
| Percent significant bias |                                                | 49.09        | 32.43                   | 39.02         | 36.36                      | 41.30                  | 28.21                                   | 37.21                                      | †                                      | 33.33                               | 18.60                             |

See notes at end of table.

**Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued**

| Variable                 | Variable label                                | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|-----------------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| DERECR                   | Distance education: pre-recorded              |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                               | 0.37         | 0.44                    | 0.23          | 0.40                       | 0.23                   | 0.38                                    | 0.31                                       | 0.44                                   | 0.41                                | 0.64                              |
| Median estimated bias    |                                               | 0.21         | 0.27                    | 0.12          | 0.17                       | 0.12                   | 0.21                                    | 0.18                                       | 0.26                                   | 0.12                                | 0.33                              |
| Percent significant bias |                                               | 47.27        | 19.44                   | 19.51         | 15.91                      | 29.55                  | 15.79                                   | 23.26                                      | 27.27                                  | 16.22                               | 48.84                             |
| DEWWW                    | Distance education: Internet                  |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                               | 0.37         | 0.44                    | 0.23          | 0.40                       | 0.23                   | 0.38                                    | 0.31                                       | 0.44                                   | 0.41                                | 0.64                              |
| Median estimated bias    |                                               | 0.21         | 0.27                    | 0.12          | 0.17                       | 0.12                   | 0.21                                    | 0.18                                       | 0.26                                   | 0.12                                | 0.33                              |
| Percent significant bias |                                               | 47.27        | 19.44                   | 19.51         | 15.91                      | 29.55                  | 15.79                                   | 23.26                                      | 27.27                                  | 16.22                               | 48.84                             |
| DISABLE                  | Disability Flag                               |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                               | 0.11         | 0.06                    | 0.10          | 0.11                       | 0.08                   | 0.08                                    | 0.04                                       | 0.06                                   | 0.08                                | 0.10                              |
| Median estimated bias    |                                               | 0.05         | 0.06                    | 0.04          | 0.04                       | 0.02                   | 0.06                                    | 0.03                                       | 0.02                                   | 0.04                                | 0.05                              |
| Percent significant bias |                                               | 47.27        | 27.03                   | 26.83         | 20.45                      | 28.26                  | 5.13                                    | 4.65                                       | 15.56                                  | 17.95                               | 27.91                             |
| DISMOBIL                 | Condition that limits physical activities     |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                               | 0.11         | 0.06                    | 0.10          | 0.11                       | 0.08                   | 0.08                                    | 0.04                                       | 0.06                                   | 0.08                                | 0.10                              |
| Median estimated bias    |                                               | 0.05         | 0.06                    | 0.04          | 0.04                       | 0.02                   | 0.06                                    | 0.03                                       | 0.02                                   | 0.04                                | 0.05                              |
| Percent significant bias |                                               | 47.27        | 27.03                   | 26.83         | 20.45                      | 28.26                  | 5.13                                    | 4.65                                       | 15.56                                  | 17.95                               | 34.88                             |
| DISOTHER                 | Other condition lasting six months or more    |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                               | 0.11         | 0.06                    | 0.10          | 0.11                       | 0.08                   | 0.08                                    | 0.04                                       | 0.06                                   | 0.08                                | 0.10                              |
| Median estimated bias    |                                               | 0.05         | 0.06                    | 0.04          | 0.04                       | 0.02                   | 0.06                                    | 0.03                                       | 0.02                                   | 0.04                                | 0.05                              |
| Percent significant bias |                                               | 47.27        | 21.62                   | 26.83         | 20.45                      | 28.26                  | 5.13                                    | 4.65                                       | 15.56                                  | 17.95                               | 23.26                             |
| DISOTHRA                 | Difficulty: dressing, bathing, etc            |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                               | 0.27         | 0.28                    | 0.31          | 0.43                       | 0.17                   | 0.26                                    | 0.20                                       | 0.30                                   | 0.26                                | 0.37                              |
| Median estimated bias    |                                               | 0.10         | 0.17                    | 0.09          | 0.18                       | 0.08                   | 0.18                                    | 0.09                                       | 0.10                                   | 0.12                                | 0.13                              |
| Percent significant bias |                                               | 21.82        | 22.22                   | 14.63         | 22.73                      | 20.45                  | 8.11                                    | 2.33                                       | #                                      | 10.81                               | 11.63                             |
| DISOTHRB                 | Difficulty: getting to school to attend class |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                               | 0.27         | 0.27                    | 0.31          | 0.43                       | 0.17                   | 0.26                                    | 0.20                                       | 0.29                                   | 0.26                                | 0.37                              |
| Median estimated bias    |                                               | 0.09         | 0.17                    | 0.09          | 0.18                       | 0.08                   | 0.18                                    | 0.09                                       | 0.10                                   | 0.13                                | 0.13                              |
| Percent significant bias |                                               | 21.82        | 22.22                   | 14.63         | 22.73                      | 20.45                  | 8.11                                    | 2.33                                       | 4.44                                   | 10.81                               | 6.98                              |
| DISOTHRC                 | Difficulty: learning, remembering             |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                               | 0.27         | 0.28                    | 0.31          | 0.43                       | 0.17                   | 0.26                                    | 0.20                                       | 0.30                                   | 0.26                                | 0.37                              |
| Median estimated bias    |                                               | 0.10         | 0.17                    | 0.09          | 0.18                       | 0.08                   | 0.18                                    | 0.09                                       | 0.10                                   | 0.12                                | 0.13                              |
| Percent significant bias |                                               | 21.82        | 22.22                   | 14.63         | 22.73                      | 20.45                  | 8.11                                    | 2.33                                       | #                                      | 10.81                               | 11.63                             |

See notes at end of table.

Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued

| Variable                 | Variable label                            | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|-------------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| DISOTHRD                 | Difficulty: working at a job              |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                           | 0.27         | 0.28                    | 0.31          | 0.43                       | 0.17                   | 0.26                                    | 0.20                                       | 0.30                                   | 0.26                                | 0.37                              |
| Median estimated bias    |                                           | 0.10         | 0.17                    | 0.09          | 0.18                       | 0.08                   | 0.18                                    | 0.09                                       | 0.10                                   | 0.12                                | 0.13                              |
| Percent significant bias |                                           | 21.82        | 22.22                   | 14.63         | 22.73                      | 20.45                  | 8.11                                    | 2.33                                       | #                                      | 10.81                               | 11.63                             |
| DISSENSR                 | Have a long-lasting sensory condition     |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                           | 0.11         | 0.06                    | 0.10          | 0.11                       | 0.08                   | 0.08                                    | 0.04                                       | 0.06                                   | 0.08                                | 0.10                              |
| Median estimated bias    |                                           | 0.05         | 0.06                    | 0.04          | 0.04                       | 0.02                   | 0.06                                    | 0.03                                       | 0.01                                   | 0.04                                | 0.05                              |
| Percent significant bias |                                           | 47.27        | 21.62                   | 26.83         | 20.45                      | 28.26                  | 5.13                                    | 4.65                                       | 15.56                                  | 17.95                               | 32.56                             |
| DISTALL                  | Distance education: entire program        |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                           | 0.36         | 0.44                    | 0.23          | 0.39                       | 0.22                   | 0.34                                    | 0.29                                       | 0.44                                   | 0.44                                | 0.62                              |
| Median estimated bias    |                                           | 0.19         | 0.27                    | 0.11          | 0.17                       | 0.11                   | 0.18                                    | 0.16                                       | 0.29                                   | 0.19                                | 0.33                              |
| Percent significant bias |                                           | 43.64        | 16.67                   | 21.95         | 18.18                      | 38.64                  | 15.79                                   | 16.28                                      | 27.27                                  | 16.22                               | 48.84                             |
| DISTEDUC                 | Distance education: took courses          |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                           | 0.12         | 0.09                    | 0.11          | 0.13                       | 0.09                   | 0.12                                    | 0.06                                       | 0.08                                   | 0.11                                | 0.12                              |
| Median estimated bias    |                                           | 0.06         | 0.06                    | 0.04          | 0.05                       | 0.02                   | 0.08                                    | 0.03                                       | 0.02                                   | 0.05                                | 0.05                              |
| Percent significant bias |                                           | 49.09        | 32.43                   | 26.83         | 18.18                      | 26.09                  | 10.26                                   | 13.95                                      | 13.33                                  | 17.95                               | 32.56                             |
| DISTLOC                  | Distance education: location of course(s) |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                           | 0.36         | 0.44                    | 0.23          | 0.39                       | 0.22                   | 0.34                                    | 0.30                                       | 0.44                                   | 0.43                                | 0.63                              |
| Median estimated bias    |                                           | 0.19         | 0.27                    | 0.11          | 0.16                       | 0.11                   | 0.18                                    | 0.16                                       | 0.29                                   | 0.17                                | 0.33                              |
| Percent significant bias |                                           | 45.45        | 13.89                   | 24.39         | 15.91                      | 38.64                  | 15.79                                   | 16.28                                      | 27.27                                  | 16.22                               | 48.84                             |
| DISTNUM                  | Distance education: number of courses     |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                           | 0.37         | 0.45                    | 0.23          | 0.40                       | 0.23                   | 0.34                                    | 0.33                                       | 0.46                                   | 0.44                                | 0.67                              |
| Median estimated bias    |                                           | 0.21         | 0.26                    | 0.12          | 0.16                       | 0.12                   | 0.17                                    | 0.19                                       | 0.32                                   | 0.16                                | 0.33                              |
| Percent significant bias |                                           | 43.64        | 16.67                   | 17.07         | 20.45                      | 40.91                  | 15.79                                   | 16.28                                      | 31.82                                  | 16.22                               | 48.84                             |
| DISTSATF                 | Distance education: satisfaction          |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                           | 0.36         | 0.44                    | 0.23          | 0.39                       | 0.22                   | 0.34                                    | 0.30                                       | 0.44                                   | 0.43                                | 0.63                              |
| Median estimated bias    |                                           | 0.19         | 0.27                    | 0.12          | 0.16                       | 0.11                   | 0.19                                    | 0.15                                       | 0.29                                   | 0.17                                | 0.34                              |
| Percent significant bias |                                           | 45.45        | 13.89                   | 26.83         | 15.91                      | 31.82                  | 15.79                                   | 16.28                                      | 27.27                                  | 16.22                               | 48.84                             |
| DISTYPES                 | Main limiting condition                   |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                           | 0.22         | 0.24                    | 0.26          | 0.32                       | 0.17                   | 0.22                                    | 0.15                                       | 0.26                                   | 0.21                                | 0.24                              |
| Median estimated bias    |                                           | 0.08         | 0.18                    | 0.10          | 0.14                       | 0.08                   | 0.17                                    | 0.07                                       | 0.11                                   | 0.11                                | 0.14                              |
| Percent significant bias |                                           | 27.27        | 27.78                   | 17.07         | 18.18                      | 31.82                  | 5.41                                    | 4.65                                       | 6.67                                   | 13.51                               | 16.28                             |

See notes at end of table.

**Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued**

| Variable                 | Variable label                                                   | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|------------------------------------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| DSTUINC                  | Dependent student earnings derived                               |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                                  | 0.25         | 0.16                    | 0.32          | 0.28                       | 0.24                   | 0.21                                    | 0.21                                       | 0.26                                   | 0.20                                | †                                 |
| Median estimated bias    |                                                                  | 0.08         | 0.05                    | 0.12          | 0.11                       | 0.06                   | 0.08                                    | 0.07                                       | 0.11                                   | 0.06                                | †                                 |
| Percent significant bias |                                                                  | 54.90        | 27.27                   | 33.33         | 24.39                      | 48.72                  | 40.54                                   | 35.00                                      | 45.00                                  | 35.14                               | †                                 |
| EMPLYAM2                 | Employer (parents) tuition aid                                   |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                                  | 0.10         | 0.05                    | 0.09          | 0.09                       | 0.08                   | 0.08                                    | 0.04                                       | 0.06                                   | 0.08                                | 0.08                              |
| Median estimated bias    |                                                                  | 0.05         | 0.04                    | 0.03          | 0.03                       | 0.02                   | 0.07                                    | 0.03                                       | 0.02                                   | 0.04                                | 0.04                              |
| Percent significant bias |                                                                  | 54.55        | 10.81                   | 31.71         | 22.73                      | 30.43                  | 7.69                                    | 16.28                                      | 15.56                                  | 17.95                               | 20.93                             |
| EVER2PUB                 | Ever attended community college                                  |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                                  | 0.14         | 0.09                    | †             | 0.12                       | 0.10                   | 0.12                                    | 0.06                                       | 0.08                                   | 0.11                                | 0.12                              |
| Median estimated bias    |                                                                  | 0.06         | 0.04                    | †             | 0.04                       | 0.03                   | 0.08                                    | 0.04                                       | 0.03                                   | 0.06                                | 0.05                              |
| Percent significant bias |                                                                  | 51.85        | 32.43                   | †             | 13.64                      | 36.36                  | 17.95                                   | 9.30                                       | 13.33                                  | 17.95                               | 30.23                             |
| EVER4YR                  | Ever attended 4-year school                                      |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                                  | 0.12         | 0.06                    | 0.10          | †                          | †                      | 0.12                                    | †                                          | †                                      | 0.08                                | 0.06                              |
| Median estimated bias    |                                                                  | 0.04         | 0.06                    | 0.03          | †                          | †                      | 0.08                                    | †                                          | †                                      | 0.04                                | 0.04                              |
| Percent significant bias |                                                                  | 41.67        | 27.03                   | 24.39         | †                          | †                      | 10.26                                   | †                                          | †                                      | 18.92                               | 8.11                              |
| FORESCH                  | Ever attended elementary or secondary school outside of the U.S. |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                                  | 0.11         | 0.07                    | 0.10          | 0.11                       | 0.07                   | 0.08                                    | 0.05                                       | 0.06                                   | 0.07                                | 0.09                              |
| Median estimated bias    |                                                                  | 0.05         | 0.06                    | 0.04          | 0.04                       | 0.02                   | 0.05                                    | 0.03                                       | 0.02                                   | 0.04                                | 0.05                              |
| Percent significant bias |                                                                  | 45.28        | 30.56                   | 25.00         | 19.05                      | 36.36                  | #                                       | 19.05                                      | 11.63                                  | 18.42                               | 33.33                             |
| GAINSUR                  | Health insurance with assistantship                              |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                                  | 0.07         | †                       | †             | 0.17                       | 0.05                   | †                                       | 0.16                                       | 0.08                                   | †                                   | #                                 |
| Median estimated bias    |                                                                  | 0.04         | †                       | †             | 0.08                       | 0.03                   | †                                       | #                                          | 0.04                                   | †                                   | #                                 |
| Percent significant bias |                                                                  | 23.81        | †                       | †             | #                          | 28.57                  | †                                       | 43.33                                      | 5.88                                   | †                                   | #                                 |
| GPA                      | Grad point average                                               |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                                  | †            | 0.11                    | †             | †                          | †                      | 0.11                                    | †                                          | †                                      | 0.05                                | †                                 |
| Median estimated bias    |                                                                  | †            | 0.09                    | †             | †                          | †                      | 0.06                                    | †                                          | †                                      | 0.02                                | †                                 |
| Percent significant bias |                                                                  | †            | 37.84                   | †             | †                          | †                      | 20.51                                   | †                                          | †                                      | 23.08                               | †                                 |
| GRADPYR                  | Year began graduate degree                                       |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                                  | 0.07         | †                       | †             | 0.11                       | 0.04                   | †                                       | 0.12                                       | 0.08                                   | †                                   | 0.10                              |
| Median estimated bias    |                                                                  | 0.02         | †                       | †             | 0.05                       | 0.01                   | †                                       | 0.06                                       | 0.02                                   | †                                   | 0.01                              |
| Percent significant bias |                                                                  | 6.98         | †                       | †             | 8.57                       | 11.43                  | †                                       | 11.43                                      | 5.41                                   | †                                   | #                                 |

See notes at end of table.

Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued

| Variable                 | Variable label                         | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|----------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| GRADTAA                  | TA duties: student email               |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                        | 0.05         | †                       | †             | 0.10                       | 0.06                   | †                                       | 0.15                                       | 0.06                                   | †                                   | #                                 |
| Median estimated bias    |                                        | 0.02         | †                       | †             | 0.06                       | 0.03                   | †                                       | #                                          | 0.03                                   | †                                   | #                                 |
| Percent significant bias |                                        | 9.52         | †                       | †             | 3.13                       | 22.86                  | †                                       | 24.14                                      | 8.82                                   | †                                   | #                                 |
| GRADTAB                  | TA duties: grading                     |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                        | 0.05         | †                       | †             | 0.10                       | 0.06                   | †                                       | 0.15                                       | 0.06                                   | †                                   | #                                 |
| Median estimated bias    |                                        | 0.02         | †                       | †             | 0.06                       | 0.03                   | †                                       | #                                          | 0.03                                   | †                                   | #                                 |
| Percent significant bias |                                        | 9.52         | †                       | †             | 3.13                       | 22.86                  | †                                       | 24.14                                      | 8.82                                   | †                                   | #                                 |
| GRADTAC                  | TA duties: teaching                    |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                        | 0.05         | †                       | †             | 0.10                       | 0.06                   | †                                       | 0.15                                       | 0.06                                   | †                                   | #                                 |
| Median estimated bias    |                                        | 0.02         | †                       | †             | 0.06                       | 0.03                   | †                                       | #                                          | 0.03                                   | †                                   | #                                 |
| Percent significant bias |                                        | 9.52         | †                       | †             | 3.13                       | 22.86                  | †                                       | 24.14                                      | 8.82                                   | †                                   | #                                 |
| GRADTAD                  | TA duties: office hours                |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                        | 0.05         | †                       | †             | 0.10                       | 0.06                   | †                                       | 0.15                                       | 0.06                                   | †                                   | #                                 |
| Median estimated bias    |                                        | 0.02         | †                       | †             | 0.06                       | 0.03                   | †                                       | #                                          | 0.03                                   | †                                   | #                                 |
| Percent significant bias |                                        | 9.52         | †                       | †             | 3.13                       | 22.86                  | †                                       | 24.14                                      | 8.82                                   | †                                   | #                                 |
| GRADTAE                  | TA duties: discussion                  |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                        | 0.05         | †                       | †             | 0.10                       | 0.06                   | †                                       | 0.15                                       | 0.06                                   | †                                   | #                                 |
| Median estimated bias    |                                        | 0.02         | †                       | †             | 0.06                       | 0.03                   | †                                       | #                                          | 0.03                                   | †                                   | #                                 |
| Percent significant bias |                                        | 9.52         | †                       | †             | 3.13                       | 22.86                  | †                                       | 24.14                                      | 8.82                                   | †                                   | #                                 |
| GRADTAF                  | TA duties: lab                         |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                        | 0.05         | †                       | †             | 0.10                       | 0.06                   | †                                       | 0.15                                       | 0.06                                   | †                                   | #                                 |
| Median estimated bias    |                                        | 0.02         | †                       | †             | 0.06                       | 0.03                   | †                                       | #                                          | 0.03                                   | †                                   | #                                 |
| Percent significant bias |                                        | 9.52         | †                       | †             | 3.13                       | 22.86                  | †                                       | 24.14                                      | 8.82                                   | †                                   | #                                 |
| GRASTUIT                 | Tuition paid by assistantship          |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                        | 0.08         | †                       | †             | 0.22                       | 0.07                   | †                                       | 0.18                                       | 0.10                                   | †                                   | †                                 |
| Median estimated bias    |                                        | 0.07         | †                       | †             | 0.07                       | 0.06                   | †                                       | 0.02                                       | 0.06                                   | †                                   | †                                 |
| Percent significant bias |                                        | 4.88         | †                       | †             | #                          | 22.86                  | †                                       | 41.38                                      | 8.82                                   | †                                   | †                                 |
| GRENRST                  | Graduate enrollment status (all years) |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                        | 0.07         | †                       | †             | 0.10                       | 0.04                   | †                                       | 0.07                                       | 0.07                                   | †                                   | 0.08                              |
| Median estimated bias    |                                        | 0.02         | †                       | †             | 0.04                       | 0.02                   | †                                       | 0.03                                       | 0.02                                   | †                                   | 0.04                              |
| Percent significant bias |                                        | 6.98         | †                       | †             | #                          | 11.43                  | †                                       | 11.43                                      | 8.11                                   | †                                   | #                                 |

See notes at end of table.

**Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued**

| Variable | Variable label                              | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|----------|---------------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| HIGHLVEX | Highest level of education ever expected    |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
|          | Mean estimated bias                         | 0.13         | 0.09                    | 0.11          | 0.12                       | 0.08                   | 0.12                                    | 0.06                                       | 0.08                                   | 0.10                                | 0.12                              |
|          | Median estimated bias                       | 0.06         | 0.05                    | 0.03          | 0.04                       | 0.02                   | 0.09                                    | 0.03                                       | 0.03                                   | 0.05                                | 0.06                              |
|          | Percent significant bias                    | 50.91        | 32.43                   | 29.27         | 18.18                      | 30.43                  | 10.26                                   | 6.98                                       | 13.33                                  | 17.95                               | 27.91                             |
| HOMEDIST | Distance from NPSAS school to home          |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
|          | Mean estimated bias                         | 0.13         | 0.10                    | 0.11          | 0.13                       | 0.09                   | 0.18                                    | 0.07                                       | 0.09                                   | 0.12                                | 0.11                              |
|          | Median estimated bias                       | 0.06         | 0.06                    | 0.03          | 0.05                       | 0.02                   | 0.09                                    | 0.03                                       | 0.03                                   | 0.07                                | 0.06                              |
|          | Percent significant bias                    | 50.91        | 32.43                   | 31.71         | 13.64                      | 32.61                  | 12.82                                   | 9.30                                       | 8.89                                   | 12.82                               | 13.95                             |
| HOMEPAR  | Parents own home                            |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
|          | Mean estimated bias                         | 0.12         | 0.15                    | 0.13          | 0.12                       | 0.04                   | 0.13                                    | 0.06                                       | 0.06                                   | 0.14                                | 0.10                              |
|          | Median estimated bias                       | 0.04         | 0.07                    | 0.03          | 0.05                       | 0.02                   | 0.09                                    | 0.03                                       | 0.02                                   | 0.07                                | 0.04                              |
|          | Percent significant bias                    | 43.14        | 6.06                    | 25.64         | 26.83                      | 27.03                  | 5.41                                    | 17.50                                      | 12.50                                  | 10.81                               | 5.00                              |
| HOMESTUD | Own home                                    |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
|          | Mean estimated bias                         | 0.19         | 0.14                    | 0.16          | 0.14                       | 0.17                   | 0.26                                    | 0.12                                       | 0.13                                   | 0.20                                | 0.23                              |
|          | Median estimated bias                       | 0.11         | 0.09                    | 0.06          | 0.06                       | 0.06                   | 0.14                                    | 0.07                                       | 0.05                                   | 0.13                                | 0.11                              |
|          | Percent significant bias                    | 47.27        | 13.51                   | 26.83         | 26.19                      | 30.43                  | 30.77                                   | 16.28                                      | 20.00                                  | 32.43                               | 37.21                             |
| HSDEG    | High school degree type                     |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
|          | Mean estimated bias                         | †            | †                       | †             | †                          | †                      | 0.07                                    | †                                          | †                                      | †                                   | †                                 |
|          | Median estimated bias                       | †            | †                       | †             | †                          | †                      | 0.03                                    | †                                          | †                                      | †                                   | †                                 |
|          | Percent significant bias                    | †            | †                       | †             | †                          | †                      | 23.08                                   | †                                          | †                                      | †                                   | †                                 |
| HSGRADYY | High school graduation year                 |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
|          | Mean estimated bias                         | †            | 0.06                    | †             | †                          | †                      | 0.08                                    | †                                          | 0.05                                   | 0.05                                | 0.05                              |
|          | Median estimated bias                       | †            | 0.04                    | †             | †                          | †                      | 0.05                                    | †                                          | 0.02                                   | 0.04                                | 0.02                              |
|          | Percent significant bias                    | †            | 29.73                   | †             | †                          | †                      | 15.38                                   | †                                          | 16.28                                  | 10.26                               | 7.14                              |
| HSTYPE   | Type of high school attended                |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
|          | Mean estimated bias                         | 0.12         | 0.10                    | 0.12          | 0.13                       | 0.09                   | 0.13                                    | 0.06                                       | 0.09                                   | 0.11                                | 0.10                              |
|          | Median estimated bias                       | 0.05         | 0.06                    | 0.04          | 0.05                       | 0.02                   | 0.08                                    | 0.03                                       | 0.03                                   | 0.05                                | 0.05                              |
|          | Percent significant bias                    | 47.17        | 30.56                   | 29.27         | 23.26                      | 33.33                  | 10.26                                   | 16.67                                      | 13.95                                  | 16.22                               | 16.67                             |
| INDEPINC | Independent student & spouse income derived |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
|          | Mean estimated bias                         | 0.09         | 0.08                    | 0.12          | 0.12                       | 0.09                   | †                                       | 0.06                                       | 0.08                                   | †                                   | †                                 |
|          | Median estimated bias                       | 0.03         | 0.04                    | 0.06          | 0.05                       | 0.03                   | †                                       | 0.03                                       | 0.02                                   | †                                   | †                                 |
|          | Percent significant bias                    | 47.27        | 29.73                   | 36.59         | 25.00                      | 32.61                  | †                                       | 27.91                                      | 42.22                                  | †                                   | †                                 |

See notes at end of table.

Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued

| Variable                 | Variable label                             | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|--------------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| JOBFFOR                  | Afford school without working              |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                            | 0.19         | 0.21                    | 0.17          | 0.18                       | 0.12                   | 0.19                                    | 0.16                                       | 0.13                                   | 0.17                                | 0.19                              |
| Median estimated bias    |                                            | 0.09         | 0.15                    | 0.07          | 0.07                       | 0.06                   | 0.14                                    | 0.08                                       | 0.07                                   | 0.08                                | 0.06                              |
| Percent significant bias |                                            | 60.00        | 36.11                   | 26.83         | 38.64                      | 45.65                  | 12.82                                   | 30.23                                      | 33.33                                  | 12.82                               | 23.26                             |
| JOBCLASS                 | Job related to coursework                  |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                            | 0.16         | 0.09                    | 0.11          | 0.21                       | 0.18                   | 0.37                                    | 0.16                                       | 0.17                                   | 0.21                                | 0.24                              |
| Median estimated bias    |                                            | 0.10         | 0.05                    | 0.04          | 0.15                       | 0.11                   | 0.21                                    | 0.10                                       | 0.06                                   | 0.07                                | 0.11                              |
| Percent significant bias |                                            | 45.45        | 8.33                    | 24.39         | 13.64                      | 30.23                  | 18.42                                   | 2.33                                       | 21.43                                  | 5.13                                | 27.91                             |
| JOBEARN                  | Total amount earned during the school year |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                            | 0.15         | 0.11                    | 0.13          | 0.14                       | 0.09                   | 0.19                                    | 0.07                                       | 0.10                                   | 0.09                                | 0.15                              |
| Median estimated bias    |                                            | 0.06         | 0.07                    | 0.04          | 0.05                       | 0.03                   | 0.09                                    | 0.04                                       | 0.05                                   | 0.05                                | 0.08                              |
| Percent significant bias |                                            | 45.45        | 13.51                   | 29.27         | 25.00                      | 26.09                  | 7.69                                    | 9.30                                       | 20.00                                  | 10.26                               | 20.93                             |
| JOBEFFA                  | Job helped with career preparation         |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                            | 0.19         | 0.21                    | 0.17          | 0.18                       | 0.12                   | 0.19                                    | 0.14                                       | 0.13                                   | 0.17                                | 0.19                              |
| Median estimated bias    |                                            | 0.10         | 0.15                    | 0.07          | 0.07                       | 0.06                   | 0.14                                    | 0.07                                       | 0.07                                   | 0.07                                | 0.07                              |
| Percent significant bias |                                            | 60.00        | 36.11                   | 26.83         | 38.64                      | 47.83                  | 12.82                                   | 30.23                                      | 33.33                                  | 12.82                               | 23.26                             |
| JOBEFFB                  | Job helped with coursework                 |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                            | 0.19         | 0.21                    | 0.17          | 0.18                       | 0.12                   | 0.19                                    | 0.14                                       | 0.13                                   | 0.17                                | 0.19                              |
| Median estimated bias    |                                            | 0.10         | 0.15                    | 0.07          | 0.07                       | 0.06                   | 0.14                                    | 0.07                                       | 0.07                                   | 0.07                                | 0.07                              |
| Percent significant bias |                                            | 60.00        | 36.11                   | 26.83         | 38.64                      | 47.83                  | 12.82                                   | 30.23                                      | 33.33                                  | 12.82                               | 23.26                             |
| JOBEFFC                  | Job restricted class choice                |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                            | 0.19         | 0.21                    | 0.17          | 0.18                       | 0.12                   | 0.19                                    | 0.14                                       | 0.13                                   | 0.17                                | 0.19                              |
| Median estimated bias    |                                            | 0.10         | 0.15                    | 0.07          | 0.07                       | 0.06                   | 0.14                                    | 0.07                                       | 0.07                                   | 0.07                                | 0.07                              |
| Percent significant bias |                                            | 60.00        | 36.11                   | 26.83         | 38.64                      | 47.83                  | 12.82                                   | 30.23                                      | 33.33                                  | 12.82                               | 23.26                             |
| JOBEFFD                  | Job limited class schedule                 |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                            | 0.19         | 0.21                    | 0.17          | 0.18                       | 0.12                   | 0.19                                    | 0.14                                       | 0.13                                   | 0.17                                | 0.19                              |
| Median estimated bias    |                                            | 0.10         | 0.15                    | 0.07          | 0.07                       | 0.06                   | 0.14                                    | 0.07                                       | 0.07                                   | 0.07                                | 0.07                              |
| Percent significant bias |                                            | 60.00        | 36.11                   | 26.83         | 38.64                      | 47.83                  | 12.82                                   | 30.23                                      | 33.33                                  | 12.82                               | 23.26                             |
| JOBEFFE                  | Job limited facility access                |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                            | 0.19         | 0.21                    | 0.17          | 0.18                       | 0.12                   | 0.19                                    | 0.14                                       | 0.13                                   | 0.17                                | 0.19                              |
| Median estimated bias    |                                            | 0.10         | 0.15                    | 0.07          | 0.07                       | 0.06                   | 0.14                                    | 0.07                                       | 0.07                                   | 0.07                                | 0.07                              |
| Percent significant bias |                                            | 60.00        | 36.11                   | 26.83         | 38.64                      | 47.83                  | 12.82                                   | 30.23                                      | 33.33                                  | 12.82                               | 23.26                             |

See notes at end of table.



**Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued**

| Variable                 | Variable label                             | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|--------------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| JOBFFF                   | Job limited number of classes              |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                            | 0.19         | 0.21                    | 0.17          | 0.18                       | 0.12                   | 0.19                                    | 0.14                                       | 0.13                                   | 0.17                                | 0.19                              |
| Median estimated bias    |                                            | 0.10         | 0.15                    | 0.07          | 0.07                       | 0.06                   | 0.14                                    | 0.07                                       | 0.07                                   | 0.07                                | 0.07                              |
| Percent significant bias |                                            | 60.00        | 36.11                   | 26.83         | 38.64                      | 47.83                  | 12.82                                   | 30.23                                      | 33.33                                  | 12.82                               | 23.26                             |
| JOBFFGR                  | Effect of job on grades                    |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                            | 0.12         | 0.17                    | 0.13          | 0.09                       | 0.04                   | 0.17                                    | 0.09                                       | 0.11                                   | 0.14                                | 0.10                              |
| Median estimated bias    |                                            | 0.05         | 0.10                    | 0.05          | 0.06                       | 0.02                   | 0.12                                    | 0.05                                       | 0.05                                   | 0.08                                | 0.05                              |
| Percent significant bias |                                            | 52.73        | 19.44                   | 19.51         | 28.57                      | 27.27                  | 15.38                                   | 30.23                                      | 13.33                                  | 17.95                               | 6.98                              |
| JOBEMPL                  | Type of employer                           |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                            | 0.15         | 0.12                    | 0.12          | 0.14                       | 0.10                   | 0.18                                    | 0.08                                       | 0.11                                   | 0.11                                | 0.14                              |
| Median estimated bias    |                                            | 0.06         | 0.07                    | 0.03          | 0.05                       | 0.04                   | 0.11                                    | 0.04                                       | 0.05                                   | 0.05                                | 0.08                              |
| Percent significant bias |                                            | 49.09        | 13.51                   | 26.83         | 27.27                      | 36.96                  | 12.82                                   | 11.63                                      | 17.78                                  | 10.26                               | 32.56                             |
| JOBEXPT                  | Parents expect you to have a job           |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                            | 0.19         | 0.20                    | 0.17          | 0.16                       | 0.10                   | 0.19                                    | 0.12                                       | 0.14                                   | 0.16                                | 0.17                              |
| Median estimated bias    |                                            | 0.09         | 0.10                    | 0.06          | 0.07                       | 0.04                   | 0.13                                    | 0.06                                       | 0.06                                   | 0.08                                | 0.06                              |
| Percent significant bias |                                            | 51.92        | 25.71                   | 27.50         | 30.95                      | 26.19                  | 7.89                                    | 29.27                                      | 11.90                                  | 15.79                               | 17.07                             |
| JOBHOUR                  | Hours worked weekly during the school year |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                            | 0.14         | 0.10                    | 0.13          | 0.13                       | 0.09                   | 0.19                                    | 0.06                                       | 0.10                                   | 0.10                                | 0.15                              |
| Median estimated bias    |                                            | 0.06         | 0.06                    | 0.04          | 0.05                       | 0.03                   | 0.09                                    | 0.04                                       | 0.05                                   | 0.05                                | 0.08                              |
| Percent significant bias |                                            | 49.09        | 10.81                   | 26.83         | 29.55                      | 26.09                  | 10.26                                   | 16.28                                      | 20.00                                  | 10.26                               | 23.26                             |
| JOBMAIN                  | Main reason for working                    |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                            | 0.19         | 0.21                    | 0.17          | 0.18                       | 0.12                   | 0.19                                    | 0.14                                       | 0.13                                   | 0.17                                | 0.19                              |
| Median estimated bias    |                                            | 0.10         | 0.15                    | 0.07          | 0.07                       | 0.06                   | 0.15                                    | 0.07                                       | 0.07                                   | 0.08                                | 0.05                              |
| Percent significant bias |                                            | 61.82        | 36.11                   | 26.83         | 38.64                      | 47.83                  | 12.82                                   | 30.23                                      | 33.33                                  | 12.82                               | 23.26                             |
| JOBMAJOR                 | Job related to major                       |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                            | 0.20         | 0.22                    | 0.17          | 0.16                       | 0.11                   | 0.17                                    | 0.09                                       | 0.11                                   | 0.16                                | 0.18                              |
| Median estimated bias    |                                            | 0.10         | 0.14                    | 0.06          | 0.06                       | 0.04                   | 0.11                                    | 0.05                                       | 0.06                                   | 0.07                                | 0.12                              |
| Percent significant bias |                                            | 56.36        | 33.33                   | 12.20         | 25.00                      | 43.48                  | 15.38                                   | 9.30                                       | 17.78                                  | 13.51                               | 30.23                             |
| JOBNUM                   | Number of jobs during NPSAS year           |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                            | 0.10         | 0.05                    | 0.10          | 0.09                       | 0.08                   | 0.08                                    | 0.04                                       | 0.06                                   | 0.08                                | 0.07                              |
| Median estimated bias    |                                            | 0.05         | 0.05                    | 0.03          | 0.04                       | 0.02                   | 0.07                                    | 0.03                                       | 0.01                                   | 0.04                                | 0.04                              |
| Percent significant bias |                                            | 54.55        | 8.11                    | 29.27         | 18.18                      | 28.26                  | 2.56                                    | 16.28                                      | 15.56                                  | 17.95                               | 20.93                             |

See notes at end of table.

Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued

| Variable                 | Variable label                              | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|---------------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| JOBONOFF                 | Job on or off campus                        |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                             | 0.15         | 0.11                    | 0.12          | 0.14                       | 0.10                   | 0.14                                    | 0.08                                       | 0.11                                   | 0.11                                | 0.14                              |
| Median estimated bias    |                                             | 0.06         | 0.06                    | 0.03          | 0.05                       | 0.03                   | 0.11                                    | 0.04                                       | 0.04                                   | 0.05                                | 0.08                              |
| Percent significant bias |                                             | 50.91        | 8.11                    | 26.83         | 34.09                      | 34.78                  | 15.38                                   | 11.63                                      | 17.78                                  | 10.26                               | 30.23                             |
| JOBPRIOR                 | Had job prior to enrollment at NPSAS        |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                             | 0.15         | 0.11                    | 0.12          | 0.14                       | 0.10                   | 0.15                                    | 0.08                                       | 0.11                                   | 0.11                                | 0.14                              |
| Median estimated bias    |                                             | 0.06         | 0.06                    | 0.04          | 0.05                       | 0.03                   | 0.11                                    | 0.04                                       | 0.04                                   | 0.04                                | 0.08                              |
| Percent significant bias |                                             | 50.91        | 8.11                    | 26.83         | 31.82                      | 30.43                  | 15.38                                   | 11.63                                      | 17.78                                  | 10.26                               | 30.23                             |
| JOBROLE                  | Working student/employee taking classes     |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                             | 0.15         | 0.11                    | 0.12          | 0.13                       | 0.09                   | 0.12                                    | 0.06                                       | 0.09                                   | 0.10                                | 0.10                              |
| Median estimated bias    |                                             | 0.06         | 0.06                    | 0.03          | 0.04                       | 0.02                   | 0.08                                    | 0.03                                       | 0.05                                   | 0.05                                | 0.07                              |
| Percent significant bias |                                             | 49.09        | 10.81                   | 26.83         | 29.55                      | 26.09                  | 7.69                                    | 18.60                                      | 20.00                                  | 7.69                                | 25.58                             |
| JOBSAVE                  | Amount saved from summer earnings           |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                             | 0.16         | 0.15                    | 0.14          | 0.16                       | 0.09                   | 0.21                                    | 0.09                                       | 0.11                                   | 0.14                                | 0.13                              |
| Median estimated bias    |                                             | 0.08         | 0.08                    | 0.04          | 0.06                       | 0.02                   | 0.10                                    | 0.05                                       | 0.04                                   | 0.05                                | 0.06                              |
| Percent significant bias |                                             | 48.08        | 11.43                   | 27.50         | 26.19                      | 25.58                  | 10.53                                   | 24.39                                      | 14.29                                  | 7.89                                | 14.63                             |
| JOBSCHA                  | Combine school and work: class outside work |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                             | 0.30         | 0.18                    | 0.24          | 0.42                       | 0.33                   | 0.21                                    | 0.25                                       | 0.32                                   | 0.15                                | 0.34                              |
| Median estimated bias    |                                             | 0.13         | 0.12                    | 0.14          | 0.22                       | 0.26                   | 0.18                                    | 0.16                                       | 0.28                                   | 0.06                                | 0.20                              |
| Percent significant bias |                                             | 60.00        | 13.51                   | 34.15         | 50.00                      | 50.00                  | 15.38                                   | 30.23                                      | 47.73                                  | 13.51                               | 39.53                             |
| JOBSCHB                  | Combine school and work: distance ed        |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                             | 0.30         | 0.18                    | 0.24          | 0.42                       | 0.33                   | 0.21                                    | 0.25                                       | 0.32                                   | 0.15                                | 0.34                              |
| Median estimated bias    |                                             | 0.13         | 0.12                    | 0.14          | 0.22                       | 0.26                   | 0.18                                    | 0.16                                       | 0.28                                   | 0.06                                | 0.20                              |
| Percent significant bias |                                             | 60.00        | 13.51                   | 34.15         | 50.00                      | 50.00                  | 15.38                                   | 30.23                                      | 47.73                                  | 13.51                               | 39.53                             |
| JOBSCHC                  | Combine school and work: modify schedule    |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                             | 0.30         | 0.18                    | 0.24          | 0.42                       | 0.33                   | 0.21                                    | 0.25                                       | 0.32                                   | 0.15                                | 0.34                              |
| Median estimated bias    |                                             | 0.13         | 0.12                    | 0.14          | 0.22                       | 0.26                   | 0.18                                    | 0.16                                       | 0.28                                   | 0.06                                | 0.20                              |
| Percent significant bias |                                             | 60.00        | 13.51                   | 34.15         | 50.00                      | 50.00                  | 15.38                                   | 30.23                                      | 47.73                                  | 13.51                               | 39.53                             |
| JOBSUMMR                 | Work during summer 2003                     |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                             | 0.13         | 0.11                    | 0.12          | 0.13                       | 0.08                   | 0.13                                    | 0.07                                       | 0.09                                   | 0.11                                | 0.11                              |
| Median estimated bias    |                                             | 0.06         | 0.07                    | 0.04          | 0.05                       | 0.02                   | 0.07                                    | 0.04                                       | 0.03                                   | 0.05                                | 0.04                              |
| Percent significant bias |                                             | 53.85        | 20.00                   | 25.00         | 19.05                      | 30.23                  | 10.53                                   | 19.51                                      | 16.67                                  | 18.42                               | 14.63                             |

See notes at end of table.

**Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued**

| Variable                 | Variable label                                    | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|---------------------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| JOBWEEK                  | Weeks worked while enrolled                       |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                   | 0.15         | 0.12                    | 0.12          | 0.14                       | 0.10                   | 0.13                                    | 0.08                                       | 0.10                                   | 0.10                                | 0.14                              |
| Median estimated bias    |                                                   | 0.06         | 0.07                    | 0.04          | 0.05                       | 0.03                   | 0.09                                    | 0.04                                       | 0.04                                   | 0.05                                | 0.08                              |
| Percent significant bias |                                                   | 47.27        | 8.11                    | 26.83         | 29.55                      | 30.43                  | 7.69                                    | 9.30                                       | 17.78                                  | 10.26                               | 32.56                             |
| LOCALRES                 | Housing                                           |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                   | 0.06         | 0.08                    | 0.10          | 0.07                       | †                      | 0.10                                    | †                                          | †                                      | 0.06                                | †                                 |
| Median estimated bias    |                                                   | 0.03         | 0.05                    | 0.03          | 0.04                       | †                      | 0.06                                    | †                                          | †                                      | 0.03                                | †                                 |
| Percent significant bias |                                                   | 63.64        | 35.14                   | 31.71         | 38.64                      | †                      | 25.64                                   | †                                          | †                                      | 23.08                               | †                                 |
| MAJORS                   | Field of study/major (detailed)                   |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                   | †            | 0.03                    | 0.03          | †                          | †                      | 0.09                                    | †                                          | †                                      | 0.03                                | †                                 |
| Median estimated bias    |                                                   | †            | 0.02                    | 0.01          | †                          | †                      | 0.05                                    | †                                          | †                                      | 0.01                                | †                                 |
| Percent significant bias |                                                   | †            | 11.11                   | 2.44          | †                          | †                      | 28.21                                   | †                                          | †                                      | 8.11                                | †                                 |
| MILTYPE                  | Military service type                             |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                   | 0.07         | 0.07                    | 0.10          | †                          | †                      | †                                       | †                                          | †                                      | †                                   | †                                 |
| Median estimated bias    |                                                   | 0.02         | 0.03                    | 0.03          | †                          | †                      | †                                       | †                                          | †                                      | †                                   | †                                 |
| Percent significant bias |                                                   | 43.64        | 37.84                   | 29.27         | †                          | †                      | †                                       | †                                          | †                                      | †                                   | †                                 |
| NPFIRST                  | NPSAS was first school attended after high school |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                   | 0.11         | 0.05                    | 0.11          | 0.09                       | 0.07                   | 0.09                                    | 0.04                                       | 0.07                                   | 0.08                                | 0.07                              |
| Median estimated bias    |                                                   | 0.05         | 0.04                    | 0.03          | 0.03                       | 0.02                   | 0.07                                    | 0.03                                       | 0.03                                   | 0.05                                | 0.04                              |
| Percent significant bias |                                                   | 47.17        | 29.73                   | 26.83         | 20.93                      | 31.82                  | 7.69                                    | 14.29                                      | 13.95                                  | 17.95                               | 23.81                             |
| NUMCRED                  | Number of credit cards in own name                |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                   | 0.12         | 0.15                    | 0.13          | 0.13                       | 0.04                   | 0.12                                    | 0.06                                       | 0.06                                   | 0.14                                | 0.11                              |
| Median estimated bias    |                                                   | 0.04         | 0.08                    | 0.03          | 0.05                       | 0.02                   | 0.07                                    | 0.03                                       | 0.02                                   | 0.07                                | 0.04                              |
| Percent significant bias |                                                   | 47.06        | 6.06                    | 25.64         | 26.83                      | 32.43                  | 2.70                                    | 15.00                                      | 12.50                                  | 10.81                               | 7.50                              |
| OWNINVST                 | Own investments, business or farm over \$10,000   |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                   | 0.18         | 0.13                    | 0.16          | 0.18                       | 0.18                   | 0.25                                    | 0.11                                       | 0.13                                   | 0.18                                | 0.20                              |
| Median estimated bias    |                                                   | 0.11         | 0.08                    | 0.06          | 0.06                       | 0.06                   | 0.16                                    | 0.06                                       | 0.06                                   | 0.11                                | 0.12                              |
| Percent significant bias |                                                   | 49.09        | 13.51                   | 29.27         | 29.55                      | 32.61                  | 23.08                                   | 18.60                                      | 20.00                                  | 29.73                               | 32.56                             |
| PARALLOW                 | Monthly allowance amount from parents             |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                   | 0.09         | 0.10                    | 0.11          | 0.10                       | 0.04                   | 0.10                                    | 0.05                                       | 0.06                                   | 0.10                                | 0.08                              |
| Median estimated bias    |                                                   | 0.03         | 0.08                    | 0.03          | 0.03                       | 0.02                   | 0.06                                    | 0.02                                       | 0.04                                   | 0.06                                | 0.06                              |
| Percent significant bias |                                                   | 49.09        | 33.33                   | 29.27         | 31.82                      | 40.91                  | 18.42                                   | 23.26                                      | 36.36                                  | 25.64                               | 32.56                             |

See notes at end of table.

Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued

| Variable                 | Variable label                                   | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|--------------------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| PARBORN                  | Student's parents were born in the United States |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                  | 0.12         | 0.09                    | 0.11          | 0.12                       | 0.09                   | 0.12                                    | 0.06                                       | 0.08                                   | 0.11                                | 0.12                              |
| Median estimated bias    |                                                  | 0.06         | 0.06                    | 0.04          | 0.04                       | 0.02                   | 0.09                                    | 0.03                                       | 0.03                                   | 0.06                                | 0.06                              |
| Percent significant bias |                                                  | 50.91        | 32.43                   | 26.83         | 18.18                      | 26.09                  | 15.38                                   | 13.95                                      | 13.33                                  | 17.95                               | 30.23                             |
| PARCOLL                  | Parents taking college courses in 2003–2004      |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                  | 0.12         | 0.15                    | 0.13          | 0.12                       | 0.04                   | 0.13                                    | 0.05                                       | 0.06                                   | 0.14                                | 0.11                              |
| Median estimated bias    |                                                  | 0.04         | 0.07                    | 0.04          | 0.05                       | 0.02                   | 0.09                                    | 0.03                                       | 0.03                                   | 0.06                                | 0.04                              |
| Percent significant bias |                                                  | 47.06        | 6.06                    | 23.08         | 26.83                      | 24.32                  | 10.81                                   | 15.00                                      | 12.50                                  | 8.11                                | 5.00                              |
| PARESTA                  | Parents own other real estate                    |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                  | 0.12         | 0.15                    | 0.13          | 0.12                       | 0.04                   | 0.13                                    | 0.06                                       | 0.08                                   | 0.14                                | 0.11                              |
| Median estimated bias    |                                                  | 0.04         | 0.08                    | 0.03          | 0.05                       | 0.02                   | 0.07                                    | 0.03                                       | 0.03                                   | 0.07                                | 0.04                              |
| Percent significant bias |                                                  | 45.10        | 6.06                    | 20.51         | 24.39                      | 27.03                  | 2.70                                    | 10.00                                      | 10.00                                  | 10.81                               | 5.00                              |
| PARHELPA                 | Help from parents: housing                       |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                  | 0.12         | 0.15                    | 0.13          | 0.12                       | 0.04                   | 0.15                                    | 0.06                                       | 0.06                                   | 0.13                                | 0.10                              |
| Median estimated bias    |                                                  | 0.04         | 0.07                    | 0.03          | 0.04                       | 0.02                   | 0.07                                    | 0.03                                       | 0.03                                   | 0.06                                | 0.04                              |
| Percent significant bias |                                                  | 43.14        | #                       | 25.64         | 24.39                      | 27.03                  | 8.11                                    | 20.00                                      | 12.50                                  | 8.11                                | 5.00                              |
| PARHELBPB                | Help from parents: other educational expenses    |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                  | 0.12         | 0.15                    | 0.13          | 0.12                       | 0.04                   | 0.15                                    | 0.06                                       | 0.06                                   | 0.13                                | 0.10                              |
| Median estimated bias    |                                                  | 0.04         | 0.07                    | 0.03          | 0.04                       | 0.02                   | 0.07                                    | 0.03                                       | 0.03                                   | 0.06                                | 0.04                              |
| Percent significant bias |                                                  | 43.14        | #                       | 25.64         | 24.39                      | 27.03                  | 8.11                                    | 20.00                                      | 12.50                                  | 8.11                                | 5.00                              |
| PARHELPC                 | Help from parents: other living expenses         |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                  | 0.12         | 0.15                    | 0.13          | 0.12                       | 0.04                   | 0.15                                    | 0.06                                       | 0.06                                   | 0.13                                | 0.10                              |
| Median estimated bias    |                                                  | 0.04         | 0.07                    | 0.03          | 0.04                       | 0.02                   | 0.07                                    | 0.03                                       | 0.03                                   | 0.06                                | 0.04                              |
| Percent significant bias |                                                  | 43.14        | #                       | 25.64         | 24.39                      | 27.03                  | 8.11                                    | 20.00                                      | 12.50                                  | 8.11                                | 5.00                              |
| PARHELDPD                | Help from parents: tuition and fees              |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                  | 0.12         | 0.15                    | 0.13          | 0.12                       | 0.04                   | 0.15                                    | 0.06                                       | 0.06                                   | 0.13                                | 0.10                              |
| Median estimated bias    |                                                  | 0.04         | 0.07                    | 0.03          | 0.04                       | 0.02                   | 0.07                                    | 0.03                                       | 0.03                                   | 0.06                                | 0.04                              |
| Percent significant bias |                                                  | 43.14        | #                       | 25.64         | 24.39                      | 27.03                  | 8.11                                    | 20.00                                      | 12.50                                  | 8.11                                | 5.00                              |
| PARLIVE                  | Lived with parents while not enrolled            |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                  | 0.12         | 0.15                    | 0.13          | 0.11                       | 0.04                   | 0.14                                    | 0.04                                       | 0.05                                   | 0.14                                | 0.15                              |
| Median estimated bias    |                                                  | 0.03         | 0.16                    | 0.04          | 0.04                       | 0.02                   | 0.10                                    | 0.02                                       | 0.02                                   | 0.07                                | 0.05                              |
| Percent significant bias |                                                  | 43.14        | 12.90                   | 20.51         | 14.63                      | 18.92                  | 10.81                                   | 10.00                                      | 10.00                                  | 2.70                                | 2.50                              |

See notes at end of table.

**Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued**

| Variable                 | Variable label                   | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|----------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| PARPAYCR                 | Parents help pay credit bills    |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                  | 0.19         | 0.30                    | 0.18          | 0.19                       | 0.07                   | 0.21                                    | 0.10                                       | 0.11                                   | 0.22                                | 0.20                              |
| Median estimated bias    |                                  | 0.08         | 0.19                    | 0.10          | 0.09                       | 0.05                   | 0.17                                    | 0.06                                       | 0.05                                   | 0.13                                | 0.09                              |
| Percent significant bias |                                  | 58.82        | 6.06                    | 25.64         | 29.27                      | 32.43                  | 8.33                                    | 17.50                                      | 15.00                                  | 10.81                               | 12.50                             |
| PAYOFBAL                 | Payoff or carry credit balance   |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                  | 0.19         | 0.30                    | 0.18          | 0.19                       | 0.07                   | 0.20                                    | 0.10                                       | 0.11                                   | 0.21                                | 0.20                              |
| Median estimated bias    |                                  | 0.08         | 0.19                    | 0.10          | 0.09                       | 0.04                   | 0.17                                    | 0.06                                       | 0.06                                   | 0.11                                | 0.08                              |
| Percent significant bias |                                  | 60.78        | 6.06                    | 25.64         | 29.27                      | 32.43                  | 8.33                                    | 17.50                                      | 15.00                                  | 10.81                               | 12.50                             |
| PAYTUIT                  | Use credit to pay for tuition    |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                  | 0.19         | 0.30                    | 0.18          | 0.19                       | 0.07                   | 0.20                                    | 0.10                                       | 0.11                                   | 0.21                                | 0.20                              |
| Median estimated bias    |                                  | 0.08         | 0.17                    | 0.10          | 0.09                       | 0.05                   | 0.17                                    | 0.06                                       | 0.05                                   | 0.12                                | 0.09                              |
| Percent significant bias |                                  | 56.86        | 6.06                    | 25.64         | 29.27                      | 32.43                  | 8.33                                    | 25.00                                      | 15.00                                  | 10.81                               | 12.50                             |
| PDADED                   | Father's highest education level |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                  | 0.07         | 0.09                    | 0.10          | †                          | †                      | †                                       | †                                          | †                                      | 0.07                                | †                                 |
| Median estimated bias    |                                  | 0.02         | 0.04                    | 0.03          | †                          | †                      | †                                       | †                                          | †                                      | 0.04                                | †                                 |
| Percent significant bias |                                  | 50.91        | 32.43                   | 31.71         | †                          | †                      | †                                       | †                                          | †                                      | 25.64                               | †                                 |
| PMOMED                   | Mothers highest education level  |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                  | 0.07         | 0.08                    | 0.10          | †                          | †                      | †                                       | †                                          | †                                      | 0.07                                | †                                 |
| Median estimated bias    |                                  | 0.02         | 0.04                    | 0.03          | †                          | †                      | †                                       | †                                          | †                                      | 0.03                                | †                                 |
| Percent significant bias |                                  | 52.73        | 32.43                   | 31.71         | †                          | †                      | †                                       | †                                          | †                                      | 28.21                               | †                                 |
| PRIMLANG                 | English as primary language      |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                  | 0.12         | 0.09                    | 0.12          | 0.13                       | 0.09                   | 0.12                                    | 0.06                                       | 0.08                                   | 0.11                                | 0.12                              |
| Median estimated bias    |                                  | 0.06         | 0.05                    | 0.04          | 0.05                       | 0.02                   | 0.09                                    | 0.03                                       | 0.02                                   | 0.05                                | 0.06                              |
| Percent significant bias |                                  | 50.91        | 32.43                   | 24.39         | 18.18                      | 26.09                  | 15.38                                   | 13.95                                      | 13.33                                  | 17.95                               | 30.23                             |
| RAINDTRB                 | State/federally recognized tribe |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                  | 0.14         | 0.13                    | 0.08          | 0.12                       | 0.12                   | 0.30                                    | 0.14                                       | 0.13                                   | 0.14                                | 0.15                              |
| Median estimated bias    |                                  | 0.05         | 0.09                    | 0.04          | 0.06                       | 0.04                   | 0.18                                    | 0.06                                       | 0.08                                   | 0.07                                | 0.06                              |
| Percent significant bias |                                  | 1.82         | 29.03                   | 2.78          | #                          | #                      | #                                       | #                                          | 2.38                                   | 2.86                                | #                                 |
| REMEDIA                  | Took remedial course: English    |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                  | 0.36         | 0.34                    | 0.30          | 0.20                       | 0.18                   | 0.38                                    | 0.22                                       | 0.25                                   | 0.40                                | 0.77                              |
| Median estimated bias    |                                  | 0.19         | 0.22                    | 0.11          | 0.16                       | 0.15                   | 0.24                                    | 0.12                                       | 0.19                                   | 0.21                                | 0.19                              |
| Percent significant bias |                                  | 43.40        | 19.44                   | 36.59         | 26.83                      | 43.59                  | 12.82                                   | 19.05                                      | 12.50                                  | 5.41                                | 11.90                             |
| REMEDIB                  | Took remedial course: math       |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                  | 0.36         | 0.34                    | 0.30          | 0.20                       | 0.18                   | 0.38                                    | 0.22                                       | 0.25                                   | 0.40                                | 0.77                              |
| Median estimated bias    |                                  | 0.19         | 0.22                    | 0.11          | 0.16                       | 0.15                   | 0.24                                    | 0.12                                       | 0.19                                   | 0.21                                | 0.19                              |
| Percent significant bias |                                  | 43.40        | 19.44                   | 36.59         | 26.83                      | 43.59                  | 12.82                                   | 19.05                                      | 12.50                                  | 5.41                                | 11.90                             |

See notes at end of table.

Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued

| Variable                 | Variable label                              | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|---------------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| REMEDIC                  | Took remedial course: reading               |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                             | 0.36         | 0.34                    | 0.30          | 0.20                       | 0.18                   | 0.38                                    | 0.22                                       | 0.25                                   | 0.40                                | 0.77                              |
| Median estimated bias    |                                             | 0.19         | 0.22                    | 0.11          | 0.16                       | 0.15                   | 0.24                                    | 0.12                                       | 0.19                                   | 0.21                                | 0.19                              |
| Percent significant bias |                                             | 43.40        | 19.44                   | 36.59         | 26.83                      | 43.59                  | 12.82                                   | 19.05                                      | 12.50                                  | 5.41                                | 11.90                             |
| REMEDID                  | Took remedial course: study skills          |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                             | 0.36         | 0.34                    | 0.30          | 0.20                       | 0.18                   | 0.38                                    | 0.22                                       | 0.25                                   | 0.40                                | 0.77                              |
| Median estimated bias    |                                             | 0.19         | 0.22                    | 0.11          | 0.16                       | 0.15                   | 0.24                                    | 0.12                                       | 0.19                                   | 0.21                                | 0.19                              |
| Percent significant bias |                                             | 43.40        | 19.44                   | 36.59         | 26.83                      | 43.59                  | 12.82                                   | 19.05                                      | 12.50                                  | 5.41                                | 11.90                             |
| REMEDIE                  | Took remedial course: writing               |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                             | 0.36         | 0.34                    | 0.30          | 0.20                       | 0.18                   | 0.38                                    | 0.22                                       | 0.25                                   | 0.40                                | 0.77                              |
| Median estimated bias    |                                             | 0.19         | 0.22                    | 0.11          | 0.16                       | 0.15                   | 0.24                                    | 0.12                                       | 0.19                                   | 0.21                                | 0.19                              |
| Percent significant bias |                                             | 43.40        | 19.44                   | 36.59         | 26.83                      | 43.59                  | 12.82                                   | 19.05                                      | 12.50                                  | 5.41                                | 11.90                             |
| REMETOOK                 | Took remedial courses this school year      |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                             | 0.26         | 0.23                    | 0.20          | 0.13                       | 0.11                   | 0.33                                    | 0.14                                       | 0.17                                   | 0.23                                | 0.49                              |
| Median estimated bias    |                                             | 0.11         | 0.11                    | 0.07          | 0.11                       | 0.07                   | 0.18                                    | 0.05                                       | 0.11                                   | 0.16                                | 0.16                              |
| Percent significant bias |                                             | 39.62        | 22.22                   | 12.20         | 24.39                      | 33.33                  | 7.69                                    | 9.52                                       | #                                      | #                                   | 35.71                             |
| REMEVER                  | Ever taken remedial courses                 |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                             | 0.12         | 0.05                    | 0.11          | 0.09                       | 0.07                   | 0.12                                    | 0.04                                       | 0.06                                   | 0.08                                | 0.07                              |
| Median estimated bias    |                                             | 0.05         | 0.05                    | 0.03          | 0.04                       | 0.02                   | 0.08                                    | 0.03                                       | 0.02                                   | 0.05                                | 0.04                              |
| Percent significant bias |                                             | 49.06        | 21.62                   | 24.39         | 20.93                      | 25.00                  | 7.69                                    | 14.29                                      | 16.28                                  | 17.95                               | 26.19                             |
| SERNEEDA                 | Adaptive equipment and technology           |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                             | 0.23         | 0.24                    | 0.25          | 0.32                       | 0.18                   | 0.27                                    | 0.18                                       | 0.29                                   | 0.23                                | 0.27                              |
| Median estimated bias    |                                             | 0.08         | 0.18                    | 0.12          | 0.12                       | 0.08                   | 0.22                                    | 0.08                                       | 0.11                                   | 0.13                                | 0.15                              |
| Percent significant bias |                                             | 32.73        | 27.78                   | 17.07         | 20.45                      | 31.82                  | 8.11                                    | 4.65                                       | 6.67                                   | 13.51                               | 16.28                             |
| SERNEEDB                 | Alternative exam formats or additional time |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                             | 0.23         | 0.24                    | 0.25          | 0.32                       | 0.18                   | 0.27                                    | 0.18                                       | 0.29                                   | 0.23                                | 0.27                              |
| Median estimated bias    |                                             | 0.08         | 0.18                    | 0.12          | 0.12                       | 0.08                   | 0.22                                    | 0.08                                       | 0.11                                   | 0.13                                | 0.15                              |
| Percent significant bias |                                             | 32.73        | 27.78                   | 17.07         | 20.45                      | 31.82                  | 8.11                                    | 4.65                                       | 6.67                                   | 13.51                               | 16.28                             |
| SERNEEDC                 | Course substitution or waiver               |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                             | 0.23         | 0.24                    | 0.25          | 0.32                       | 0.18                   | 0.27                                    | 0.18                                       | 0.29                                   | 0.23                                | 0.27                              |
| Median estimated bias    |                                             | 0.08         | 0.18                    | 0.12          | 0.12                       | 0.08                   | 0.22                                    | 0.08                                       | 0.11                                   | 0.13                                | 0.15                              |
| Percent significant bias |                                             | 32.73        | 27.78                   | 17.07         | 20.45                      | 31.82                  | 8.11                                    | 4.65                                       | 6.67                                   | 13.51                               | 16.28                             |

See notes at end of table.

**Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued**

| Variable                 | Variable label                                         | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|--------------------------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| SERNEEDD                 | Readers, note takers, or scribes                       |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                        | 0.23         | 0.24                    | 0.25          | 0.32                       | 0.18                   | 0.27                                    | 0.18                                       | 0.29                                   | 0.23                                | 0.27                              |
| Median estimated bias    |                                                        | 0.08         | 0.18                    | 0.12          | 0.12                       | 0.08                   | 0.22                                    | 0.08                                       | 0.11                                   | 0.13                                | 0.15                              |
| Percent significant bias |                                                        | 32.73        | 27.78                   | 17.07         | 20.45                      | 31.82                  | 8.11                                    | 4.65                                       | 6.67                                   | 13.51                               | 16.28                             |
| SERNEEDE                 | Registration assistance or priority class registration |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                        | 0.23         | 0.24                    | 0.25          | 0.32                       | 0.18                   | 0.27                                    | 0.18                                       | 0.29                                   | 0.23                                | 0.27                              |
| Median estimated bias    |                                                        | 0.08         | 0.18                    | 0.12          | 0.12                       | 0.08                   | 0.22                                    | 0.08                                       | 0.11                                   | 0.13                                | 0.15                              |
| Percent significant bias |                                                        | 32.73        | 27.78                   | 17.07         | 20.45                      | 31.82                  | 8.11                                    | 4.65                                       | 6.67                                   | 13.51                               | 16.28                             |
| SERNEEDF                 | Sign language or oral interpreters                     |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                        | 0.23         | 0.24                    | 0.25          | 0.33                       | 0.18                   | 0.29                                    | 0.18                                       | 0.29                                   | 0.24                                | 0.28                              |
| Median estimated bias    |                                                        | 0.09         | 0.18                    | 0.12          | 0.13                       | 0.09                   | 0.22                                    | 0.08                                       | 0.11                                   | 0.13                                | 0.16                              |
| Percent significant bias |                                                        | 30.91        | 27.78                   | 17.07         | 20.45                      | 34.09                  | 8.11                                    | 4.65                                       | 6.67                                   | 16.22                               | 16.28                             |
| SERNEEDG                 | Tutors to assist with homework                         |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                        | 0.23         | 0.24                    | 0.25          | 0.32                       | 0.18                   | 0.27                                    | 0.18                                       | 0.29                                   | 0.23                                | 0.27                              |
| Median estimated bias    |                                                        | 0.08         | 0.18                    | 0.12          | 0.12                       | 0.08                   | 0.22                                    | 0.08                                       | 0.11                                   | 0.13                                | 0.15                              |
| Percent significant bias |                                                        | 32.73        | 27.78                   | 17.07         | 20.45                      | 31.82                  | 8.11                                    | 4.65                                       | 6.67                                   | 13.51                               | 16.28                             |
| SERNEEDX                 | Needs: other                                           |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                        | 0.23         | 0.24                    | 0.25          | 0.32                       | 0.18                   | 0.27                                    | 0.18                                       | 0.29                                   | 0.23                                | 0.27                              |
| Median estimated bias    |                                                        | 0.08         | 0.18                    | 0.12          | 0.12                       | 0.08                   | 0.22                                    | 0.08                                       | 0.11                                   | 0.13                                | 0.15                              |
| Percent significant bias |                                                        | 32.73        | 27.78                   | 17.07         | 20.45                      | 31.82                  | 8.11                                    | 4.65                                       | 6.67                                   | 13.51                               | 16.28                             |
| SERRECVA                 | Service: adaptive equipment and technology             |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                        | 0.23         | 0.25                    | 0.26          | 0.32                       | 0.18                   | 0.26                                    | 0.17                                       | 0.29                                   | 0.23                                | 0.27                              |
| Median estimated bias    |                                                        | 0.09         | 0.20                    | 0.11          | 0.14                       | 0.08                   | 0.20                                    | 0.07                                       | 0.13                                   | 0.13                                | 0.15                              |
| Percent significant bias |                                                        | 30.91        | 27.78                   | 14.63         | 20.45                      | 31.82                  | 8.11                                    | 4.65                                       | 13.33                                  | 13.51                               | 16.28                             |
| SERRECVB                 | Service: alternative exam formats/additional time      |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                        | 0.23         | 0.25                    | 0.26          | 0.32                       | 0.18                   | 0.26                                    | 0.17                                       | 0.29                                   | 0.23                                | 0.27                              |
| Median estimated bias    |                                                        | 0.09         | 0.20                    | 0.11          | 0.14                       | 0.08                   | 0.20                                    | 0.07                                       | 0.13                                   | 0.13                                | 0.15                              |
| Percent significant bias |                                                        | 30.91        | 27.78                   | 14.63         | 20.45                      | 31.82                  | 8.11                                    | 4.65                                       | 13.33                                  | 13.51                               | 16.28                             |
| SERRECVC                 | Service: course substitution or waiver                 |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                                        | 0.23         | 0.25                    | 0.26          | 0.32                       | 0.18                   | 0.26                                    | 0.17                                       | 0.29                                   | 0.23                                | 0.27                              |
| Median estimated bias    |                                                        | 0.09         | 0.20                    | 0.11          | 0.14                       | 0.08                   | 0.20                                    | 0.07                                       | 0.13                                   | 0.13                                | 0.15                              |
| Percent significant bias |                                                        | 30.91        | 27.78                   | 14.63         | 20.45                      | 31.82                  | 8.11                                    | 4.65                                       | 13.33                                  | 13.51                               | 16.28                             |

See notes at end of table.

Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued

| Variable                 | Variable label                               | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|----------------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| SERRECVD                 | Service: readers, note takers, or scribes    |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                              | 0.23         | 0.25                    | 0.26          | 0.32                       | 0.18                   | 0.26                                    | 0.17                                       | 0.29                                   | 0.23                                | 0.27                              |
| Median estimated bias    |                                              | 0.09         | 0.20                    | 0.11          | 0.14                       | 0.08                   | 0.20                                    | 0.07                                       | 0.13                                   | 0.13                                | 0.15                              |
| Percent significant bias |                                              | 30.91        | 27.78                   | 14.63         | 20.45                      | 31.82                  | 8.11                                    | 4.65                                       | 13.33                                  | 13.51                               | 16.28                             |
| SERRECVE                 | Service: registration priority or assistance |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                              | 0.23         | 0.25                    | 0.26          | 0.32                       | 0.18                   | 0.26                                    | 0.17                                       | 0.29                                   | 0.23                                | 0.27                              |
| Median estimated bias    |                                              | 0.09         | 0.20                    | 0.11          | 0.14                       | 0.08                   | 0.20                                    | 0.07                                       | 0.13                                   | 0.13                                | 0.15                              |
| Percent significant bias |                                              | 30.91        | 27.78                   | 14.63         | 20.45                      | 31.82                  | 8.11                                    | 4.65                                       | 13.33                                  | 13.51                               | 16.28                             |
| SERRECVF                 | Service: sign language or oral interpreters  |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                              | 0.23         | 0.25                    | 0.26          | 0.32                       | 0.18                   | 0.26                                    | 0.17                                       | 0.29                                   | 0.23                                | 0.27                              |
| Median estimated bias    |                                              | 0.09         | 0.20                    | 0.11          | 0.14                       | 0.08                   | 0.20                                    | 0.07                                       | 0.13                                   | 0.13                                | 0.15                              |
| Percent significant bias |                                              | 30.91        | 27.78                   | 14.63         | 20.45                      | 31.82                  | 8.11                                    | 4.65                                       | 13.33                                  | 13.51                               | 16.28                             |
| SERRECVG                 | Service: tutors to assist with homework      |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                              | 0.23         | 0.25                    | 0.26          | 0.32                       | 0.18                   | 0.26                                    | 0.17                                       | 0.29                                   | 0.23                                | 0.27                              |
| Median estimated bias    |                                              | 0.09         | 0.20                    | 0.11          | 0.14                       | 0.08                   | 0.20                                    | 0.07                                       | 0.13                                   | 0.13                                | 0.15                              |
| Percent significant bias |                                              | 30.91        | 27.78                   | 14.63         | 20.45                      | 31.82                  | 8.11                                    | 4.65                                       | 13.33                                  | 13.51                               | 16.28                             |
| SERRECVX                 | Service: other                               |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                              | 0.23         | 0.25                    | 0.26          | 0.32                       | 0.18                   | 0.26                                    | 0.17                                       | 0.29                                   | 0.23                                | 0.27                              |
| Median estimated bias    |                                              | 0.09         | 0.20                    | 0.11          | 0.14                       | 0.08                   | 0.20                                    | 0.07                                       | 0.13                                   | 0.13                                | 0.15                              |
| Percent significant bias |                                              | 30.91        | 27.78                   | 14.63         | 20.45                      | 31.82                  | 8.11                                    | 4.65                                       | 13.33                                  | 13.51                               | 16.28                             |
| SIBCOLB4                 | Siblings in college before respondent        |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                              | 0.12         | 0.15                    | 0.13          | 0.12                       | 0.04                   | 0.13                                    | 0.06                                       | 0.06                                   | 0.14                                | 0.11                              |
| Median estimated bias    |                                              | 0.04         | 0.07                    | 0.04          | 0.05                       | 0.02                   | 0.08                                    | 0.03                                       | 0.02                                   | 0.07                                | 0.04                              |
| Percent significant bias |                                              | 47.06        | 6.06                    | 25.64         | 26.83                      | 27.03                  | 10.81                                   | 15.00                                      | 12.50                                  | 8.11                                | 5.00                              |
| SINCOL                   | Number in college (independent students)     |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                              | 0.08         | 0.08                    | 0.10          | †                          | †                      | †                                       | †                                          | †                                      | †                                   | †                                 |
| Median estimated bias    |                                              | 0.02         | 0.03                    | 0.04          | †                          | †                      | †                                       | †                                          | †                                      | †                                   | †                                 |
| Percent significant bias |                                              | 50.91        | 35.14                   | 36.59         | †                          | †                      | †                                       | †                                          | †                                      | †                                   | †                                 |
| SJCOMSER                 | Work-study: community service                |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                              | 0.12         | 0.24                    | 0.18          | 0.11                       | 0.09                   | 0.10                                    | 0.09                                       | 0.10                                   | 0.21                                | 0.10                              |
| Median estimated bias    |                                              | 0.04         | 0.10                    | 0.05          | 0.04                       | 0.04                   | 0.04                                    | 0.04                                       | 0.05                                   | 0.11                                | 0.06                              |
| Percent significant bias |                                              | 13.21        | #                       | 15.38         | 10.00                      | 13.16                  | 2.63                                    | 7.32                                       | 25.64                                  | 5.88                                | #                                 |

See notes at end of table.



**Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued**

| Variable                 | Variable label                     | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| SJHOURS                  | Work study: hours worked per week  |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                    | 0.08         | †                       | 0.10          | 0.07                       | 0.05                   | 0.10                                    | 0.04                                       | 0.06                                   | 0.15                                | 0.06                              |
| Median estimated bias    |                                    | 0.01         | †                       | 0.04          | 0.04                       | 0.02                   | 0.08                                    | 0.01                                       | 0.03                                   | 0.10                                | 0.02                              |
| Percent significant bias |                                    | 20.00        | †                       | 15.00         | 7.14                       | 2.38                   | 7.69                                    | 6.98                                       | 6.82                                   | 5.71                                | 9.30                              |
| SJMAJOR                  | Work study: related to major       |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                    | 0.08         | 0.24                    | 0.11          | 0.11                       | 0.09                   | 0.12                                    | 0.07                                       | 0.08                                   | 0.20                                | 0.08                              |
| Median estimated bias    |                                    | 0.04         | 0.11                    | 0.04          | 0.07                       | 0.04                   | 0.08                                    | 0.03                                       | 0.04                                   | 0.08                                | 0.05                              |
| Percent significant bias |                                    | 9.80         | 9.09                    | 13.16         | 17.07                      | 12.50                  | 2.63                                    | 7.14                                       | 14.63                                  | 11.43                               | #                                 |
| SJONOFF                  | Work study: on/off campus          |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                    | 0.11         | 0.22                    | 0.17          | 0.10                       | 0.08                   | 0.09                                    | 0.06                                       | 0.08                                   | 0.17                                | 0.08                              |
| Median estimated bias    |                                    | 0.04         | 0.12                    | 0.06          | 0.06                       | 0.04                   | 0.04                                    | 0.04                                       | 0.03                                   | 0.07                                | 0.03                              |
| Percent significant bias |                                    | 20.75        | 6.06                    | 17.50         | 17.07                      | 17.50                  | 2.56                                    | 7.14                                       | 21.95                                  | 11.43                               | #                                 |
| SJSCHOOL                 | Work study: for school             |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                    | 0.11         | 0.22                    | 0.17          | 0.10                       | 0.08                   | 0.09                                    | 0.06                                       | 0.08                                   | 0.17                                | 0.08                              |
| Median estimated bias    |                                    | 0.04         | 0.12                    | 0.07          | 0.06                       | 0.04                   | 0.04                                    | 0.04                                       | 0.03                                   | 0.08                                | 0.03                              |
| Percent significant bias |                                    | 18.87        | 6.06                    | 17.50         | 17.07                      | 17.50                  | 2.56                                    | 7.14                                       | 21.95                                  | 11.43                               | #                                 |
| SJTUTOR                  | Work study: tutoring               |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                    | 0.12         | 0.24                    | 0.18          | 0.10                       | 0.08                   | 0.10                                    | 0.09                                       | 0.10                                   | 0.21                                | 0.09                              |
| Median estimated bias    |                                    | 0.04         | 0.08                    | 0.05          | 0.05                       | 0.04                   | 0.04                                    | 0.04                                       | 0.06                                   | 0.11                                | 0.05                              |
| Percent significant bias |                                    | 13.21        | #                       | 15.38         | 10.00                      | 13.16                  | 2.63                                    | 7.32                                       | 23.08                                  | 5.88                                | #                                 |
| SPINCOL                  | Spouse in college                  |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                    | 0.13         | 0.13                    | 0.13          | 0.14                       | 0.06                   | 0.17                                    | 0.06                                       | 0.10                                   | 0.11                                | 0.15                              |
| Median estimated bias    |                                    | 0.07         | 0.08                    | 0.05          | 0.06                       | 0.03                   | 0.14                                    | 0.03                                       | 0.04                                   | 0.07                                | 0.08                              |
| Percent significant bias |                                    | 34.55        | 25.00                   | 21.95         | 13.64                      | 16.67                  | 7.89                                    | 4.65                                       | 4.44                                   | 5.41                                | 25.58                             |
| SPSINC                   | Spouse of student earnings derived |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                    | 0.46         | 0.26                    | 0.54          | 0.53                       | 0.59                   | 0.26                                    | 0.35                                       | 0.55                                   | 0.20                                | 0.27                              |
| Median estimated bias    |                                    | 0.26         | 0.15                    | 0.29          | 0.28                       | 0.23                   | 0.09                                    | 0.22                                       | 0.30                                   | 0.08                                | 0.15                              |
| Percent significant bias |                                    | 54.55        | 38.89                   | 43.90         | 25.00                      | 34.09                  | 20.51                                   | 25.58                                      | 42.22                                  | 21.62                               | 25.58                             |
| SSISSDI                  | Receive SSI/SSDI                   |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                    | 0.23         | 0.24                    | 0.26          | 0.34                       | 0.17                   | 0.25                                    | 0.17                                       | 0.28                                   | 0.23                                | 0.27                              |
| Median estimated bias    |                                    | 0.09         | 0.18                    | 0.11          | 0.13                       | 0.08                   | 0.18                                    | 0.06                                       | 0.11                                   | 0.12                                | 0.14                              |
| Percent significant bias |                                    | 29.09        | 27.78                   | 14.63         | 18.18                      | 29.55                  | 8.11                                    | 4.65                                       | 8.89                                   | 13.51                               | 16.28                             |
| STUDMULT                 | Number of institutions attended    |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                    | 0.06         | 0.06                    | 0.08          | †                          | †                      | †                                       | †                                          | †                                      | 0.05                                | †                                 |
| Median estimated bias    |                                    | 0.02         | 0.03                    | 0.01          | †                          | †                      | †                                       | †                                          | †                                      | 0.01                                | †                                 |
| Percent significant bias |                                    | 54.55        | 29.73                   | 26.83         | †                          | †                      | †                                       | †                                          | †                                      | 28.21                               | †                                 |

See notes at end of table.

Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued

| Variable                 | Variable label                     | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| TAXHOPE                  | Claim Federal Hope scholarship     |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                    | 0.12         | 0.09                    | 0.12          | 0.13                       | 0.08                   | 0.17                                    | 0.06                                       | 0.09                                   | 0.11                                | 0.10                              |
| Median estimated bias    |                                    | 0.04         | 0.06                    | 0.04          | 0.05                       | 0.02                   | 0.08                                    | 0.03                                       | 0.03                                   | 0.05                                | 0.04                              |
| Percent significant bias |                                    | 41.82        | 32.43                   | 19.51         | 15.91                      | 28.26                  | 20.51                                   | 18.60                                      | 15.56                                  | 17.95                               | 2.33                              |
| TAXLEARN                 | Claim lifetime learning tax credit |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                    | 0.12         | 0.10                    | 0.11          | 0.13                       | 0.08                   | 0.17                                    | 0.06                                       | 0.08                                   | 0.11                                | 0.11                              |
| Median estimated bias    |                                    | 0.05         | 0.05                    | 0.03          | 0.04                       | 0.02                   | 0.08                                    | 0.03                                       | 0.02                                   | 0.05                                | 0.05                              |
| Percent significant bias |                                    | 49.09        | 27.03                   | 19.51         | 20.45                      | 30.43                  | 17.95                                   | 13.95                                      | 13.33                                  | 17.95                               | 2.33                              |
| TAXTUIT                  | Claim tuition tax deduction        |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                    | 0.12         | 0.09                    | 0.11          | 0.13                       | 0.08                   | 0.17                                    | 0.06                                       | 0.09                                   | 0.11                                | 0.11                              |
| Median estimated bias    |                                    | 0.05         | 0.06                    | 0.04          | 0.04                       | 0.02                   | 0.08                                    | 0.03                                       | 0.02                                   | 0.05                                | 0.05                              |
| Percent significant bias |                                    | 49.09        | 32.43                   | 26.83         | 22.73                      | 26.09                  | 17.95                                   | 11.63                                      | 13.33                                  | 20.51                               | 16.28                             |
| TRANSCRD                 | Transferred credits to NPSAS       |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                    | 0.20         | 0.66                    | 0.23          | 0.17                       | 0.20                   | 0.35                                    | 0.14                                       | 0.21                                   | 0.35                                | 0.28                              |
| Median estimated bias    |                                    | 0.09         | 0.48                    | 0.10          | 0.11                       | 0.08                   | 0.30                                    | 0.10                                       | 0.18                                   | 0.28                                | 0.19                              |
| Percent significant bias |                                    | 20.75        | 31.25                   | 19.51         | 4.88                       | 14.29                  | 7.69                                    | 15.00                                      | 25.00                                  | 2.70                                | 12.20                             |
| TRANSFR                  | Transferred from NPSAS             |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                    | 0.15         | 0.27                    | 0.19          | 0.10                       | 0.22                   | 0.21                                    | 0.15                                       | 0.13                                   | 0.15                                | 0.17                              |
| Median estimated bias    |                                    | 0.06         | 0.12                    | 0.07          | 0.06                       | 0.06                   | 0.15                                    | 0.11                                       | 0.07                                   | 0.07                                | 0.12                              |
| Percent significant bias |                                    | 28.30        | #                       | 19.51         | 4.88                       | 4.55                   | 2.56                                    | 24.39                                      | 5.00                                   | #                                   | 12.20                             |
| TRANSPLN                 | Plan to transfer from NPSAS        |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                    | 0.17         | 0.15                    | 0.14          | 0.13                       | 0.10                   | 0.20                                    | 0.09                                       | 0.10                                   | 0.17                                | 0.15                              |
| Median estimated bias    |                                    | 0.09         | 0.09                    | 0.06          | 0.06                       | 0.04                   | 0.11                                    | 0.05                                       | 0.04                                   | 0.12                                | 0.07                              |
| Percent significant bias |                                    | 60.38        | 24.32                   | 14.63         | 37.21                      | 54.55                  | 17.95                                   | 28.57                                      | 16.28                                  | 30.77                               | 26.19                             |
| TRANSTO                  | Transferred to NPSAS               |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                    | 0.12         | 0.24                    | 0.14          | 0.10                       | 0.14                   | 0.21                                    | 0.09                                       | 0.12                                   | 0.20                                | 0.20                              |
| Median estimated bias    |                                    | 0.04         | 0.16                    | 0.05          | 0.06                       | 0.03                   | 0.16                                    | 0.06                                       | 0.09                                   | 0.12                                | 0.15                              |
| Percent significant bias |                                    | 35.85        | 8.82                    | 21.95         | 9.76                       | 6.82                   | 5.13                                    | 7.32                                       | 22.50                                  | #                                   | 17.07                             |
| UNTAXBF                  | Received untaxed benefits in 2003  |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                    | 0.22         | 0.06                    | 0.12          | 0.12                       | 0.09                   | 0.10                                    | 0.05                                       | 0.07                                   | 0.09                                | 0.11                              |
| Median estimated bias    |                                    | 0.13         | 0.06                    | 0.04          | 0.05                       | 0.04                   | 0.08                                    | 0.02                                       | 0.02                                   | 0.05                                | 0.06                              |
| Percent significant bias |                                    | 30.91        | 24.32                   | 19.51         | 27.27                      | 19.57                  | 5.13                                    | 4.65                                       | 13.33                                  | 21.62                               | 16.28                             |
| UNTAXBFA                 | Received child support             |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                    | 0.28         | 0.24                    | 0.25          | 0.28                       | 0.20                   | 0.24                                    | 0.17                                       | 0.18                                   | 0.18                                | 0.13                              |
| Median estimated bias    |                                    | 0.18         | 0.19                    | 0.15          | 0.21                       | 0.14                   | 0.18                                    | 0.14                                       | 0.11                                   | 0.10                                | 0.10                              |
| Percent significant bias |                                    | 47.27        | 21.62                   | 31.71         | 30.95                      | 26.09                  | 2.63                                    | 4.65                                       | 11.90                                  | 13.51                               | 4.76                              |

See notes at end of table.

**Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued**

| Variable                 | Variable label                      | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|-------------------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| UNTAXBFB                 | Received disability payments        |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                     | 0.28         | 0.18                    | 0.31          | 0.40                       | 0.25                   | 0.25                                    | 0.23                                       | 0.26                                   | 0.20                                | 0.24                              |
| Median estimated bias    |                                     | 0.18         | 0.14                    | 0.19          | 0.25                       | 0.17                   | 0.17                                    | 0.19                                       | 0.16                                   | 0.12                                | 0.12                              |
| Percent significant bias |                                     | 47.27        | 16.22                   | 41.46         | 40.91                      | 34.78                  | 7.69                                    | 13.95                                      | 15.91                                  | 27.03                               | 4.65                              |
| UNTAXBFC                 | Received food stamps                |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                     | 0.28         | 0.18                    | 0.31          | 0.40                       | 0.25                   | 0.25                                    | 0.23                                       | 0.26                                   | 0.20                                | 0.24                              |
| Median estimated bias    |                                     | 0.18         | 0.14                    | 0.19          | 0.25                       | 0.17                   | 0.17                                    | 0.19                                       | 0.16                                   | 0.12                                | 0.12                              |
| Percent significant bias |                                     | 47.27        | 16.22                   | 41.46         | 40.91                      | 34.78                  | 7.69                                    | 13.95                                      | 15.91                                  | 27.03                               | 4.65                              |
| UNTAXBFD                 | Received social security benefits   |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                     | 0.22         | 0.19                    | 0.31          | 0.40                       | 0.25                   | 0.25                                    | 0.23                                       | 0.26                                   | 0.20                                | 0.24                              |
| Median estimated bias    |                                     | 0.13         | 0.14                    | 0.20          | 0.25                       | 0.17                   | 0.17                                    | 0.18                                       | 0.17                                   | 0.12                                | 0.12                              |
| Percent significant bias |                                     | 30.91        | 16.22                   | 41.46         | 40.91                      | 36.96                  | 7.69                                    | 13.95                                      | 15.91                                  | 27.03                               | 4.65                              |
| UNTAXBFE                 | Received TANF                       |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                     | 0.28         | 0.24                    | 0.25          | 0.28                       | 0.20                   | 0.24                                    | 0.17                                       | 0.18                                   | 0.18                                | 0.13                              |
| Median estimated bias    |                                     | 0.18         | 0.19                    | 0.15          | 0.21                       | 0.14                   | 0.18                                    | 0.14                                       | 0.11                                   | 0.10                                | 0.10                              |
| Percent significant bias |                                     | 47.27        | 21.62                   | 31.71         | 30.95                      | 26.09                  | 2.63                                    | 4.65                                       | 11.90                                  | 13.51                               | 4.76                              |
| UNTAXBFF                 | Received worker's compensation      |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                     | 0.12         | 0.18                    | 0.31          | 0.40                       | 0.25                   | 0.25                                    | 0.23                                       | 0.26                                   | 0.20                                | 0.24                              |
| Median estimated bias    |                                     | 0.06         | 0.14                    | 0.19          | 0.25                       | 0.17                   | 0.17                                    | 0.19                                       | 0.16                                   | 0.12                                | 0.12                              |
| Percent significant bias |                                     | 43.64        | 16.22                   | 41.46         | 40.91                      | 34.78                  | 7.69                                    | 13.95                                      | 15.91                                  | 27.03                               | 4.65                              |
| USBORN                   | Respondent born in the U.S.         |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                     | 0.12         | 0.10                    | 0.12          | 0.13                       | 0.08                   | 0.13                                    | 0.06                                       | 0.08                                   | 0.10                                | 0.12                              |
| Median estimated bias    |                                     | 0.05         | 0.06                    | 0.04          | 0.04                       | 0.02                   | 0.09                                    | 0.03                                       | 0.03                                   | 0.04                                | 0.05                              |
| Percent significant bias |                                     | 45.45        | 27.03                   | 17.07         | 22.73                      | 28.26                  | 5.13                                    | 9.30                                       | 11.11                                  | 23.08                               | 25.58                             |
| VOCAPPLY                 | Ever applied for Voc Rehab services |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                     | 0.23         | 0.28                    | 0.24          | 0.34                       | 0.17                   | 0.31                                    | 0.19                                       | 0.30                                   | 0.23                                | 0.30                              |
| Median estimated bias    |                                     | 0.08         | 0.21                    | 0.10          | 0.12                       | 0.07                   | 0.23                                    | 0.08                                       | 0.11                                   | 0.11                                | 0.14                              |
| Percent significant bias |                                     | 25.45        | 11.11                   | 12.20         | 15.91                      | 20.45                  | 2.70                                    | 6.98                                       | 2.22                                   | 8.11                                | 16.28                             |
| VOCRECV                  | Ever received Voc Rehab services    |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                     | 0.24         | 0.24                    | 0.26          | 0.34                       | 0.17                   | 0.25                                    | 0.17                                       | 0.28                                   | 0.23                                | 0.26                              |
| Median estimated bias    |                                     | 0.08         | 0.18                    | 0.11          | 0.13                       | 0.08                   | 0.18                                    | 0.07                                       | 0.11                                   | 0.13                                | 0.14                              |
| Percent significant bias |                                     | 29.09        | 27.78                   | 14.63         | 20.45                      | 29.55                  | 8.11                                    | 4.65                                       | 6.67                                   | 13.51                               | 16.28                             |
| VOTEEVER                 | Ever vote                           |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                                     | 0.12         | 0.10                    | 0.12          | 0.12                       | 0.08                   | 0.14                                    | 0.06                                       | 0.08                                   | 0.10                                | 0.13                              |
| Median estimated bias    |                                     | 0.05         | 0.05                    | 0.04          | 0.04                       | 0.02                   | 0.10                                    | 0.03                                       | 0.03                                   | 0.04                                | 0.05                              |
| Percent significant bias |                                     | 47.27        | 27.03                   | 19.51         | 22.73                      | 28.26                  | 7.69                                    | 9.30                                       | 13.33                                  | 23.08                               | 25.58                             |

See notes at end of table.

**Table K-24. Summary of item nonresponse bias analysis for all students and by institutional sector: 2004—Continued**

| Variable                 | Variable label             | All students | Public less-than-2-year | Public 2-year | Public 4-year non-doctoral | Public 4-year doctoral | Private not-for-profit less-than-4-year | Private not-for-profit 4-year non-doctoral | Private not-for-profit 4-year doctoral | Private for-profit less-than-2-year | Private for-profit 2-year or more |
|--------------------------|----------------------------|--------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|
| VOTEREG                  | Registered to vote         |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                            | 0.12         | 0.10                    | 0.12          | 0.12                       | 0.08                   | 0.18                                    | 0.06                                       | 0.08                                   | 0.10                                | 0.13                              |
| Median estimated bias    |                            | 0.05         | 0.05                    | 0.05          | 0.05                       | 0.02                   | 0.10                                    | 0.03                                       | 0.03                                   | 0.04                                | 0.06                              |
| Percent significant bias |                            | 47.27        | 27.03                   | 17.07         | 18.18                      | 26.09                  | 12.82                                   | 9.30                                       | 13.33                                  | 23.08                               | 25.58                             |
| YEARGRAD                 | Year began graduate school |              |                         |               |                            |                        |                                         |                                            |                                        |                                     |                                   |
| Mean estimated bias      |                            | 0.07         | †                       | †             | 0.10                       | 0.04                   | †                                       | 0.07                                       | 0.07                                   | †                                   | 0.08                              |
| Median estimated bias    |                            | 0.02         | †                       | †             | 0.05                       | 0.01                   | †                                       | 0.03                                       | 0.02                                   | †                                   | 0.04                              |
| Percent significant bias |                            | 6.98         | †                       | †             | #                          | 11.43                  | †                                       | 11.43                                      | 8.11                                   | †                                   | #                                 |

† Not applicable.

NOTE: Nonresponse bias analysis was conducted only for items with a weighted response rate less than 85 percent. Nonresponse bias analysis was based on the student-level variables known for both item respondents and nonrespondents (described in section 6.3).

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table K-25. Evaluation of item nonresponse bias after imputation for continuous variables: 2004**

| Variable | Variable label                              | Before<br>imputation<br>mean | After<br>imputation<br>mean | Estimated<br>bias      | Relative<br>bias |
|----------|---------------------------------------------|------------------------------|-----------------------------|------------------------|------------------|
| BAYEAR   | Year received bachelor's degree             | 1,995.56                     | 1,995.55                    | 0.01                   | #                |
| COMHOUR  | Number of hours volunteered per month       | 15.27                        | 15.36                       | -0.10                  | -0.01            |
| CRBALDUE | Balance due on all credit cards             | 2,036.12                     | 2,043.79                    | -7.67                  | #                |
| DEPCOST  | Monthly daycare costs                       | 414.40                       | 421.10                      | -6.70                  | -0.02            |
| DEPINC   | Dependent parent income derived             | 60,353.38                    | 66,537.78                   | -6,184.40 <sup>1</sup> | -0.09            |
| DEPOLD   | Dependent children—age of oldest            | 2.28                         | 2.69                        | -0.42 <sup>1</sup>     | -0.16            |
| DEPYNG   | Dependent children—age of youngest          | 1.60                         | 1.97                        | -0.36 <sup>1</sup>     | -0.18            |
| DSTUINC  | Dependent student earnings derived          | 4,351.04                     | 5,474.09                    | -1,123.05 <sup>1</sup> | -0.21            |
| EMPLYAM2 | Employer (parents) tuition aid              | 29.11                        | 29.44                       | -0.32                  | -0.01            |
| GPA      | Grad point average                          | 296.43                       | 296.85                      | -0.42 <sup>1</sup>     | #                |
| HOMEDIST | Distance from NPSAS school to home          | 159.96                       | 161.77                      | -1.81                  | -0.01            |
| HSGRADYY | High school graduation year                 | 1,995.43                     | 1,963.77                    | 31.67 <sup>1</sup>     | 0.02             |
| INDEPINC | Independent student & spouse income derived | 25,522.71                    | 32,689.87                   | -7,167.16 <sup>1</sup> | -0.22            |
| JOBEARN  | Total amount earned during the school year  | 15,145.66                    | 15,137.24                   | 8.42                   | #                |
| JOBHOUR  | Hours worked weekly during the school year  | 29.97                        | 30.11                       | -0.14 <sup>1</sup>     | #                |
| JOBNUM   | Number of jobs during NPSAS year            | 0.95                         | 0.95                        | #                      | #                |
| JOBSAVE  | Amount saved from summer earnings           | 1,101.21                     | 1,102.04                    | -0.83                  | #                |
| NUMCRED  | Number of credit cards in own name          | 1.15                         | 1.16                        | -0.01                  | -0.01            |
| PARALLOW | Monthly allowance amount from parents       | 107.27                       | 145.68                      | -38.41 <sup>1</sup>    | -0.26            |
| SJHOURS  | Work study: hours worked per week           | 12.39                        | 12.52                       | -0.13                  | -0.01            |
| SPSINC   | Spouse of student earnings derived          | 21,221.92                    | 29,144.00                   | -7,922.08 <sup>1</sup> | -0.27            |

<sup>1</sup> Bias is significant at the 0.05 level.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table K-26. Evaluation of item nonresponse bias after imputation for categorical variables: 2004**

| Variable | Variable label                                              | Category | Before imputation mean | After imputation mean | Estimated bias     | Relative bias |
|----------|-------------------------------------------------------------|----------|------------------------|-----------------------|--------------------|---------------|
| ATTENDA  | Reason for attending NPSAS: complete associate's degree     | 0        | 61.73                  | 62.37                 | -0.64              | -0.01         |
|          |                                                             | 1        | 38.27                  | 37.63                 | 0.64               | 0.02          |
| ATTENDB  | Reason for attending NPSAS: complete certificate            | 0        | 81.45                  | 81.14                 | 0.31               | #             |
|          |                                                             | 1        | 18.55                  | 18.86                 | -0.31              | -0.02         |
| ATTENDC  | Reason for attending NPSAS: learn job skills                | 0        | 58.04                  | 57.37                 | 0.68 <sup>1</sup>  | 0.01          |
|          |                                                             | 1        | 41.96                  | 42.63                 | -0.68 <sup>1</sup> | -0.02         |
| ATTENDD  | Reason for attending NPSAS: personal interest or enrichment | 0        | 53.46                  | 53.39                 | 0.07               | #             |
|          |                                                             | 1        | 46.54                  | 46.61                 | -0.07              | #             |
| ATTENDE  | Reason for attending NPSAS: transfer to 2-year school       | 0        | 94.54                  | 94.62                 | -0.08              | #             |
|          |                                                             | 1        | 5.46                   | 5.38                  | 0.08               | 0.01          |
| ATTENDF  | Reason for attending NPSAS: transfer to 4-year school       | 0        | 66.28                  | 67.10                 | -0.82 <sup>1</sup> | -0.01         |
|          |                                                             | 1        | 33.72                  | 32.90                 | 0.82 <sup>1</sup>  | 0.02          |
| ATTENDG  | Reason for attending NPSAS: transfer to another school      | 0        | 91.10                  | 91.17                 | -0.08              | #             |
|          |                                                             | 1        | 8.90                   | 8.83                  | 0.08               | 0.01          |
| CLASSA   | Type of class: business                                     | 0        | 89.26                  | 89.28                 | -0.03              | #             |
|          |                                                             | 1        | 10.74                  | 10.72                 | 0.03               | #             |
| CLASSB   | Type of class: health                                       | 0        | 88.58                  | 88.69                 | -0.11              | #             |
|          |                                                             | 1        | 11.42                  | 11.31                 | 0.11               | 0.01          |
| CLASSC   | Type of class: education                                    | 0        | 85.43                  | 84.68                 | 0.75               | 0.01          |
|          |                                                             | 1        | 14.57                  | 15.32                 | -0.75              | -0.05         |
| CLASSD   | Type of class: engineering and engineering technology       | 0        | 97.36                  | 97.31                 | 0.05               | #             |
|          |                                                             | 1        | 2.64                   | 2.69                  | -0.05              | -0.02         |
| CLASSE   | Type of class: computer and information sciences            | 0        | 86.96                  | 86.97                 | -0.01              | #             |
|          |                                                             | 1        | 13.04                  | 13.03                 | 0.01               | #             |
| CLASSF   | Type of class: social sciences                              | 0        | 88.69                  | 88.53                 | 0.16               | #             |
|          |                                                             | 1        | 11.31                  | 11.47                 | -0.16              | -0.01         |
| CLASSG   | Type of class: natural sciences and mathematics             | 0        | 82.33                  | 81.33                 | 1.00               | 0.01          |
|          |                                                             | 1        | 17.67                  | 18.67                 | -1.00              | -0.05         |
| CLASSH   | Type of class: arts and humanities                          | 0        | 84.82                  | 84.27                 | 0.54               | 0.01          |
|          |                                                             | 1        | 15.18                  | 15.73                 | -0.54              | -0.03         |
| CLASSI   | Type of class: communications                               | 0        | 94.54                  | 94.23                 | 0.31               | #             |
|          |                                                             | 1        | 5.46                   | 5.77                  | -0.31              | -0.05         |
| CLASSJ   | Type of class: vocational program                           | 0        | 93.90                  | 94.23                 | -0.33              | #             |
|          |                                                             | 1        | 6.10                   | 5.77                  | 0.33               | 0.06          |
| CLASSK   | Type of class: university transfer                          | 0        | 94.32                  | 94.27                 | 0.05               | #             |
|          |                                                             | 1        | 5.68                   | 5.73                  | -0.05              | -0.01         |
| CLASSL   | Type of class: general education                            | 0        | 76.09                  | 76.56                 | -0.47              | -0.01         |
|          |                                                             | 1        | 23.91                  | 23.44                 | 0.47               | 0.02          |

See notes at end of table.

**Table K-26. Evaluation of item nonresponse bias after imputation for categorical variables: 2004—Continued**

| Variable | Variable label                                       | Category | Before imputation mean | After imputation mean | Estimated bias     | Relative bias |
|----------|------------------------------------------------------|----------|------------------------|-----------------------|--------------------|---------------|
| CLASSX   | Type of class: other                                 | 0        | 79.48                  | 79.98                 | -0.50              | -0.01         |
|          |                                                      | 1        | 20.52                  | 20.02                 | 0.50               | 0.02          |
| COMONE   | One time event                                       | 0        | 82.11                  | 82.25                 | -0.14              | #             |
|          |                                                      | 1        | 17.89                  | 17.75                 | 0.14               | 0.01          |
| COMREQ   | Volunteer work required for graduation/class         | 0        | 86.50                  | 86.54                 | -0.04              | #             |
|          |                                                      | 1        | 13.50                  | 13.46                 | 0.04               | #             |
| COMSERV  | Community service/volunteer in last year             | 0        | 57.78                  | 57.88                 | -0.10              | #             |
|          |                                                      | 1        | 42.22                  | 42.12                 | 0.10               | #             |
| COMSERVA | Volunteer: fundraising (political and non-political) | 0        | 79.85                  | 79.86                 | #                  | #             |
|          |                                                      | 1        | 20.15                  | 20.14                 | #                  | #             |
| COMSERVB | Volunteer: homeless shelter/soup kitchen             | 0        | 86.26                  | 86.58                 | -0.32              | #             |
|          |                                                      | 1        | 13.74                  | 13.42                 | 0.32               | 0.02          |
| COMSERVC | Volunteer: health services                           | 0        | 82.76                  | 82.43                 | 0.33               | #             |
|          |                                                      | 1        | 17.24                  | 17.57                 | -0.33              | -0.02         |
| COMSERVD | Volunteer: neighborhood improvement                  | 0        | 80.37                  | 80.51                 | -0.14              | #             |
|          |                                                      | 1        | 19.63                  | 19.49                 | 0.14               | 0.01          |
| COMSERVE | Volunteer: service to the church                     | 0        | 68.77                  | 68.44                 | 0.33               | #             |
|          |                                                      | 1        | 31.23                  | 31.56                 | -0.33              | -0.01         |
| COMSERVF | Volunteer: tutoring/education-related                | 0        | 74.06                  | 74.40                 | -0.33              | #             |
|          |                                                      | 1        | 25.94                  | 25.60                 | 0.33               | 0.01          |
| COMSERVG | Volunteer: other work with kids                      | 0        | 71.70                  | 72.08                 | -0.38              | -0.01         |
|          |                                                      | 1        | 28.30                  | 27.92                 | 0.38               | 0.01          |
| COMSERVX | Volunteer: other                                     | 0        | 70.93                  | 71.19                 | -0.26              | #             |
|          |                                                      | 1        | 29.07                  | 28.81                 | 0.26               | 0.01          |
| CONSIDRA | Consider campus safety                               | 0        | 68.90                  | 69.39                 | -0.48 <sup>1</sup> | -0.01         |
|          |                                                      | 1        | 31.10                  | 30.61                 | 0.48 <sup>1</sup>  | 0.02          |
| CONSIDRB | Consider graduation rate                             | 0        | 72.01                  | 72.21                 | -0.20              | #             |
|          |                                                      | 1        | 27.99                  | 27.79                 | 0.20               | 0.01          |
| CONSIDRC | Consider job rate                                    | 0        | 35.29                  | 35.89                 | -0.60              | -0.02         |
|          |                                                      | 1        | 64.71                  | 64.11                 | 0.60               | 0.01          |
| DEGEARN  | Earned prior degree/certificates                     | 0        | 65.78                  | 65.32                 | 0.46               | 0.01          |
|          |                                                      | 1        | 34.22                  | 34.68                 | -0.46              | -0.01         |
| DEGEARNA | Already earned bachelor's degree                     | 0        | 48.64                  | 50.15                 | -1.51 <sup>1</sup> | -0.03         |
|          |                                                      | 1        | 51.36                  | 49.85                 | 1.51 <sup>1</sup>  | 0.03          |
| DEGEARNB | Already earned associate's degree                    | 0        | 70.03                  | 68.76                 | 1.27 <sup>1</sup>  | 0.02          |
|          |                                                      | 1        | 29.97                  | 31.24                 | -1.27 <sup>1</sup> | -0.04         |
| DEGEARNC | Already earned undergraduate certificate/diploma     | 0        | 76.22                  | 75.44                 | 0.78 <sup>1</sup>  | 0.01          |
|          |                                                      | 1        | 23.78                  | 24.56                 | -0.78 <sup>1</sup> | -0.03         |
| DEGEARND | Already earned post-BA certificate                   | 0        | 98.41                  | 98.47                 | -0.06              | #             |
|          |                                                      | 1        | 1.59                   | 1.53                  | 0.06               | 0.04          |
| DEGEARNE | Already earned master's degree                       | 0        | 87.50                  | 87.99                 | -0.49              | -0.01         |
|          |                                                      | 1        | 12.50                  | 12.01                 | 0.49               | 0.04          |

See notes at end of table.

**Table K-26. Evaluation of item nonresponse bias after imputation for categorical variables: 2004—Continued**

| Variable | Variable label                                 | Category | Before imputation mean | After imputation mean | Estimated bias     | Relative bias |
|----------|------------------------------------------------|----------|------------------------|-----------------------|--------------------|---------------|
| DEGEARNF | Already earned post-MA certificate             | 0        | 99.34                  | 99.34                 | #                  | #             |
|          |                                                | 1        | 0.66                   | 0.66                  | #                  | #             |
| DEGEARNG | Already earned first professional degree       | 0        | 97.28                  | 97.16                 | 0.12               | #             |
|          |                                                | 1        | 2.72                   | 2.84                  | -0.12              | -0.04         |
| DEGEARNH | Already earned doctoral degree                 | 0        | 99.11                  | 99.14                 | -0.03              | #             |
|          |                                                | 1        | 0.89                   | 0.86                  | 0.03               | 0.04          |
| DELIVE   | Distance education: live                       | 0        | 83.64                  | 83.44                 | 0.20               | #             |
|          |                                                | 1        | 16.36                  | 16.56                 | -0.20              | -0.01         |
| DEPCARE  | Have dependent children in daycare             | 0        | 63.86                  | 63.80                 | 0.07               | #             |
|          |                                                | 1        | 36.14                  | 36.20                 | -0.07              | #             |
| DEPCHILD | Dependents - has dependent children            | 0        | 75.95                  | 74.12                 | 1.82 <sup>1</sup>  | 0.02          |
|          |                                                | 1        | 24.05                  | 25.88                 | -1.82 <sup>1</sup> | -0.07         |
| DEPCLAIM | Claimed as a dependent                         | 0        | 24.07                  | 23.58                 | 0.49 <sup>1</sup>  | 0.02          |
|          |                                                | 1        | 64.37                  | 65.02                 | -0.65 <sup>1</sup> | -0.01         |
|          |                                                | 2        | 0.41                   | 0.42                  | -0.01              | -0.02         |
|          |                                                | 3        | 11.15                  | 10.98                 | 0.17               | 0.02          |
| DEPNUMCH | Dependents - number of dependent children      | 0        | 78.41                  | 74.12                 | 4.29 <sup>1</sup>  | 0.06          |
|          |                                                | 1        | 8.31                   | 10.34                 | -2.03 <sup>1</sup> | -0.20         |
|          |                                                | 2        | 7.99                   | 9.50                  | -1.51 <sup>1</sup> | -0.16         |
|          |                                                | 3        | 3.58                   | 4.17                  | -0.59 <sup>1</sup> | -0.14         |
|          |                                                | 4        | 1.23                   | 1.37                  | -0.15 <sup>1</sup> | -0.11         |
|          |                                                | 5        | 0.36                   | 0.37                  | -0.01              | -0.04         |
|          |                                                | 6        | 0.09                   | 0.09                  | #                  | -0.04         |
|          |                                                | 7        | 0.03                   | 0.03                  | #                  | 0.08          |
|          |                                                | 8        | 0.01                   | 0.01                  | #                  | 0.09          |
|          |                                                | 9        | #                      | #                     | #                  | 0.23          |
| 10       | #                                              | #        | #                      | 0.23                  |                    |               |
| DEPOTHER | Dependents - has dependent other than children | 0        | 95.10                  | 94.90                 | 0.20 <sup>1</sup>  | #             |
|          |                                                | 1        | 4.90                   | 5.10                  | -0.20 <sup>1</sup> | -0.04         |
| DERECR   | Distance education: pre-recorded               | 0        | 80.23                  | 79.74                 | 0.49               | 0.01          |
|          |                                                | 1        | 19.77                  | 20.26                 | -0.49              | -0.02         |
| DEWWW    | Distance education: Internet                   | 0        | 11.78                  | 11.61                 | 0.17               | 0.01          |
|          |                                                | 1        | 88.22                  | 88.39                 | -0.17              | #             |
| DISABLE  | Disability Flag                                | 0        | 89.73                  | 89.28                 | 0.45 <sup>1</sup>  | 0.01          |
|          |                                                | 1        | 10.27                  | 10.72                 | -0.45 <sup>1</sup> | -0.04         |
| DISMOBIL | Condition that limits physical activities      | 0        | 95.63                  | 95.71                 | -0.08              | #             |
|          |                                                | 1        | 4.37                   | 4.29                  | 0.08               | 0.02          |
| DISOTHER | Other condition lasting six months or more     | 0        | 94.01                  | 93.94                 | 0.07               | #             |
|          |                                                | 1        | 5.99                   | 6.06                  | -0.07              | -0.01         |
| DISOTHRA | Difficulty: dressing, bathing, etc             | 0        | 92.45                  | 92.68                 | -0.23              | #             |
|          |                                                | 1        | 7.55                   | 7.32                  | 0.23               | 0.03          |
| DISOTHRB | Difficulty: getting to school to attend class  | 0        | 68.99                  | 68.82                 | 0.17               | #             |
|          |                                                | 1        | 31.01                  | 31.18                 | -0.17              | -0.01         |

See notes at end of table.



**Table K-26. Evaluation of item nonresponse bias after imputation for categorical variables: 2004—Continued**

| Variable | Variable label                            | Category | Before imputation mean | After imputation mean | Estimated bias    | Relative bias |
|----------|-------------------------------------------|----------|------------------------|-----------------------|-------------------|---------------|
| DISOTHRC | Difficulty: learning, remembering         | 0        | 17.61                  | 17.19                 | 0.42              | 0.02          |
|          |                                           | 1        | 82.39                  | 82.81                 | -0.42             | -0.01         |
| DISOTHRD | Difficulty: working at a job              | 0        | 61.45                  | 61.34                 | 0.11              | #             |
|          |                                           | 1        | 38.55                  | 38.66                 | -0.11             | #             |
| DISSENSR | Have a long-lasting sensory condition     | 0        | 98.19                  | 98.17                 | 0.02              | #             |
|          |                                           | 1        | 1.81                   | 1.83                  | -0.02             | -0.01         |
| DISTALL  | Distance education: entire program        | 0        | 66.44                  | 65.97                 | 0.47              | 0.01          |
|          |                                           | 1        | 33.56                  | 34.03                 | -0.47             | -0.01         |
| DISTEDUC | Distance education: took courses          | 0        | 84.33                  | 84.18                 | 0.16              | #             |
|          |                                           | 1        | 15.67                  | 15.82                 | -0.16             | -0.01         |
| DISTLOC  | Distance education: location of course(s) | 1        | 80.22                  | 79.02                 | 1.19 <sup>1</sup> | 0.02          |
|          |                                           | 2        | 10.16                  | 10.64                 | -0.48             | -0.04         |
|          |                                           | 3        | 9.62                   | 10.34                 | -0.72             | -0.07         |
| DISTNUM  | Distance education: number of courses     | 1        | 45.16                  | 44.69                 | 0.47              | 0.01          |
|          |                                           | 2        | 22.80                  | 22.83                 | -0.03             | #             |
|          |                                           | 3        | 11.20                  | 11.27                 | -0.07             | -0.01         |
|          |                                           | 4        | 7.07                   | 7.08                  | -0.01             | #             |
|          |                                           | 5        | 3.99                   | 3.98                  | 0.01              | #             |
|          |                                           | 6        | 3.50                   | 3.71                  | -0.21             | -0.06         |
|          |                                           | 7        | 1.81                   | 1.75                  | 0.06              | 0.03          |
|          |                                           | 8        | 1.33                   | 1.45                  | -0.13             | -0.09         |
|          |                                           | 9        | 0.61                   | 0.65                  | -0.05             | -0.07         |
|          |                                           | 10       | 1.15                   | 1.15                  | #                 | #             |
|          |                                           | 11       | 0.26                   | 0.25                  | 0.01              | 0.03          |
|          |                                           | 12       | 0.70                   | 0.68                  | 0.02              | 0.02          |
|          |                                           | 13       | 0.21                   | 0.26                  | -0.05             | -0.20         |
|          |                                           | 14       | 0.10                   | 0.11                  | -0.01             | -0.10         |
|          |                                           | 15       | 0.13                   | 0.12                  | 0.01              | 0.07          |
| DISTSATF | Distance education: satisfaction          | 1        | 28.02                  | 27.95                 | 0.07              | #             |
|          |                                           | 2        | 40.25                  | 39.98                 | 0.28              | 0.01          |
|          |                                           | 3        | 31.73                  | 32.08                 | -0.35             | -0.01         |
| DISTYPES | Main limiting condition                   | 1        | 5.19                   | 4.91                  | 0.28              | 0.06          |
|          |                                           | 2        | 3.70                   | 3.93                  | -0.23             | -0.06         |
|          |                                           | 3        | 0.46                   | 0.48                  | -0.02             | -0.04         |
|          |                                           | 4        | 24.73                  | 25.40                 | -0.67             | -0.03         |
|          |                                           | 5        | 7.78                   | 7.51                  | 0.28              | 0.04          |
|          |                                           | 6        | 11.02                  | 10.50                 | 0.52              | 0.05          |
|          |                                           | 7        | 17.37                  | 17.75                 | -0.38             | -0.02         |
|          |                                           | 8        | 8.84                   | 8.80                  | 0.04              | #             |
|          |                                           | 9        | 13.14                  | 13.09                 | 0.05              | #             |
|          |                                           | 10       | 0.53                   | 0.51                  | 0.03              | 0.05          |
|          |                                           | 11       | 1.33                   | 1.19                  | 0.14              | 0.12          |
|          |                                           | 12       | 5.90                   | 5.93                  | -0.03             | #             |
| EVER2PUB | Ever attended community college           | 0        | 58.64                  | 58.31                 | 0.32              | 0.01          |
|          |                                           | 1        | 41.36                  | 41.69                 | -0.32             | -0.01         |

See notes at end of table.

**Table K-26. Evaluation of item nonresponse bias after imputation for categorical variables: 2004—Continued**

| Variable | Variable label                                                   | Category | Before imputation mean        | After imputation mean | Estimated bias     | Relative bias |       |       |
|----------|------------------------------------------------------------------|----------|-------------------------------|-----------------------|--------------------|---------------|-------|-------|
| EVER4YR  | Ever attended 4-year school                                      | 0        | 70.99                         | 70.02                 | 0.97 <sup>1</sup>  | 0.01          |       |       |
|          |                                                                  | 1        | 29.01                         | 29.98                 | -0.97 <sup>1</sup> | -0.03         |       |       |
| FORESCH  | Ever attended elementary or secondary school outside of the U.S. | 0        | 91.08                         | 90.95                 | 0.13               | #             |       |       |
|          |                                                                  | 1        | 8.92                          | 9.05                  | -0.13              | -0.01         |       |       |
| GAINSUR  | Health insurance with assistantship                              | 0        | 57.38                         | 57.87                 | -0.49              | -0.01         |       |       |
|          |                                                                  | 1        | 42.62                         | 42.13                 | 0.49               | 0.01          |       |       |
| GRADPYR  | Year began graduate degree                                       | 1985     | 0.02                          | 8.41                  | -8.39 <sup>1</sup> | -1.00         |       |       |
|          |                                                                  | 1986     | 0.05                          | 0.05                  | #                  | 0.04          |       |       |
|          |                                                                  | 1987     | #                             | #                     | #                  | 0.55          |       |       |
|          |                                                                  | 1988     | 0.04                          | 0.03                  | 0.01               | 0.16          |       |       |
|          |                                                                  | 1989     | 0.05                          | 0.07                  | -0.03              | -0.35         |       |       |
|          |                                                                  | 1990     | 0.05                          | 0.03                  | 0.02               | 0.55          |       |       |
|          |                                                                  | 1991     | 0.16                          | 0.11                  | 0.05               | 0.47          |       |       |
|          |                                                                  | 1992     | 0.08                          | 0.07                  | 0.01               | 0.15          |       |       |
|          |                                                                  | 1993     | 0.25                          | 0.21                  | 0.04               | 0.20          |       |       |
|          |                                                                  | 1994     | 0.17                          | 0.15                  | 0.02               | 0.17          |       |       |
|          |                                                                  | 1995     | 0.26                          | 0.25                  | 0.02               | 0.07          |       |       |
|          |                                                                  | 1996     | 0.45                          | 0.34                  | 0.11 <sup>1</sup>  | 0.32          |       |       |
|          |                                                                  | 1997     | 1.03                          | 0.93                  | 0.10               | 0.11          |       |       |
|          |                                                                  | 1998     | 1.78                          | 1.46                  | 0.32 <sup>1</sup>  | 0.22          |       |       |
| GRADTAA  | TA duties: student email                                         | 0        | 55.08                         | 56.72                 | -1.64              | -0.03         |       |       |
|          |                                                                  | 1        | 44.92                         | 43.28                 | 1.64               | 0.04          |       |       |
|          |                                                                  | GRADTAB  | TA duties: grading            | 0                     | 32.62              | 33.76         | -1.14 | -0.03 |
|          |                                                                  |          |                               | 1                     | 67.38              | 66.24         | 1.14  | 0.02  |
|          |                                                                  | GRADTAC  | TA duties: teaching           | 0                     | 47.73              | 45.72         | 2.00  | 0.04  |
|          |                                                                  |          |                               | 1                     | 52.27              | 54.28         | -2.00 | -0.04 |
|          |                                                                  | GRADTAD  | TA duties: office hours       | 0                     | 27.28              | 28.46         | -1.18 | -0.04 |
|          |                                                                  |          |                               | 1                     | 72.72              | 71.54         | 1.18  | 0.02  |
|          |                                                                  | GRADTAE  | TA duties: discussion         | 0                     | 63.91              | 64.47         | -0.56 | -0.01 |
|          |                                                                  |          |                               | 1                     | 36.09              | 35.53         | 0.56  | 0.02  |
|          |                                                                  | GRADTAF  | TA duties: lab                | 0                     | 63.72              | 63.46         | 0.26  | #     |
|          |                                                                  |          |                               | 1                     | 36.28              | 36.54         | -0.26 | -0.01 |
|          |                                                                  | GRASTUIT | Tuition paid by assistantship | 0                     | 30.55              | 33.14         | -2.59 | -0.08 |
|          |                                                                  |          |                               | 1                     | 69.45              | 66.86         | 2.59  | 0.04  |
| GRENRST  | Graduate enrollment status (all years)                           | 1        | 61.33                         | 59.96                 | 1.37               | 0.02          |       |       |
|          |                                                                  | 2        | 33.57                         | 35.09                 | -1.52              | -0.04         |       |       |
|          |                                                                  | 3        | 5.10                          | 4.94                  | 0.16               | 0.03          |       |       |

See notes at end of table.

**Table K-26. Evaluation of item nonresponse bias after imputation for categorical variables:  
2004—Continued**

| Variable | Variable label                           | Category | Before<br>imputation<br>mean | After<br>imputation<br>mean | Estimated<br>bias  | Relative<br>bias |
|----------|------------------------------------------|----------|------------------------------|-----------------------------|--------------------|------------------|
| HIGHLVEX | Highest level of education ever expected | 1        | 0.51                         | 0.56                        | -0.05              | -0.09            |
|          |                                          | 2        | 1.45                         | 1.96                        | -0.52 <sup>1</sup> | -0.26            |
|          |                                          | 3        | 6.58                         | 7.07                        | -0.50 <sup>1</sup> | -0.07            |
|          |                                          | 4        | 26.07                        | 26.43                       | -0.36              | -0.01            |
|          |                                          | 5        | 1.12                         | 1.09                        | 0.03               | 0.03             |
|          |                                          | 6        | 42.21                        | 41.53                       | 0.68 <sup>1</sup>  | 0.02             |
|          |                                          | 7        | 15.92                        | 15.48                       | 0.43 <sup>1</sup>  | 0.03             |
|          |                                          | 8        | 6.15                         | 5.87                        | 0.28 <sup>1</sup>  | 0.05             |
| HOMEPAR  | Parents own home                         | 0        | 13.65                        | 13.78                       | -0.13              | -0.01            |
|          |                                          | 1        | 86.35                        | 86.22                       | 0.13               | #                |
| HOMESTUD | Own home                                 | 0        | 47.67                        | 51.56                       | -3.89 <sup>1</sup> | -0.08            |
|          |                                          | 1        | 52.33                        | 48.44                       | 3.89 <sup>1</sup>  | 0.08             |
| HSDEG    | High school degree type                  | 1        | 89.50                        | 87.01                       | 2.49 <sup>1</sup>  | 0.03             |
|          |                                          | 2        | 6.46                         | 6.37                        | 0.08               | 0.01             |
|          |                                          | 3        | 0.41                         | 0.40                        | 0.01               | 0.03             |
|          |                                          | 4        | 1.76                         | 4.41                        | -2.65 <sup>1</sup> | -0.60            |
|          |                                          | 5        | 1.63                         | 1.57                        | 0.06               | 0.04             |
|          |                                          | 6        | 0.24                         | 0.23                        | 0.01               | 0.04             |
| HSTYPE   | Type of high school attended             | 1        | 89.13                        | 89.31                       | -0.18              | #                |
|          |                                          | 2        | 10.32                        | 10.32                       | #                  | #                |
|          |                                          | 3        | 0.55                         | 0.37                        | 0.18 <sup>1</sup>  | 0.49             |
| JOBFFOR  | Afford school without working            | 0        | 61.55                        | 61.76                       | -0.21              | #                |
|          |                                          | 1        | 38.45                        | 38.24                       | 0.21               | 0.01             |
| JOBCLASS | Job related to coursework                | 0        | 64.69                        | 63.55                       | 1.14 <sup>1</sup>  | 0.02             |
|          |                                          | 1        | 35.31                        | 36.45                       | -1.14 <sup>1</sup> | -0.03            |
| JOBEFFA  | Job helped with career preparation       | 0        | 61.87                        | 62.27                       | -0.40              | -0.01            |
|          |                                          | 1        | 38.13                        | 37.73                       | 0.40               | 0.01             |
| JOBEFFB  | Job helped with coursework               | 0        | 84.35                        | 84.95                       | -0.59 <sup>1</sup> | -0.01            |
|          |                                          | 1        | 15.65                        | 15.05                       | 0.59 <sup>1</sup>  | 0.04             |
| JOBEFFC  | Job restricted class choice              | 0        | 64.77                        | 64.31                       | 0.46               | 0.01             |
|          |                                          | 1        | 35.23                        | 35.69                       | -0.46              | -0.01            |
| JOBEFFD  | Job limited class schedule               | 0        | 50.36                        | 49.51                       | 0.84 <sup>1</sup>  | 0.02             |
|          |                                          | 1        | 49.64                        | 50.49                       | -0.84 <sup>1</sup> | -0.02            |
| JOBEFFE  | Job limited facility access              | 0        | 67.51                        | 67.03                       | 0.48               | 0.01             |
|          |                                          | 1        | 32.49                        | 32.97                       | -0.48              | -0.01            |
| JOBEFFF  | Job limited number of classes            | 0        | 57.75                        | 57.28                       | 0.47               | 0.01             |
|          |                                          | 1        | 42.25                        | 42.72                       | -0.47              | -0.01            |
| JOBEFFGR | Effect of job on grades                  | 1        | 20.61                        | 20.52                       | 0.09               | #                |
|          |                                          | 2        | 40.30                        | 40.59                       | -0.30              | -0.01            |
|          |                                          | 3        | 39.10                        | 38.89                       | 0.21               | 0.01             |

See notes at end of table.

Table K-26. Evaluation of item nonresponse bias after imputation for categorical variables: 2004—Continued

| Variable | Variable label                              | Category | Before imputation mean | After imputation mean | Estimated bias     | Relative bias |
|----------|---------------------------------------------|----------|------------------------|-----------------------|--------------------|---------------|
| JOBEMPL  | Type of employer                            | 1        | 7.83                   | 7.55                  | 0.27               | 0.04          |
|          |                                             | 2        | 60.09                  | 60.19                 | -0.10              | #             |
|          |                                             | 3        | 12.92                  | 13.07                 | -0.16              | -0.01         |
|          |                                             | 4        | 11.84                  | 12.09                 | -0.25              | -0.02         |
|          |                                             | 5        | 1.77                   | 1.74                  | 0.04               | 0.02          |
|          |                                             | 6        | 5.55                   | 5.35                  | 0.20               | 0.04          |
| JOBEXPT  | Parents expect you to have a job            | 0        | 32.14                  | 31.59                 | 0.55 <sup>1</sup>  | 0.02          |
|          |                                             | 1        | 67.86                  | 68.41                 | -0.55 <sup>1</sup> | -0.01         |
| JOBMAIN  | Main reason for working                     | 1        | 23.60                  | 23.70                 | -0.10              | #             |
|          |                                             | 2        | 62.95                  | 63.43                 | -0.48              | -0.01         |
|          |                                             | 3        | 7.96                   | 7.65                  | 0.31               | 0.04          |
|          |                                             | 4        | 5.49                   | 5.22                  | 0.27               | 0.05          |
| JOBMAJOR | Job related to major                        | 0        | 54.21                  | 54.71                 | -0.51              | -0.01         |
|          |                                             | 1        | 45.79                  | 45.29                 | 0.51               | 0.01          |
| JOBONOFF | Job on or off campus                        | 1        | 7.21                   | 7.03                  | 0.18               | 0.03          |
|          |                                             | 2        | 90.65                  | 90.84                 | -0.19              | #             |
|          |                                             | 3        | 2.14                   | 2.13                  | 0.01               | #             |
| JOBPRIOR | Had job prior to enrollment at NPSAS        | 0        | 38.22                  | 38.00                 | 0.22               | 0.01          |
|          |                                             | 1        | 61.78                  | 62.00                 | -0.22              | #             |
| JOBROLE  | Working student/employee taking classes     | 1        | 60.98                  | 60.95                 | 0.03               | #             |
|          |                                             | 2        | 39.02                  | 39.05                 | -0.03              | #             |
| JOBSCHA  | Combine school and work: class outside work | 0        | 18.84                  | 18.58                 | 0.26               | 0.01          |
|          |                                             | 1        | 81.16                  | 81.42                 | -0.26              | #             |
| JOBSCHB  | Combine school and work: distance ed        | 0        | 79.89                  | 79.31                 | 0.57               | 0.01          |
|          |                                             | 1        | 20.11                  | 20.69                 | -0.57              | -0.03         |
| JOBSCHC  | Combine school and work: modify schedule    | 0        | 63.65                  | 63.99                 | -0.35              | -0.01         |
|          |                                             | 1        | 36.35                  | 36.01                 | 0.35               | 0.01          |
| JOBSUMMR | Work during summer 2003                     | 0        | 22.21                  | 22.21                 | #                  | #             |
|          |                                             | 1        | 77.79                  | 77.79                 | #                  | #             |
| JOBWEEK  | Weeks worked while enrolled                 | 1        | 63.03                  | 63.40                 | -0.37              | -0.01         |
|          |                                             | 2        | 17.55                  | 17.68                 | -0.13              | -0.01         |
|          |                                             | 3        | 8.32                   | 8.09                  | 0.23               | 0.03          |
|          |                                             | 4        | 11.11                  | 10.84                 | 0.27               | 0.02          |
| LOCALRES | Housing                                     | 0        | 15.62                  | 12.45                 | 3.17 <sup>1</sup>  | 0.25          |
|          |                                             | 1        | 12.21                  | 12.03                 | 0.18               | 0.02          |
|          |                                             | 2        | 45.88                  | 48.10                 | -2.21 <sup>1</sup> | -0.05         |
|          |                                             | 3        | 19.51                  | 20.42                 | -0.91 <sup>1</sup> | -0.04         |
|          |                                             | 4        | 6.78                   | 7.01                  | -0.23 <sup>1</sup> | -0.03         |

See notes at end of table.

**Table K-26. Evaluation of item nonresponse bias after imputation for categorical variables:  
2004—Continued**

| Variable | Variable label                  | Category | Before<br>imputation<br>mean | After<br>imputation<br>mean | Estimated<br>bias  | Relative<br>bias |
|----------|---------------------------------|----------|------------------------------|-----------------------------|--------------------|------------------|
| MAJORS   | Field of study/major (detailed) | 0        | 10.66                        | 10.76                       | -0.10              | -0.01            |
|          |                                 | 1        | 0.48                         | 0.48                        | #                  | #                |
|          |                                 | 2        | 0.30                         | 0.30                        | #                  | #                |
|          |                                 | 3        | 0.64                         | 0.64                        | 0.01               | 0.01             |
|          |                                 | 4        | 0.24                         | 0.23                        | #                  | 0.02             |
|          |                                 | 5        | 2.21                         | 2.19                        | 0.01               | 0.01             |
|          |                                 | 6        | 0.58                         | 0.57                        | 0.01               | 0.01             |
|          |                                 | 7        | 4.96                         | 5.06                        | -0.11              | -0.02            |
|          |                                 | 8        | 1.43                         | 1.44                        | -0.01              | -0.01            |
|          |                                 | 9        | 10.10                        | 9.90                        | 0.20 <sup>1</sup>  | 0.02             |
|          |                                 | 10       | 3.52                         | 3.48                        | 0.04               | 0.01             |
|          |                                 | 11       | 1.27                         | 1.28                        | -0.01              | -0.01            |
|          |                                 | 12       | 0.55                         | 0.53                        | 0.02               | 0.04             |
|          |                                 | 13       | 0.52                         | 0.53                        | -0.01              | -0.02            |
|          |                                 | 14       | 1.45                         | 1.39                        | 0.06 <sup>1</sup>  | 0.05             |
|          |                                 | 15       | 1.39                         | 1.38                        | 0.01               | #                |
|          |                                 | 16       | 4.53                         | 4.56                        | -0.04              | -0.01            |
|          |                                 | 17       | 0.12                         | 0.11                        | 0.01               | 0.06             |
|          |                                 | 18       | 2.56                         | 2.54                        | 0.02               | 0.01             |
|          |                                 | 19       | 0.58                         | 0.58                        | #                  | 0.01             |
|          |                                 | 20       | 0.02                         | 0.02                        | #                  | -0.02            |
|          |                                 | 21       | 0.35                         | 0.36                        | -0.01              | -0.03            |
|          |                                 | 22       | 0.53                         | 0.55                        | -0.02              | -0.04            |
|          |                                 | 23       | 0.39                         | 0.38                        | 0.01               | 0.02             |
|          |                                 | 24       | 0.62                         | 0.60                        | 0.02               | 0.04             |
|          |                                 | 25       | 0.80                         | 0.78                        | 0.02               | 0.02             |
|          |                                 | 26       | 0.19                         | 0.19                        | #                  | 0.01             |
|          |                                 | 27       | 3.13                         | 3.13                        | #                  | #                |
|          |                                 | 28       | 0.41                         | 0.40                        | 0.01               | 0.03             |
|          |                                 | 29       | 1.42                         | 1.41                        | 0.01               | 0.01             |
|          |                                 | 30       | 0.45                         | 0.48                        | -0.03              | -0.06            |
|          |                                 | 31       | 0.98                         | 0.99                        | -0.01              | -0.01            |
|          |                                 | 32       | 0.05                         | 0.05                        | #                  | 0.07             |
|          |                                 | 33       | 0.24                         | 0.25                        | -0.01              | -0.04            |
|          |                                 | 34       | 3.34                         | 3.37                        | -0.03              | -0.01            |
|          |                                 | 35       | 13.51                        | 13.56                       | -0.05              | #                |
|          |                                 | 36       | 17.49                        | 17.55                       | -0.06              | #                |
|          |                                 | 37       | 1.10                         | 1.12                        | -0.01              | -0.01            |
|          |                                 | 38       | 0.29                         | 0.30                        | -0.01              | -0.03            |
|          |                                 | 39       | 2.26                         | 2.29                        | -0.03              | -0.01            |
|          |                                 | 40       | 0.46                         | 0.45                        | 0.01               | 0.02             |
|          |                                 | 41       | 0.20                         | 0.19                        | 0.01               | 0.05             |
|          |                                 | 42       | 0.20                         | 0.21                        | #                  | -0.01            |
|          |                                 | 43       | 1.08                         | 1.06                        | 0.02               | 0.02             |
|          |                                 | 44       | 1.00                         | 1.00                        | #                  | #                |
|          |                                 | 45       | 0.59                         | 0.59                        | #                  | #                |
| 46       | 0.81                            | 0.78     | 0.03 <sup>1</sup>            | 0.04                        |                    |                  |
| MILTYPE  | Military service type           | 0        | 94.56                        | 94.77                       | -0.20 <sup>1</sup> | #                |
|          |                                 | 1        | 0.50                         | 0.57                        | -0.08 <sup>1</sup> | -0.14            |
|          |                                 | 2        | 1.14                         | 1.22                        | -0.08 <sup>1</sup> | -0.06            |
|          |                                 | 3        | 3.80                         | 3.44                        | 0.36 <sup>1</sup>  | 0.10             |

See notes at end of table.

**Table K-26. Evaluation of item nonresponse bias after imputation for categorical variables: 2004—Continued**

| Variable | Variable label                                    | Category | Before imputation mean | After imputation mean | Estimated bias     | Relative bias |
|----------|---------------------------------------------------|----------|------------------------|-----------------------|--------------------|---------------|
| NPFIRST  | NPSAS was first school attended after high school | 0        | 43.56                  | 44.18                 | -0.62 <sup>1</sup> | -0.01         |
|          |                                                   | 1        | 56.44                  | 55.82                 | 0.62 <sup>1</sup>  | 0.01          |
| OWNINVST | Own investments, business or farm over \$10,000   | 0        | 86.88                  | 87.69                 | -0.81 <sup>1</sup> | -0.01         |
|          |                                                   | 1        | 13.12                  | 12.31                 | 0.81 <sup>1</sup>  | 0.07          |
| PARBORN  | Student's parents were born in the United States  | 1        | 18.04                  | 18.16                 | -0.11              | -0.01         |
|          |                                                   | 2        | 5.74                   | 5.79                  | -0.05              | -0.01         |
|          |                                                   | 3        | 76.21                  | 76.05                 | 0.17               | #             |
| PARCOLL  | Parents taking college courses in 2003-2004       | 0        | 89.79                  | 89.84                 | -0.05              | #             |
|          |                                                   | 1        | 1.95                   | 2.08                  | -0.13              | -0.06         |
|          |                                                   | 2        | 8.26                   | 8.08                  | 0.18               | 0.02          |
| PARESTA  | Parents own other real estate                     | 0        | 70.56                  | 70.69                 | -0.13              | #             |
|          |                                                   | 1        | 29.44                  | 29.31                 | 0.13               | #             |
| PARHELPA | Help from parents: housing                        | 0        | 53.49                  | 54.27                 | -0.78 <sup>1</sup> | -0.01         |
|          |                                                   | 1        | 46.51                  | 45.73                 | 0.78 <sup>1</sup>  | 0.02          |
| PARHELPB | Help from parents: other educational expenses     | 0        | 46.43                  | 46.89                 | -0.46              | -0.01         |
|          |                                                   | 1        | 53.57                  | 53.11                 | 0.46               | 0.01          |
| PARHELPC | Help from parents: other living expenses          | 0        | 45.21                  | 45.45                 | -0.24              | -0.01         |
|          |                                                   | 1        | 54.79                  | 54.55                 | 0.24               | #             |
| PARHELPD | Help from parents: tuition and fees               | 0        | 40.99                  | 41.88                 | -0.89 <sup>1</sup> | -0.02         |
|          |                                                   | 1        | 59.01                  | 58.12                 | 0.89 <sup>1</sup>  | 0.02          |
| PARLIVE  | Lived with parents while not enrolled             | 0        | 36.25                  | 39.08                 | -2.84 <sup>1</sup> | -0.07         |
|          |                                                   | 1        | 63.75                  | 60.92                 | 2.84 <sup>1</sup>  | 0.05          |
| PARPAYCR | Parents help pay credit bills                     | 0        | 75.59                  | 75.46                 | 0.13               | #             |
|          |                                                   | 1        | 24.41                  | 24.54                 | -0.13              | -0.01         |
| PAYOFBAL | Payoff or carry credit balance                    | 1        | 58.15                  | 58.55                 | -0.39              | -0.01         |
|          |                                                   | 2        | 41.85                  | 41.45                 | 0.39               | 0.01          |
| PAYTUIT  | Use credit to pay for tuition                     | 0        | 80.49                  | 81.02                 | -0.54              | -0.01         |
|          |                                                   | 1        | 19.51                  | 18.98                 | 0.54               | 0.03          |
| PDADED   | Father's highest education level                  | 0        | 7.76                   | 7.58                  | 0.19 <sup>1</sup>  | 0.02          |
|          |                                                   | 1        | 11.40                  | 11.37                 | 0.03               | #             |
|          |                                                   | 2        | 32.06                  | 31.93                 | 0.13               | #             |
|          |                                                   | 3        | 3.91                   | 3.95                  | -0.04              | -0.01         |
|          |                                                   | 4        | 4.63                   | 5.56                  | -0.93 <sup>1</sup> | -0.17         |
|          |                                                   | 5        | 3.78                   | 4.49                  | -0.71 <sup>1</sup> | -0.16         |
|          |                                                   | 6        | 3.03                   | 3.69                  | -0.66 <sup>1</sup> | -0.18         |
|          |                                                   | 7        | 14.50                  | 17.25                 | -2.75 <sup>1</sup> | -0.16         |
|          |                                                   | 8        | 7.30                   | 8.84                  | -1.54 <sup>1</sup> | -0.17         |
|          |                                                   | 9        | 1.67                   | 1.97                  | -0.30 <sup>1</sup> | -0.15         |
|          |                                                   | 10       | 2.86                   | 3.38                  | -0.52 <sup>1</sup> | -0.15         |
|          | 11                                                | 7.09     | †                      | †                     | †                  |               |

See notes at end of table.

**Table K-26. Evaluation of item nonresponse bias after imputation for categorical variables:  
2004—Continued**

| Variable | Variable label                                         | Category | Before<br>imputation<br>mean | After<br>imputation<br>mean | Estimated<br>bias  | Relative<br>bias |
|----------|--------------------------------------------------------|----------|------------------------------|-----------------------------|--------------------|------------------|
| PMOMED   | Mother's highest education level                       | 0        | 4.31                         | 4.20                        | 0.10               | 0.02             |
|          |                                                        | 1        | 10.44                        | 10.38                       | 0.05               | 0.01             |
|          |                                                        | 2        | 35.49                        | 35.62                       | -0.13              | #                |
|          |                                                        | 3        | 3.74                         | 3.80                        | -0.06              | -0.02            |
|          |                                                        | 4        | 5.71                         | 6.84                        | -1.13 <sup>1</sup> | -0.17            |
|          |                                                        | 5        | 6.63                         | 7.98                        | -1.35 <sup>1</sup> | -0.17            |
|          |                                                        | 6        | 3.34                         | 3.98                        | -0.64 <sup>1</sup> | -0.16            |
|          |                                                        | 7        | 14.15                        | 17.00                       | -2.85 <sup>1</sup> | -0.17            |
|          |                                                        | 8        | 7.07                         | 8.32                        | -1.25 <sup>1</sup> | -0.15            |
|          |                                                        | 9        | 0.72                         | 0.80                        | -0.08 <sup>1</sup> | -0.10            |
|          |                                                        | 10       | 0.91                         | 1.07                        | -0.16 <sup>1</sup> | -0.15            |
|          |                                                        | 11       | 7.49                         | †                           | †                  | †                |
| PRIMLANG | English as primary language                            | 0        | 12.96                        | 12.82                       | 0.13               | 0.01             |
|          |                                                        | 1        | 87.04                        | 87.18                       | -0.13              | #                |
| RAINDTRB | State/federally recognized tribe                       | 0        | 70.49                        | 64.84                       | 5.65 <sup>1</sup>  | 0.09             |
|          |                                                        | 1        | 29.51                        | 35.16                       | -5.65 <sup>1</sup> | -0.16            |
| REMEDIA  | Took remedial course: English                          | 0        | 69.91                        | 69.88                       | 0.02               | #                |
|          |                                                        | 1        | 30.09                        | 30.12                       | -0.02              | #                |
| REMEDIB  | Took remedial course: math                             | 0        | 23.53                        | 23.15                       | 0.37               | 0.02             |
|          |                                                        | 1        | 76.47                        | 76.85                       | -0.37              | #                |
| REMEDIC  | Took remedial course: reading                          | 0        | 72.07                        | 72.02                       | 0.05               | #                |
|          |                                                        | 1        | 27.93                        | 27.98                       | -0.05              | #                |
| REMEDID  | Took remedial course: study skills                     | 0        | 87.86                        | 87.77                       | 0.09               | #                |
|          |                                                        | 1        | 12.14                        | 12.23                       | -0.09              | -0.01            |
| REMEDIE  | Took remedial course: writing                          | 0        | 64.49                        | 65.25                       | -0.77              | -0.01            |
|          |                                                        | 1        | 35.51                        | 34.75                       | 0.77               | 0.02             |
| REMETOOK | Took remedial courses this school year                 | 0        | 49.78                        | 51.93                       | -2.15 <sup>1</sup> | -0.04            |
|          |                                                        | 1        | 50.22                        | 48.07                       | 2.15 <sup>1</sup>  | 0.04             |
| REMEVER  | Ever taken remedial courses                            | 0        | 65.90                        | 65.69                       | 0.22               | #                |
|          |                                                        | 1        | 34.10                        | 34.31                       | -0.22              | -0.01            |
| SERNEEDA | Adaptive equipment and technology                      | 0        | 96.38                        | 96.55                       | -0.17              | #                |
|          |                                                        | 1        | 3.62                         | 3.45                        | 0.17               | 0.05             |
| SERNEEDB | Alternative exam formats or additional time            | 0        | 89.97                        | 90.05                       | -0.08              | #                |
|          |                                                        | 1        | 10.03                        | 9.95                        | 0.08               | 0.01             |
| SERNEEDC | Course substitution or waiver                          | 0        | 95.48                        | 95.42                       | 0.06               | #                |
|          |                                                        | 1        | 4.52                         | 4.58                        | -0.06              | -0.01            |
| SERNEEDD | Readers, note takers, or scribes                       | 0        | 95.13                        | 95.17                       | -0.04              | #                |
|          |                                                        | 1        | 4.87                         | 4.83                        | 0.04               | 0.01             |
| SERNEEDE | Registration assistance or priority class registration | 0        | 95.60                        | 95.53                       | 0.07               | #                |
|          |                                                        | 1        | 4.40                         | 4.47                        | -0.07              | -0.02            |
| SERNEEDF | Sign language or oral interpreters                     | 0        | 98.57                        | 98.42                       | 0.15               | #                |
|          |                                                        | 1        | 1.43                         | 1.58                        | -0.15              | -0.09            |
| SERNEEDG | Tutors to assist with homework                         | 0        | 90.56                        | 90.98                       | -0.42              | #                |
|          |                                                        | 1        | 9.44                         | 9.02                        | 0.42               | 0.05             |

See notes at end of table.

**Appendix K. Nonresponse Bias Analysis**

**Table K-26. Evaluation of item nonresponse bias after imputation for categorical variables:  
2004—Continued**

| Variable  | Variable label                                    | Category | Before<br>imputation<br>mean | After<br>imputation<br>mean | Estimated<br>bias  | Relative<br>bias |
|-----------|---------------------------------------------------|----------|------------------------------|-----------------------------|--------------------|------------------|
| SERNEEDX  | Needs: other                                      | 0        | 93.84                        | 93.60                       | 0.24               | #                |
|           |                                                   | 1        | 6.16                         | 6.40                        | -0.24              | -0.04            |
| SERRECV A | Service: adaptive equipment and technology        | 0        | 96.17                        | 96.24                       | -0.06              | #                |
|           |                                                   | 1        | 3.83                         | 3.76                        | 0.06               | 0.02             |
| SERRECV B | Service: alternative exam formats/additional time | 0        | 87.57                        | 88.06                       | -0.50              | -0.01            |
|           |                                                   | 1        | 12.43                        | 11.94                       | 0.50               | 0.04             |
| SERRECV C | Service: course substitution or waiver            | 0        | 98.39                        | 98.55                       | -0.15              | #                |
|           |                                                   | 1        | 1.61                         | 1.45                        | 0.15               | 0.10             |
| SERRECV D | Service: readers, note takers, or scribes         | 0        | 95.29                        | 95.52                       | -0.22              | #                |
|           |                                                   | 1        | 4.71                         | 4.48                        | 0.22               | 0.05             |
| SERRECV E | Service: registration priority or assistance      | 0        | 92.99                        | 93.07                       | -0.09              | #                |
|           |                                                   | 1        | 7.01                         | 6.93                        | 0.09               | 0.01             |
| SERRECV F | Service: sign language or oral interpreters       | 0        | 99.44                        | 99.45                       | -0.02              | #                |
|           |                                                   | 1        | 0.56                         | 0.55                        | 0.02               | 0.03             |
| SERRECV G | Service: tutors to assist with homework           | 0        | 90.79                        | 90.50                       | 0.28               | #                |
|           |                                                   | 1        | 9.21                         | 9.50                        | -0.28              | -0.03            |
| SERRECV X | Service: other                                    | 0        | 93.62                        | 93.80                       | -0.18              | #                |
|           |                                                   | 1        | 6.38                         | 6.20                        | 0.18               | 0.03             |
| SIBCOLB4  | Siblings in college before respondent             | 0        | 53.58                        | 54.03                       | -0.45              | -0.01            |
|           |                                                   | 1        | 46.42                        | 45.97                       | 0.45               | 0.01             |
| SINCOL    | Number in college (independent students)          | 0        | 45.04                        | 43.31                       | 1.73 <sup>1</sup>  | 0.04             |
|           |                                                   | 1        | 47.60                        | 48.87                       | -1.27 <sup>1</sup> | -0.03            |
|           |                                                   | 2        | 6.44                         | 6.83                        | -0.39 <sup>1</sup> | -0.06            |
|           |                                                   | 3        | 0.81                         | 0.87                        | -0.07 <sup>1</sup> | -0.08            |
|           |                                                   | 4        | 0.10                         | 0.11                        | -0.01              | -0.09            |
|           |                                                   | 5        | 0.01                         | 0.01                        | #                  | -0.02            |
| SJCOMSER  | Work-study: community service                     | 0        | 91.53                        | 91.43                       | 0.10               | #                |
|           |                                                   | 1        | 8.47                         | 8.57                        | -0.10              | -0.01            |
| SJMAJOR   | Work study: related to major                      | 0        | 57.78                        | 58.57                       | -0.79              | -0.01            |
|           |                                                   | 1        | 42.22                        | 41.43                       | 0.79               | 0.02             |
| SJONOFF   | Work study: on/off campus                         | 1        | 79.08                        | 80.29                       | -1.21 <sup>1</sup> | -0.02            |
|           |                                                   | 2        | 17.15                        | 16.20                       | 0.95               | 0.06             |
|           |                                                   | 3        | 3.77                         | 3.51                        | 0.25               | 0.07             |
| SJSCHOOL  | Work study: for school                            | 1        | 83.78                        | 85.16                       | -1.38 <sup>1</sup> | -0.02            |
|           |                                                   | 2        | 16.22                        | 14.84                       | 1.38 <sup>1</sup>  | 0.09             |
| SJTUTOR   | Work study: tutoring                              | 0        | 78.59                        | 78.16                       | 0.43               | 0.01             |
|           |                                                   | 1        | 21.41                        | 21.84                       | -0.43              | -0.02            |
| SPINCOL   | Spouse in college                                 | 0        | 80.75                        | 81.70                       | -0.95 <sup>1</sup> | -0.01            |
|           |                                                   | 1        | 9.55                         | 8.85                        | 0.70 <sup>1</sup>  | 0.08             |
|           |                                                   | 2        | 9.70                         | 9.45                        | 0.25               | 0.03             |

See notes at end of table.



**Table K-26. Evaluation of item nonresponse bias after imputation for categorical variables:  
2004—Continued**

| Variable | Variable label                     | Category | Before<br>imputation<br>mean | After<br>imputation<br>mean | Estimated<br>bias   | Relative<br>bias |
|----------|------------------------------------|----------|------------------------------|-----------------------------|---------------------|------------------|
| SSISSDI  | Receive SSI/SSDI                   | 0        | 92.60                        | 92.59                       | 0.01                | #                |
|          |                                    | 1        | 2.56                         | 2.83                        | -0.27               | -0.09            |
|          |                                    | 3        | 3.87                         | 3.60                        | 0.26                | 0.07             |
|          |                                    | 4        | 0.97                         | 0.98                        | -0.01               | -0.01            |
| STUDMULT | Number of institutions attended    | 1        | 92.80                        | 92.99                       | -0.19 <sup>1</sup>  | #                |
|          |                                    | 2        | 6.85                         | 6.67                        | 0.18 <sup>1</sup>   | 0.03             |
|          |                                    | 3        | 0.32                         | 0.31                        | 0.01                | 0.05             |
|          |                                    | 4        | 0.03                         | 0.03                        | #                   | -0.08            |
|          |                                    | 5        | #                            | #                           | #                   | -0.22            |
| TAXHOPE  | Claim Federal Hope scholarship     | 0        | 61.72                        | 62.05                       | -0.33               | -0.01            |
|          |                                    | 1        | 6.28                         | 6.46                        | -0.19               | -0.03            |
|          |                                    | 2        | 32.01                        | 31.49                       | 0.52 <sup>1</sup>   | 0.02             |
| TAXLEARN | Claim lifetime learning tax credit | 0        | 58.92                        | 59.34                       | -0.43               | -0.01            |
|          |                                    | 1        | 7.94                         | 8.09                        | -0.15               | -0.02            |
|          |                                    | 2        | 33.14                        | 32.56                       | 0.58 <sup>1</sup>   | 0.02             |
| TAXTUIT  | Claim tuition tax deduction        | 0        | 48.86                        | 49.13                       | -0.27               | -0.01            |
|          |                                    | 1        | 17.95                        | 18.18                       | -0.24               | -0.01            |
|          |                                    | 2        | 33.19                        | 32.69                       | 0.50 <sup>1</sup>   | 0.02             |
| TRANSCRD | Transferred credits to NPSAS       | 1        | 54.20                        | 54.38                       | -0.18               | #                |
|          |                                    | 2        | 38.64                        | 38.08                       | 0.56                | 0.01             |
|          |                                    | 3        | 7.16                         | 7.54                        | -0.38               | -0.05            |
| TRANSFR  | Transferred from NPSAS             | 0        | 70.21                        | 70.91                       | -0.71               | -0.01            |
|          |                                    | 1        | 29.79                        | 29.09                       | 0.71                | 0.02             |
| TRANSPLN | Plan to transfer from NPSAS        | 0        | 65.99                        | 65.69                       | 0.30                | #                |
|          |                                    | 1        | 34.01                        | 34.31                       | -0.30               | -0.01            |
| TRANSTO  | Transferred to NPSAS               | 0        | 66.48                        | 66.41                       | 0.07                | #                |
|          |                                    | 1        | 33.52                        | 33.59                       | -0.07               | #                |
| UGDEGAA  | Associate's degree types           | 1        | 67.31                        | 67.20                       | 0.11                | #                |
|          |                                    | 2        | 32.69                        | 32.80                       | -0.11               | #                |
| UNTAXBF  | Received untaxed benefits in 2003  | 0        | 86.65                        | 86.43                       | 0.22                | #                |
|          |                                    | 1        | 13.35                        | 13.57                       | -0.22               | -0.02            |
| UNTAXBFA | Received child support             | 0        | 40.57                        | 41.47                       | -0.90               | -0.02            |
|          |                                    | 1        | 59.43                        | 58.53                       | 0.90                | 0.02             |
| UNTAXBFB | Received disability payments       | 0        | 80.29                        | 66.26                       | 14.03 <sup>1</sup>  | 0.21             |
|          |                                    | 1        | 19.71                        | 33.74                       | -14.03 <sup>1</sup> | -0.42            |
| UNTAXBFC | Received food stamps               | 0        | 84.11                        | 84.06                       | 0.05                | #                |
|          |                                    | 1        | 15.89                        | 15.94                       | -0.05               | #                |
| UNTAXBFD | Received social security benefits  | 0        | 81.78                        | 81.79                       | -0.01               | #                |
|          |                                    | 1        | 18.22                        | 18.21                       | 0.01                | #                |
| UNTAXBFE | Received TANF                      | 0        | 88.07                        | 87.95                       | 0.13                | #                |
|          |                                    | 1        | 11.93                        | 12.05                       | -0.13               | -0.01            |
| UNTAXBFF | Received worker's compensation     | 0        | 92.70                        | 88.93                       | 3.77 <sup>1</sup>   | 0.04             |
|          |                                    | 1        | 7.30                         | 11.07                       | -3.77 <sup>1</sup>  | -0.34            |

See notes at end of table.

**Table K-26. Evaluation of item nonresponse bias after imputation for categorical variables: 2004—Continued**

| Variable | Variable label                      | Category | Before imputation mean | After imputation mean | Estimated bias     | Relative bias |
|----------|-------------------------------------|----------|------------------------|-----------------------|--------------------|---------------|
| USBORN   | Respondent born in the U.S.         | 0        | 6.52                   | 6.66                  | -0.15              | -0.02         |
|          |                                     | 1        | 93.48                  | 93.34                 | 0.15               | #             |
| VOCAPPLY | Ever applied for Voc Rehab services | 0        | 94.75                  | 94.49                 | 0.26               | #             |
|          |                                     | 1        | 5.25                   | 5.51                  | -0.26              | -0.05         |
| VOCRECV  | Ever received Voc Rehab services    | 0        | 83.32                  | 83.23                 | 0.09               | #             |
|          |                                     | 1        | 16.68                  | 16.77                 | -0.09              | -0.01         |
| VOTEEVER | Ever vote                           | 0        | 37.23                  | 36.45                 | 0.78 <sup>†</sup>  | 0.02          |
|          |                                     | 1        | 62.77                  | 63.55                 | -0.78 <sup>†</sup> | -0.01         |
| VOTEREG  | Registered to vote                  | 0        | 17.53                  | 17.36                 | 0.16               | 0.01          |
|          |                                     | 1        | 82.47                  | 82.64                 | -0.16              | #             |
| YEARGRAD | Year began graduate school          | 1985     | 0.02                   | 0.01                  | #                  | 0.37          |
|          |                                     | 1986     | 0.05                   | 0.05                  | -0.01              | -0.12         |
|          |                                     | 1987     | #                      | #                     | #                  | 0.37          |
|          |                                     | 1988     | 0.04                   | 0.03                  | #                  | 0.06          |
|          |                                     | 1989     | 0.05                   | 0.04                  | 0.01               | 0.28          |
|          |                                     | 1990     | 0.05                   | 0.04                  | 0.01               | 0.26          |
|          |                                     | 1991     | 0.16                   | 0.14                  | 0.02               | 0.13          |
|          |                                     | 1992     | 0.08                   | 0.07                  | 0.01               | 0.07          |
|          |                                     | 1993     | 0.25                   | 0.22                  | 0.02               | 0.10          |
|          |                                     | 1994     | 0.19                   | 0.17                  | 0.02               | 0.11          |
|          |                                     | 1995     | 0.25                   | 0.21                  | 0.05               | 0.23          |
|          |                                     | 1996     | 0.45                   | 0.37                  | 0.08               | 0.22          |
|          |                                     | 1997     | 1.00                   | 0.91                  | 0.09               | 0.10          |
| 1998     | 1.73                                | 1.76     | -0.03                  | -0.02                 |                    |               |
| 1999     | 3.22                                | 4.06     | -0.84                  | -0.21                 |                    |               |
| 2000     | 6.42                                | 6.35     | 0.07                   | 0.01                  |                    |               |
| 2001     | 14.52                               | 14.51    | 0.02                   | #                     |                    |               |
| 2002     | 26.71                               | 25.93    | 0.78                   | 0.03                  |                    |               |
| 2003     | 38.14                               | 38.10    | 0.04                   | #                     |                    |               |
| 2004     | 6.68                                | 7.02     | -0.34                  | -0.05                 |                    |               |

† Not applicable.

Bias is significant at the 0.05/(c-1) level, where c is the number of categories within the primary variable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Appendix L**  
**Details of the Bootstrap Variance Estimation**

---



## L.1 Background

The first stage sample of institutions was selected using a probability proportional to size (pps) sequential sampling scheme (Chromy 1981), and certain large institutions were selected with certainty (see section 2.1). In this application, sample selection of institutions was “without replacement” and selection of bootstrap samples for variance estimation used the same sampling methodology used for selecting the initial sample. Sampling of students is assumed to be with a low sampling fraction so that “with replacement” variance models provide a good approximation to the second stage (student) variance contribution. This is also consistent with treating the student population as infinite for the purposes of applying statistical tests based on normal distribution theory, which requires reference to a hypothetical infinite population.

The second stage design involved stratification of students within institutions and application of different sampling rates within the student strata (see section 2.1). For variance estimation purposes, replicates of the second stage sample were formed as discrete subsamples of the student sample ordered by stratum. Each student sample replicate could be considered as the sample resulting from applying the second stage design with a smaller overall student sample size. In most institutions, only two student sample replicates were formed; in some of the larger institutions, as many as eight student replicate samples were formed. All of the institutions with three or more student replicates were certainty institutions.

For discussion purposes, the sampling units are referred to as institutions at the first stage of sampling and as student replicates at the second stage of sampling. Because the student replicates are treated as being drawn with replacement, the effects of student stratification and weighting are incorporated in the weighted replicate subtotals and represented in the expectation of the variance estimates.

Software which accounts for the finite population correction (FPC) in two stage samples had been developed and written by Steve Kaufman at National Center for Education Statistics (NCES) and was adapted to the National Postsecondary Student Aid Study (NPSAS) application (Kaufman 2004). The discussion below addresses four steps of the software program and the general process followed to select bootstrap samples and compute replicate weights as applied to the NPSAS data:

1. Computation of the variance of an estimate for a variable whose value is known for all first stage frame elements.
2. Determination of the first stage bootstrap sample size based on comparisons to the variance calculated in step 1.
3. Determination of the second stage sample size for each bootstrap replicate selection.
4. Selection of the bootstrap samples and calculation of the associated replicate weights.

### L.1.1 Step 1: Computation of the Variance of an Estimate for a Known Variable

The institution sampling frame created from Integrated Postsecondary Education Data System (IPEDS) (see section 2.1) included variables known for each institution. The total student enrollment from the frame was selected for the purposes of computing a variance for a simple linear estimate of a population total at the design stratum level.

Within each design stratum two or more institutions had been selected. The originally applied measures of size scaled to the sample size for the design stratum were also available on the complete frame. If more than three institutions had been selected from a design stratum, the frame was modified by forming substrata called analysis strata. Each analysis stratum was associated with, in most cases, two selected institutions; when a design stratum had an odd sample size, it was necessary to form one analysis stratum with three selected institutions (see section 6.4.1).

The Kaufman procedure formed exactly equal-sized strata with an accumulated size measure of 2 (or 3) by partitioning the measure of size for any institution whose accumulated measure of size exceeded 2 (or 3). This introduced some additional first stage units into the frame. In addition, within each analysis stratum, a similar partitioning was performed to form 2 (or 3) subgroups of equal size. It was then feasible to approximate the FPC factor within analysis stratum by applying the formula developed for Rao-Hartley-Cochran sample designs.<sup>1</sup> The frame-based variance of the total estimate was then computed within each analysis stratum by multiplying the “with replacement” variance estimate by the Rao-Harley-Cochran FPC factor. This design stratum level variance was then used in a subsequent step to select an appropriate design stratum bootstrap sample size that empirically reproduces this standard variance (within a reasonable approximation).

### L.1.2 Step 2: Determination of First Stage Bootstrap Sample Sizes

For this step of the process, a pseudo sampling frame was formed from the observed sample by replicating each institutional respondent based on its assigned first stage sampling weight. Since the NPSAS application used only respondent institutions, the weight used for this purpose was adjusted for institution nonresponse. Each respondent institution and its measure of size was replicated on the pseudo frame based on a multiple of its “rounded up” first stage weight so that the sum of its repeated measures of size totaled exactly 1; the measure of size for the final replication was adjusted downward when the first stage weight was not an integer so that the sum of the measures of size for each institution was exactly 1.

This pseudo frame was then used to generate first stage samples using the same pps sequential sampling procedure used for selecting the NPSAS sample from the complete frame. A range of sample sizes was specified in advance for each design stratum and 100 first stage bootstrap samples were selected for each sample size and used to compute a bootstrap variance estimate for the linear statistic selected for comparison with the standard variance computed in step 1. If the specified range included feasible values, then this process was able to bracket standard variances with empirical bootstrap variances based on two different sample sizes. Once the standard variance was bracketed, simple linear interpolation was used to compute the proportional position of the standard variance between the bracketed values. This proportion was then compared to a randomly drawn uniform random number to select one of the integer valued bootstrap sample sizes. The bracketing sample sizes were not always consecutive. The following notation is useful for discussing the general results of applying the algorithm. Let  $n_{1h}$  = the number of institutions selected in design stratum h (first stage sample),  $m_{1h}^*$  = the first stage bootstrap sample size for design stratum h, and  $m_{1hi}^*$  = the number of times institution  $i$  in design

---

<sup>1</sup> See Kaufman (1999) for a discussion of the rationale for this approach.

stratum  $h$  is actually selected in a particular bootstrap sample. Then the first stage (institution level) bootstrap sample weight is then computed as an adjustment to the initial weight as

$$w_{hi}^* = w_{hi} \frac{n_{1h}}{m_{1h}^*} m_{1hi}^*.$$

Note that for certainty strata, the first stage sample was preserved and both the initial institution weight and the adjusted institution weight were exactly 1.

### L.1.3 Step 3: Determination of the Second Stage Bootstrap Sample Sizes

Since second stage units were defined as replicate subsamples from the sample of students selected within each institution and ‘with replacement’ sampling was assumed as a reasonable approximation to the low sampling rate, the second stage bootstrap sample sizes were just one less than the initial sample multiplied by the first stage bootstrap weight. If we let  $n_{2hi} =$  the number of student replicates initially selected at institution  $i$  in design stratum  $h$ , then second-stage bootstrap sample was computed as

$$m_{2hi}^* = w_{1hi}^* (n_{2hi} - 1).$$

The resulting number was randomly rounded to an integer value.<sup>2</sup>

### L.1.4 Step 4: Selection of Bootstrap Samples and Computation of Replicate Weights

The first stage replicate samples were selected using pps sequential sampling using the first stage bootstrap sample sizes. For institutions selected one or more times at the first stage of bootstrap sample selection for a particular replicate, student replicates were selected with equal probability and ‘with replacement’ using the second stage bootstrap sample size for that institution. Note that in certainty institutions, the second-stage bootstrap sample size was always just one less than the original sample. Much larger second stage samples were selected in institutions with smaller first stage sampling rates.

## L.2 Overall Weight Adjustment

The overall weight adjustments for the  $k$ -th student in student replicate  $hij$  received a bootstrap replicate weight based on a particular bootstrap sample outcome by adjusting the individual’s initial weight as

$$w_{hijk}^* = w_{hijk} \frac{n_{1h}}{m_{1h}^*} m_{1hi}^* \frac{n_{2hi}}{m_{2hi}^*} m_{2hij}^*.$$

Note that this adjustment incorporates adjustments at both stages of bootstrap sampling.

<sup>2</sup> The formula generally produces a non-integer result. The number is increased to the next highest integer with probability proportional to the fractional component of the number (e.g., for 1.73, the number would be increased to 2 with probability 0.73). Otherwise the number is decreased to the next smallest integer (e.g., for 1.73, the number would be decreased to 1 with probability 0.27).

### L.3 Number of Bootstrap Replicates

The bootstrap sampling process was repeated 100 times, but only the first 64 samples were used to compute replicate weights. This decision was based on studying the stability of the bootstrap variance estimate as the number of replicates was increased. Only small changes in the values of the bootstrap variance estimates were observed after the number of replicates exceeded about 55.

### L.4 Appendix L References

- Chromy, J.R. (1981). Variance Estimators for a Sequential Sample Selection Procedure. In. D. Krewski, R. Platek, and J.N.K. Rao (Eds.), *Current Top IMS in Survey Sampling* (pp. 329-347). New York: Academic Press.
- Kaufman, S. (1999). Using the Bootstrap to Estimate the Variance from a Single Systematic PPS Sample. *Proceedings of the Survey Research Methods Section, American Statistical Association*.
- Kaufman, S. (2004). Using the Bootstrap in a Two-Stage Design when Some Second-Stage Strata have only One Unit Allocated. *Proceedings of the American Statistical Association, Section on Survey Research Methods*.



# **Appendix M**

## **Weighted Analysis Considerations**

---



The National Postsecondary Student Aid Study 2004 (NPSAS:04) sampling design was a stratified two-stage design. A stratified sample of postsecondary institutions was selected with probabilities proportional to a composite measure of size at the first stage, and a stratified systematic sample of students was selected from sample institutions at the second stage. At the first stage, about 25 percent of the eligible institutions were selected, but the institution sampling rates varied considerably by institutional sampling strata.<sup>1</sup> Institutions were oversampled in the 12 states with representative samples of undergraduate students in three sectors. At the second stage, first-time beginners (FTBs) and undergraduate students in the 12 states were sampled at higher rates than other students. Because of this complex sampling design, statistical analyses should be conducted using software that properly accounts for the complex survey design.

Most commonly used statistical computing packages (e.g., SAS and SPSS) assume that data are obtained from a simple random sample; that is, they assume that the observations are independent and identically distributed. When the data have been collected using a complex sampling design, the simple random sampling assumption usually leads to an underestimate of the sampling variance, which would lead to artificially small confidence intervals and liberal hypothesis test results (i.e., rejecting the null hypothesis when it is in fact true more often than indicated by the nominal Type I error level) (Carlson, Johnson, and Cohen 1993).

Statistical strategies that have been developed to address this issue include: first-order Taylor series expansion of the variance equation; bootstrap replication; balanced repeated replication; and the Jackknife approach (see, e.g., Wolter 1985). Special-purpose software packages that have been developed for analysis of complex sample survey data include SUDAAN, WesVar, and Stata. Evaluations of the relative performances of these packages are reported by Cohen (1997).

- SUDAAN is a commercial product developed by RTI; information regarding the features of this package and its lease terms is available from the website <http://www.rti.org/sudaan>.
- WesVar is a product of Westat, Inc.; information regarding the features of this package and its lease terms is available from the website <http://www.westat.com/wesvar>.
- Information regarding the features of Stata and its lease terms is available from the website <http://www.stata.com>.
- The National Center for Education Statistics (NCES) has also developed a software tool called the Data Analysis System (DAS) for analysis of complex survey data. Information about using the DAS is available from the website <http://nces.ed.gov/das>.

When computing standard errors using Taylor Series approximation, analysts should use the variables ANALSTR and ANALPSU in specifying analysis strata and analysis PSUs (primary sampling units). This method of variance estimation may overestimate the variance because it does not always account for the finite population correction (FPC) at the institution stage of sampling. Additionally, the analyst should specify the study weights (STUDYWT).

---

<sup>1</sup> From about 6 percent for two national sample strata to 100 percent for two national sample strata and several state sample strata. See chapter 2 for more details.

Below is an example of generic SUDAAN code to produce estimates and standard errors using Taylor Series approximation and not accounting for the FPC. The symbols /\* and \*/ in the code indicate the beginning and end of a comment. Note that the dataset must be sorted by analysis strata and analysis PSUs.

```
PROC DESCRIPT DATA=/* INSERT FILENAME */ DESIGN=WOR;
NEST ANALSTR ANALPSU;
WEIGHT STUDYWT;
VAR /* INSERT VARIABLES */;
SUBPOPN /* INSERT DOMAIN OF INTEREST */;
PRINT NSUM MEAN SEMEAN / STYLE=NCHS;
RUN;
```

When computing standard errors using Taylor Series approximation, the analyst could alternatively use the variables FANALSTR, FANALPSU, FANALSSU, and PSUCOUNT in specifying analysis strata, analysis PSUs, analysis SSUs (secondary sampling units), and estimated number of PSUs in the stratum. This method of variance estimation accounts for the FPC at the institution stage of sampling.

Below is an example of generic SUDAAN code to produce estimates and standard errors using Taylor Series approximation accounting for the fpc. The symbols /\* and \*/ in the code indicate the beginning and end of a comment. Note that the dataset must be sorted by analysis strata, analysis PSUs, and analysis SSUs.

```
PROC DESCRIPT DATA=/* INSERT FILENAME */ DESIGN=WOR;
NEST FANALSTR FANALPSU FANALSSU;
TOTCNT PSUCOUNT _MINUS1__ __ZERO_;
WEIGHT STUDYWT;
VAR /* INSERT VARIABLES */;
SUBPOPN /* INSERT DOMAIN OF INTEREST */;
PRINT NSUM MEAN SEMEAN / STYLE=NCHS;
RUN;
```

When computing standard errors using bootstrap replication, the analyst should specify the bootstrap weights BOOTWT01 – BOOTWT64 in addition to specifying STUDYWT.

Below is an example of generic SUDAAN code to produce estimates and standard errors using bootstrap replication. The symbols /\* and \*/ in the code indicate the beginning and end of a comment. Note that the dataset does not need to be sorted.

```
PROC DESCRIPT DATA=/* INSERT FILENAME */ DESIGN=BRR;  
REPWGT BOOTWT01-BOOTWT64;  
WEIGHT STUDYWT;  
VAR /* INSERT VARIABLES */;  
SUBPOPN /* INSERT DOMAIN OF INTEREST */;  
PRINT NSUM MEAN SEMEAN / STYLE=NCHS;  
RUN;
```

If one must perform a quick analysis of NPSAS:04 data without using one of the software packages for analysis of complex survey data, the design effects tables in appendix N can be used to make approximate adjustments to the standard errors of survey statistics computed using the standard software packages that assume simple random sampling designs. For example, table N-2 shows design effects (DEFFs) and square roots of design effects (DEFTs) for male undergraduate students. If one had computed a statistic (e.g., mean Pell grant amount) for this domain of students, then the summary statistics from table N-2 suggest that the standard error computed from the statistical software package should be multiplied by a survey DEFT of about 1.87 (the median for this domain). However, the range of DEFTs shown in table N-2 for this domain is from 1.30 to 2.78. Therefore, one cannot be confident regarding the actual design-based standard error without performing the analysis using one of the software packages specifically designed for analysis of data from complex sample surveys.

## Appendix M References

- Carlson, B.L., Johnson, A.E., and Cohen, S.B. (1993). An Evaluation of the Use of Personal Computers for Variance Estimation with Complex Survey Data. *Journal of Official Statistics*, 9(4): 795-814.
- Cohen, S.B. (1997). An Evaluation of Alternative PC-Based Software Packages Developed for the Analysis of Complex Survey Data. *The American Statistician*, 57(13): 285-292.
- Wolter, K. (1985). *Introduction to Variance Estimation*, Springer-Verlag: New York, NY.



# **Appendix N**

## **Design Effects**

---





Table N-1. Design effects for all undergraduate students: 2004

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF  |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|-------|
| Received any aid                              | TOTAID>0                 | 63.24            | 0.36                  | 0.17                                | 2.13 | 4.55  |
| Received any federal aid                      | ANYFED=1                 | 46.38            | 0.27                  | 0.18                                | 1.50 | 2.26  |
| Received any state grant aid                  | ANYSTGRT=1               | 14.67            | 0.39                  | 0.13                                | 3.08 | 9.51  |
| Received any institution grant aid            | ANYINSTG=1               | 17.56            | 0.42                  | 0.13                                | 3.10 | 9.59  |
| Received any work-study aid                   | ANYWKST=1                | 7.54             | 0.22                  | 0.09                                | 2.36 | 5.57  |
| Received a Pell grant                         | ANYPELL=1                | 26.76            | 0.17                  | 0.16                                | 1.06 | 1.12  |
| Received a Stafford loan                      | ANYSTAF=1                | 33.18            | 0.23                  | 0.17                                | 1.38 | 1.89  |
| Subsidized                                    | STAFSUB>0                | 27.69            | 0.22                  | 0.16                                | 1.39 | 1.93  |
| Unsubsidized                                  | STAFUNSB>0               | 20.65            | 0.18                  | 0.14                                | 1.22 | 1.50  |
| Married                                       | SMARITAL=2               | 21.29            | 0.40                  | 0.14                                | 2.77 | 7.67  |
| U.S. citizen                                  | CITIZEN2=1               | 92.86            | 0.24                  | 0.09                                | 2.63 | 6.93  |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 48.91            | 0.61                  | 0.18                                | 3.43 | 11.75 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 58.94            | 0.49                  | 0.17                                | 2.82 | 7.95  |
| Received any employer aid                     | ANYEMP=1                 | 7.01             | 0.17                  | 0.09                                | 1.85 | 3.41  |
| Worked while in school                        | JOBENR IN (2,3)          | 74.19            | 0.28                  | 0.15                                | 1.81 | 3.29  |
| Worked full-time while in school              | JOBENR = 3               | 32.74            | 0.35                  | 0.17                                | 2.12 | 4.50  |
| Worked part-time while in school              | JOBENR = 2               | 41.44            | 0.36                  | 0.17                                | 2.04 | 4.17  |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 23.54            | 0.33                  | 0.15                                | 2.19 | 4.82  |
| Registered to vote                            | VOTEREG=1                | 79.51            | 0.30                  | 0.14                                | 2.12 | 4.48  |
| Has a disability                              | DISABLE=1                | 11.32            | 0.19                  | 0.11                                | 1.72 | 2.96  |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 7.50             | 0.16                  | 0.09                                | 1.70 | 2.91  |
| Has dependents other than a spouse            | DEPANY=1                 | 27.12            | 0.42                  | 0.16                                | 2.66 | 7.09  |
| U.S. Armed Forces veteran                     | VETERAN=1                | 3.39             | 0.16                  | 0.06                                | 2.42 | 5.88  |
| Ever attended a community college             | EVER2PUB=1               | 68.13            | 0.26                  | 0.16                                | 1.60 | 2.57  |
| Summary statistics                            |                          |                  |                       |                                     |      |       |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.06 | 1.12  |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.65 | 2.74  |
| Median                                        | †                        | †                | †                     | †                                   | 2.12 | 4.49  |
| 75th percentile                               | †                        | †                | †                     | †                                   | 2.65 | 7.01  |
| Maximum                                       | †                        | †                | †                     | †                                   | 3.43 | 11.75 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table N-2. Design effects for male undergraduate students: 2004

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|------|
| Received any aid                              | TOTAID>0                 | 60.61            | 0.54                  | 0.27                                | 2.01 | 4.03 |
| Received any federal aid                      | ANYFED=1                 | 41.99            | 0.46                  | 0.27                                | 1.68 | 2.83 |
| Received any state grant aid                  | ANYSTGRT=1               | 12.94            | 0.36                  | 0.19                                | 1.95 | 3.79 |
| Received any institution grant aid            | ANYINSTG=1               | 17.15            | 0.55                  | 0.21                                | 2.61 | 6.81 |
| Received any work-study aid                   | ANYWKST=1                | 7.40             | 0.24                  | 0.15                                | 1.67 | 2.79 |
| Received a Pell grant                         | ANYPELL=1                | 22.02            | 0.38                  | 0.23                                | 1.66 | 2.76 |
| Received a Stafford loan                      | ANYSTAF=1                | 31.48            | 0.45                  | 0.26                                | 1.73 | 3.00 |
| Subsidized                                    | STAFSUB>0                | 25.95            | 0.42                  | 0.24                                | 1.73 | 3.01 |
| Unsubsidized                                  | STAFUNSB>0               | 19.24            | 0.32                  | 0.22                                | 1.45 | 2.09 |
| Married                                       | SMARITAL=2               | 19.08            | 0.61                  | 0.22                                | 2.78 | 7.73 |
| U.S. citizen                                  | CITIZEN2=1               | 92.69            | 0.33                  | 0.14                                | 2.27 | 5.17 |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 51.83            | 0.72                  | 0.28                                | 2.59 | 6.71 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 57.26            | 0.60                  | 0.27                                | 2.19 | 4.78 |
| Received any employer aid                     | ANYEMP=1                 | 6.94             | 0.29                  | 0.14                                | 2.02 | 4.09 |
| Worked while in school                        | JOBENR IN (2,3)          | 73.79            | 0.40                  | 0.24                                | 1.63 | 2.65 |
| Worked full-time while in school              | JOBENR = 3               | 32.78            | 0.51                  | 0.26                                | 1.96 | 3.83 |
| Worked part-time while in school              | JOBENR = 2               | 41.01            | 0.46                  | 0.27                                | 1.70 | 2.87 |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 22.19            | 0.42                  | 0.23                                | 1.81 | 3.27 |
| Registered to vote                            | VOTEREG=1                | 79.37            | 0.44                  | 0.22                                | 1.94 | 3.76 |
| Has a disability                              | DISABLE=1                | 11.23            | 0.29                  | 0.18                                | 1.68 | 2.83 |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 6.89             | 0.18                  | 0.14                                | 1.30 | 1.70 |
| Has dependents other than a spouse            | DEPANY=1                 | 19.15            | 0.47                  | 0.22                                | 2.14 | 4.58 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 6.25             | 0.29                  | 0.13                                | 2.14 | 4.58 |
| Ever attended a community college             | EVER2PUB=1               | 66.35            | 0.45                  | 0.26                                | 1.71 | 2.93 |
| Summary statistics                            |                          |                  |                       |                                     |      |      |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.30 | 1.70 |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.68 | 2.83 |
| Median                                        | †                        | †                | †                     | †                                   | 1.87 | 3.51 |
| 75th percentile                               | †                        | †                | †                     | †                                   | 2.14 | 4.58 |
| Maximum                                       | †                        | †                | †                     | †                                   | 2.78 | 7.73 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table N-3. Design effects for female undergraduate students: 2004

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|------|
| Received any aid                              | TOTAID>0                 | 65.18            | 0.41                  | 0.22                                | 1.87 | 3.51 |
| Received any federal aid                      | ANYFED=1                 | 49.60            | 0.37                  | 0.23                                | 1.62 | 2.63 |
| Received any state grant aid                  | ANYSTGRT=1               | 15.93            | 0.45                  | 0.17                                | 2.66 | 7.05 |
| Received any institution grant aid            | ANYINSTG=1               | 17.85            | 0.42                  | 0.18                                | 2.37 | 5.60 |
| Received any work-study aid                   | ANYWKST=1                | 7.64             | 0.25                  | 0.12                                | 2.06 | 4.26 |
| Received a Pell grant                         | ANYPELL=1                | 30.24            | 0.28                  | 0.21                                | 1.31 | 1.72 |
| Received a Stafford loan                      | ANYSTAF=1                | 34.44            | 0.34                  | 0.22                                | 1.58 | 2.49 |
| Subsidized                                    | STAFSUB>0                | 28.97            | 0.34                  | 0.21                                | 1.62 | 2.63 |
| Unsubsidized                                  | STAFUNSB>0               | 21.68            | 0.31                  | 0.19                                | 1.61 | 2.60 |
| Married                                       | SMARITAL=2               | 22.91            | 0.40                  | 0.19                                | 2.09 | 4.39 |
| U.S. citizen                                  | CITIZEN2=1               | 92.99            | 0.24                  | 0.12                                | 2.04 | 4.14 |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 46.77            | 0.61                  | 0.23                                | 2.67 | 7.11 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 60.17            | 0.52                  | 0.23                                | 2.32 | 5.36 |
| Received any employer aid                     | ANYEMP=1                 | 7.06             | 0.16                  | 0.12                                | 1.40 | 1.96 |
| Worked while in school                        | JOBENR IN (2,3)          | 74.48            | 0.31                  | 0.20                                | 1.55 | 2.40 |
| Worked full-time while in school              | JOBENR = 3               | 32.72            | 0.40                  | 0.22                                | 1.87 | 3.49 |
| Worked part-time while in school              | JOBENR = 2               | 41.76            | 0.43                  | 0.23                                | 1.88 | 3.52 |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 24.53            | 0.36                  | 0.20                                | 1.82 | 3.30 |
| Registered to vote                            | VOTEREG=1                | 79.62            | 0.31                  | 0.19                                | 1.68 | 2.83 |
| Has a disability                              | DISABLE=1                | 11.38            | 0.22                  | 0.15                                | 1.50 | 2.26 |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 7.96             | 0.21                  | 0.12                                | 1.68 | 2.82 |
| Has dependents other than a spouse            | DEPANY=1                 | 32.97            | 0.50                  | 0.22                                | 2.33 | 5.43 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 1.29             | 0.10                  | 0.05                                | 1.84 | 3.38 |
| Ever attended a community college             | EVER2PUB=1               | 69.44            | 0.35                  | 0.21                                | 1.65 | 2.71 |
| Summary statistics                            |                          |                  |                       |                                     |      |      |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.31 | 1.72 |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.62 | 2.61 |
| Median                                        | †                        | †                | †                     | †                                   | 1.83 | 3.34 |
| 75th percentile                               | †                        | †                | †                     | †                                   | 2.08 | 4.32 |
| Maximum                                       | †                        | †                | †                     | †                                   | 2.67 | 7.11 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table N-4. Design effects for students at less-than-2-year institutions: 2004**

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF  |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|-------|
| Received any aid                              | TOTAID>0                 | 77.83            | 0.79                  | 0.42                                | 1.87 | 3.49  |
| Received any federal aid                      | ANYFED=1                 | 66.77            | 0.50                  | 0.48                                | 1.04 | 1.09  |
| Received any state grant aid                  | ANYSTGRT=1               | 3.25             | 0.35                  | 0.18                                | 1.96 | 3.85  |
| Received any institution grant aid            | ANYINSTG=1               | 5.30             | 0.73                  | 0.23                                | 3.22 | 10.37 |
| Received any work-study aid                   | ANYWKST=1                | 2.15             | 0.19                  | 0.15                                | 1.27 | 1.61  |
| Received a Pell grant                         | ANYPELL=1                | 47.70            | 0.46                  | 0.51                                | 0.91 | 0.83  |
| Received a Stafford loan                      | ANYSTAF=1                | 47.42            | 0.46                  | 0.51                                | 0.91 | 0.84  |
| Subsidized                                    | STAFSUB>0                | 45.20            | 0.41                  | 0.51                                | 0.82 | 0.67  |
| Unsubsidized                                  | STAFUNSB>0               | 38.31            | 0.50                  | 0.49                                | 1.02 | 1.04  |
| Married                                       | SMARITAL=2               | 24.90            | 0.67                  | 0.44                                | 1.52 | 2.30  |
| U.S. citizen                                  | CITIZEN2=1               | 88.38            | 0.54                  | 0.33                                | 1.66 | 2.75  |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 73.49            | 1.05                  | 0.45                                | 2.33 | 5.45  |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 73.08            | 0.66                  | 0.45                                | 1.46 | 2.12  |
| Received any employer aid                     | ANYEMP=1                 | 6.57             | 0.45                  | 0.25                                | 1.77 | 3.13  |
| Worked while in school                        | JOBENR IN (2,3)          | 66.43            | 0.68                  | 0.48                                | 1.43 | 2.03  |
| Worked full-time while in school              | JOBENR = 3               | 35.57            | 0.66                  | 0.49                                | 1.35 | 1.83  |
| Worked part-time while in school              | JOBENR = 2               | 30.86            | 0.61                  | 0.47                                | 1.30 | 1.69  |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 20.77            | 0.52                  | 0.41                                | 1.27 | 1.61  |
| Registered to vote                            | VOTEREG=1                | 75.33            | 0.61                  | 0.44                                | 1.39 | 1.93  |
| Has a disability                              | DISABLE=1                | 12.77            | 0.51                  | 0.34                                | 1.51 | 2.28  |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 3.97             | 0.22                  | 0.20                                | 1.11 | 1.23  |
| Has dependents other than a spouse            | DEPANY=1                 | 44.98            | 0.71                  | 0.51                                | 1.41 | 1.98  |
| U.S. Armed Forces veteran                     | VETERAN=1                | 3.07             | 0.30                  | 0.18                                | 1.69 | 2.85  |
| Ever attended a community college             | EVER2PUB=1               | 40.91            | 0.51                  | 0.50                                | 1.02 | 1.03  |
| Summary statistics                            |                          |                  |                       |                                     |      |       |
| Minimum                                       | †                        | †                | †                     | †                                   | 0.82 | 0.67  |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.08 | 1.16  |
| Median                                        | †                        | †                | †                     | †                                   | 1.40 | 1.95  |
| 75th percentile                               | †                        | †                | †                     | †                                   | 1.67 | 2.80  |
| Maximum                                       | †                        | †                | †                     | †                                   | 3.22 | 10.37 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table N-5. Design effects for students at public 2-year institutions: 2004

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF  |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|-------|
| Received any aid                              | TOTAID>0                 | 48.09            | 0.79                  | 0.31                                | 2.58 | 6.66  |
| Received any federal aid                      | ANYFED=1                 | 30.83            | 0.53                  | 0.28                                | 1.88 | 3.52  |
| Received any state grant aid                  | ANYSTGRT=1               | 10.91            | 0.58                  | 0.19                                | 2.99 | 8.97  |
| Received any institution grant aid            | ANYINSTG=1               | 7.24             | 0.49                  | 0.16                                | 3.09 | 9.56  |
| Received any work-study aid                   | ANYWKST=1                | 3.65             | 0.22                  | 0.12                                | 1.89 | 3.59  |
| Received a Pell grant                         | ANYPELL=1                | 22.92            | 0.35                  | 0.26                                | 1.36 | 1.84  |
| Received a Stafford loan                      | ANYSTAF=1                | 13.40            | 0.39                  | 0.21                                | 1.88 | 3.52  |
| Subsidized                                    | STAFSUB>0                | 11.06            | 0.35                  | 0.19                                | 1.83 | 3.35  |
| Unsubsidized                                  | STAFUNSB>0               | 7.73             | 0.24                  | 0.16                                | 1.44 | 2.06  |
| Married                                       | SMARITAL=2               | 26.79            | 0.65                  | 0.27                                | 2.39 | 5.71  |
| U.S. citizen                                  | CITIZEN2=1               | 91.72            | 0.47                  | 0.17                                | 2.74 | 7.53  |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 31.21            | 0.94                  | 0.29                                | 3.28 | 10.75 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 76.10            | 0.70                  | 0.26                                | 2.65 | 7.03  |
| Received any employer aid                     | ANYEMP=1                 | 7.50             | 0.24                  | 0.16                                | 1.48 | 2.18  |
| Worked while in school                        | JOBENR IN (2,3)          | 78.64            | 0.36                  | 0.25                                | 1.43 | 2.06  |
| Worked full-time while in school              | JOBENR = 3               | 40.13            | 0.60                  | 0.30                                | 1.98 | 3.90  |
| Worked part-time while in school              | JOBENR = 2               | 38.51            | 0.60                  | 0.30                                | 2.01 | 4.05  |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 22.37            | 0.43                  | 0.26                                | 1.69 | 2.85  |
| Registered to vote                            | VOTEREG=1                | 78.63            | 0.54                  | 0.25                                | 2.14 | 4.59  |
| Has a disability                              | DISABLE=1                | 12.20            | 0.31                  | 0.20                                | 1.52 | 2.31  |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 9.45             | 0.30                  | 0.18                                | 1.64 | 2.68  |
| Has dependents other than a spouse            | DEPANY=1                 | 34.59            | 0.61                  | 0.29                                | 2.09 | 4.37  |
| U.S. Armed Forces veteran                     | VETERAN=1                | 3.93             | 0.24                  | 0.12                                | 1.98 | 3.93  |
| Ever attended a community college             | EVER2PUB=1               | 100.00           | 0.00                  | 0.00                                | †    | †     |
| Summary statistics                            |                          |                  |                       |                                     |      |       |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.36 | 1.84  |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.64 | 2.68  |
| Median                                        | †                        | †                | †                     | †                                   | 1.98 | 3.90  |
| 75th percentile                               | †                        | †                | †                     | †                                   | 2.58 | 6.66  |
| Maximum                                       | †                        | †                | †                     | †                                   | 3.28 | 10.75 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table N-6. Design effects for undergraduate students at 4-year non-doctorate-granting/first-professional institutions: 2004**

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF  |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|-------|
| Received any aid                              | TOTAID>0                 | 75.31            | 1.08                  | 0.34                                | 3.14 | 9.87  |
| Received any federal aid                      | ANYFED=1                 | 58.11            | 0.94                  | 0.39                                | 2.38 | 5.65  |
| Received any state grant aid                  | ANYSTGRT=1               | 21.13            | 1.05                  | 0.33                                | 3.22 | 10.38 |
| Received any institution grant aid            | ANYINSTG=1               | 29.20            | 1.63                  | 0.36                                | 4.50 | 20.23 |
| Received any work-study aid                   | ANYWKST=1                | 13.58            | 0.92                  | 0.27                                | 3.39 | 11.47 |
| Received a Pell grant                         | ANYPELL=1                | 29.43            | 0.98                  | 0.36                                | 2.71 | 7.33  |
| Received a Stafford loan                      | ANYSTAF=1                | 47.15            | 1.15                  | 0.40                                | 2.89 | 8.33  |
| Subsidized                                    | STAFSUB>0                | 38.88            | 0.97                  | 0.39                                | 2.50 | 6.25  |
| Unsubsidized                                  | STAFUNSB>0               | 27.00            | 0.84                  | 0.35                                | 2.36 | 5.58  |
| Married                                       | SMARITAL=2               | 19.77            | 1.09                  | 0.32                                | 3.42 | 11.71 |
| U.S. citizen                                  | CITIZEN2=1               | 94.37            | 0.43                  | 0.18                                | 2.31 | 5.35  |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 59.06            | 1.67                  | 0.39                                | 4.25 | 18.05 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 45.52            | 1.54                  | 0.40                                | 3.89 | 15.10 |
| Received any employer aid                     | ANYEMP=1                 | 7.81             | 0.46                  | 0.21                                | 2.14 | 4.57  |
| Worked while in school                        | JOBENR IN (2,3)          | 72.28            | 0.77                  | 0.36                                | 2.15 | 4.61  |
| Worked full-time while in school              | JOBENR = 3               | 29.63            | 1.30                  | 0.36                                | 3.57 | 12.73 |
| Worked part-time while in school              | JOBENR = 2               | 42.65            | 0.87                  | 0.39                                | 2.22 | 4.91  |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 25.84            | 0.91                  | 0.35                                | 2.61 | 6.84  |
| Registered to vote                            | VOTEREG=1                | 81.36            | 0.62                  | 0.31                                | 2.00 | 4.01  |
| Has a disability                              | DISABLE=1                | 11.15            | 0.42                  | 0.25                                | 1.67 | 2.80  |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 6.38             | 0.31                  | 0.19                                | 1.59 | 2.52  |
| Has dependents other than a spouse            | DEPANY=1                 | 23.01            | 1.11                  | 0.34                                | 3.30 | 10.86 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 3.48             | 0.40                  | 0.15                                | 2.75 | 7.54  |
| Ever attended a community college             | EVER2PUB=1               | 43.99            | 1.03                  | 0.40                                | 2.59 | 6.72  |
| Summary statistics                            |                          |                  |                       |                                     |      |       |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.59 | 2.52  |
| 25th percentile                               | †                        | †                | †                     | †                                   | 2.27 | 5.13  |
| Median                                        | †                        | †                | †                     | †                                   | 2.66 | 7.08  |
| 75th percentile                               | †                        | †                | †                     | †                                   | 3.34 | 11.16 |
| Maximum                                       | †                        | †                | †                     | †                                   | 4.50 | 20.23 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table N-7. Design effects for undergraduate students at 4-year doctorate-granting/first-professional institutions: 2004**

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|------|
| Received any aid                              | TOTAID>0                 | 71.45            | 0.56                  | 0.32                                | 1.78 | 3.15 |
| Received any federal aid                      | ANYFED=1                 | 52.80            | 0.64                  | 0.35                                | 1.82 | 3.32 |
| Received any state grant aid                  | ANYSTGRT=1               | 18.10            | 0.40                  | 0.27                                | 1.50 | 2.24 |
| Received any institution grant aid            | ANYINSTG=1               | 29.47            | 0.72                  | 0.32                                | 2.26 | 5.13 |
| Received any work-study aid                   | ANYWKST=1                | 11.19            | 0.41                  | 0.22                                | 1.85 | 3.42 |
| Received a Pell grant                         | ANYPELL=1                | 23.37            | 0.65                  | 0.30                                | 2.19 | 4.80 |
| Received a Stafford loan                      | ANYSTAF=1                | 44.32            | 0.68                  | 0.35                                | 1.94 | 3.75 |
| Subsidized                                    | STAFSUB>0                | 34.96            | 0.63                  | 0.33                                | 1.88 | 3.54 |
| Unsubsidized                                  | STAFUNSB>0               | 24.83            | 0.52                  | 0.30                                | 1.71 | 2.92 |
| Married                                       | SMARITAL=2               | 11.20            | 0.47                  | 0.22                                | 2.12 | 4.48 |
| U.S. citizen                                  | CITIZEN2=1               | 94.10            | 0.25                  | 0.17                                | 1.52 | 2.32 |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 64.29            | 0.94                  | 0.34                                | 2.79 | 7.76 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 37.82            | 0.69                  | 0.34                                | 2.01 | 4.05 |
| Received any employer aid                     | ANYEMP=1                 | 4.60             | 0.21                  | 0.15                                | 1.42 | 2.01 |
| Worked while in school                        | JOBENR IN (2,3)          | 67.75            | 0.61                  | 0.33                                | 1.85 | 3.41 |
| Worked full-time while in school              | JOBENR = 3               | 17.86            | 0.45                  | 0.27                                | 1.67 | 2.79 |
| Worked part-time while in school              | JOBENR = 2               | 49.88            | 0.48                  | 0.35                                | 1.36 | 1.85 |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 21.53            | 0.46                  | 0.29                                | 1.60 | 2.56 |
| Registered to vote                            | VOTEREG=1                | 79.75            | 0.35                  | 0.28                                | 1.25 | 1.55 |
| Has a disability                              | DISABLE=1                | 9.32             | 0.24                  | 0.20                                | 1.16 | 1.34 |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 6.23             | 0.23                  | 0.17                                | 1.35 | 1.82 |
| Has dependents other than a spouse            | DEPANY=1                 | 11.05            | 0.52                  | 0.22                                | 2.37 | 5.63 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 1.53             | 0.12                  | 0.09                                | 1.38 | 1.89 |
| Ever attended a community college             | EVER2PUB=1               | 40.67            | 0.73                  | 0.34                                | 2.11 | 4.46 |
| Summary statistics                            |                          |                  |                       |                                     |      |      |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.16 | 1.34 |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.46 | 2.13 |
| Median                                        | †                        | †                | †                     | †                                   | 1.80 | 3.23 |
| 75th percentile                               | †                        | †                | †                     | †                                   | 2.06 | 4.25 |
| Maximum                                       | †                        | †                | †                     | †                                   | 2.79 | 7.76 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table N-8. Design effects for undergraduate students at public 4-year non-doctorate-granting/first-professional institutions: 2004**

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF  |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|-------|
| Received any aid                              | TOTAID>0                 | 67.60            | 1.72                  | 0.53                                | 3.22 | 10.39 |
| Received any federal aid                      | ANYFED=1                 | 52.86            | 1.60                  | 0.57                                | 2.81 | 7.91  |
| Received any state grant aid                  | ANYSTGRT=1               | 19.12            | 1.37                  | 0.45                                | 3.06 | 9.36  |
| Received any institution grant aid            | ANYINSTG=1               | 15.41            | 1.29                  | 0.41                                | 3.12 | 9.76  |
| Received any work-study aid                   | ANYWKST=1                | 8.53             | 0.82                  | 0.32                                | 2.56 | 6.54  |
| Received a Pell grant                         | ANYPELL=1                | 28.78            | 1.35                  | 0.52                                | 2.60 | 6.78  |
| Received a Stafford loan                      | ANYSTAF=1                | 40.48            | 1.45                  | 0.56                                | 2.59 | 6.70  |
| Subsidized                                    | STAFSUB>0                | 32.10            | 1.26                  | 0.53                                | 2.37 | 5.61  |
| Unsubsidized                                  | STAFUNSB>0               | 23.08            | 1.06                  | 0.48                                | 2.21 | 4.87  |
| Married                                       | SMARITAL=2               | 18.47            | 1.48                  | 0.44                                | 3.34 | 11.17 |
| U.S. citizen                                  | CITIZEN2=1               | 93.88            | 0.59                  | 0.27                                | 2.16 | 4.67  |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 54.56            | 2.14                  | 0.57                                | 3.77 | 14.22 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 45.09            | 2.07                  | 0.57                                | 3.63 | 13.21 |
| Received any employer aid                     | ANYEMP=1                 | 5.56             | 0.45                  | 0.26                                | 1.74 | 3.02  |
| Worked while in school                        | JOBENR IN (2,3)          | 74.54            | 1.02                  | 0.50                                | 2.06 | 4.24  |
| Worked full-time while in school              | JOBENR = 3               | 27.96            | 1.55                  | 0.51                                | 3.02 | 9.10  |
| Worked part-time while in school              | JOBENR = 2               | 46.58            | 1.00                  | 0.57                                | 1.76 | 3.09  |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 24.21            | 1.27                  | 0.49                                | 2.59 | 6.70  |
| Registered to vote                            | VOTEREG=1                | 80.68            | 0.85                  | 0.45                                | 1.88 | 3.52  |
| Has a disability                              | DISABLE=1                | 11.02            | 0.47                  | 0.36                                | 1.32 | 1.74  |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 6.26             | 0.39                  | 0.28                                | 1.42 | 2.02  |
| Has dependents other than a spouse            | DEPANY=1                 | 20.06            | 1.21                  | 0.46                                | 2.65 | 7.03  |
| U.S. Armed Forces veteran                     | VETERAN=1                | 2.58             | 0.39                  | 0.18                                | 2.13 | 4.56  |
| Ever attended a community college             | EVER2PUB=1               | 45.23            | 1.74                  | 0.57                                | 3.06 | 9.37  |
| Summary statistics                            |                          |                  |                       |                                     |      |       |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.32 | 1.74  |
| 25th percentile                               | †                        | †                | †                     | †                                   | 2.10 | 4.40  |
| Median                                        | †                        | †                | †                     | †                                   | 2.59 | 6.70  |
| 75th percentile                               | †                        | †                | †                     | †                                   | 3.06 | 9.37  |
| Maximum                                       | †                        | †                | †                     | †                                   | 3.77 | 14.22 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).



**Table N-9. Design effects for undergraduate students at public 4-year doctorate-granting/first-professional institutions: 2004**

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|------|
| Received any aid                              | TOTAID>0                 | 69.14            | 0.62                  | 0.38                                | 1.61 | 2.59 |
| Received any federal aid                      | ANYFED=1                 | 51.29            | 0.65                  | 0.42                                | 1.57 | 2.47 |
| Received any state grant aid                  | ANYSTGRT=1               | 17.85            | 0.30                  | 0.32                                | 0.95 | 0.91 |
| Received any institution grant aid            | ANYINSTG=1               | 23.27            | 0.55                  | 0.35                                | 1.57 | 2.46 |
| Received any work-study aid                   | ANYWKST=1                | 8.26             | 0.27                  | 0.23                                | 1.18 | 1.39 |
| Received a Pell grant                         | ANYPELL=1                | 23.90            | 0.64                  | 0.36                                | 1.81 | 3.26 |
| Received a Stafford loan                      | ANYSTAF=1                | 43.01            | 0.58                  | 0.41                                | 1.41 | 1.98 |
| Subsidized                                    | STAFSUB>0                | 33.28            | 0.59                  | 0.39                                | 1.50 | 2.24 |
| Unsubsidized                                  | STAFUNSB>0               | 25.45            | 0.49                  | 0.36                                | 1.35 | 1.84 |
| Married                                       | SMARITAL=2               | 11.57            | 0.47                  | 0.27                                | 1.78 | 3.15 |
| U.S. citizen                                  | CITIZEN2=1               | 94.27            | 0.29                  | 0.19                                | 1.48 | 2.18 |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 62.70            | 1.09                  | 0.40                                | 2.70 | 7.31 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 38.61            | 0.79                  | 0.41                                | 1.94 | 3.78 |
| Received any employer aid                     | ANYEMP=1                 | 4.17             | 0.19                  | 0.17                                | 1.17 | 1.36 |
| Worked while in school                        | JOBENR IN (2,3)          | 69.88            | 0.72                  | 0.38                                | 1.88 | 3.52 |
| Worked full-time while in school              | JOBENR = 3               | 18.47            | 0.45                  | 0.32                                | 1.38 | 1.90 |
| Worked part-time while in school              | JOBENR = 2               | 51.40            | 0.55                  | 0.42                                | 1.33 | 1.76 |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 21.29            | 0.38                  | 0.34                                | 1.12 | 1.26 |
| Registered to vote                            | VOTEREG=1                | 80.23            | 0.40                  | 0.33                                | 1.20 | 1.45 |
| Has a disability                              | DISABLE=1                | 9.38             | 0.29                  | 0.24                                | 1.18 | 1.40 |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 6.55             | 0.25                  | 0.21                                | 1.21 | 1.46 |
| Has dependents other than a spouse            | DEPANY=1                 | 11.41            | 0.55                  | 0.26                                | 2.07 | 4.29 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 1.63             | 0.13                  | 0.11                                | 1.20 | 1.43 |
| Ever attended a community college             | EVER2PUB=1               | 42.53            | 0.77                  | 0.41                                | 1.86 | 3.46 |
| Summary statistics                            |                          |                  |                       |                                     |      |      |
| Minimum                                       | †                        | †                | †                     | †                                   | 0.95 | 0.91 |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.20 | 1.44 |
| Median                                        | †                        | †                | †                     | †                                   | 1.44 | 2.08 |
| 75th percentile                               | †                        | †                | †                     | †                                   | 1.79 | 3.21 |
| Maximum                                       | †                        | †                | †                     | †                                   | 2.70 | 7.31 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table N-10. Design effects for undergraduate students at private not-for-profit 4-year non-doctorate-granting/first-professional: 2004**

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF  |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|-------|
| Received any aid                              | TOTAID>0                 | 85.17            | 0.92                  | 0.40                                | 2.33 | 5.45  |
| Received any federal aid                      | ANYFED=1                 | 64.82            | 1.15                  | 0.53                                | 2.16 | 4.66  |
| Received any state grant aid                  | ANYSTGRT=1               | 23.70            | 1.60                  | 0.47                                | 3.37 | 11.36 |
| Received any institution grant aid            | ANYINSTG=1               | 46.84            | 3.02                  | 0.56                                | 5.44 | 29.56 |
| Received any work-study aid                   | ANYWKST=1                | 20.03            | 1.63                  | 0.45                                | 3.66 | 13.37 |
| Received a Pell grant                         | ANYPELL=1                | 30.26            | 1.80                  | 0.51                                | 3.52 | 12.39 |
| Received a Stafford loan                      | ANYSTAF=1                | 55.67            | 1.74                  | 0.55                                | 3.14 | 9.87  |
| Subsidized                                    | STAFSUB>0                | 47.54            | 1.48                  | 0.56                                | 2.66 | 7.07  |
| Unsubsidized                                  | STAFUNSB>0               | 32.01            | 1.39                  | 0.52                                | 2.67 | 7.15  |
| Married                                       | SMARITAL=2               | 21.45            | 1.56                  | 0.46                                | 3.41 | 11.61 |
| U.S. citizen                                  | CITIZEN2=1               | 95.00            | 0.62                  | 0.24                                | 2.56 | 6.55  |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 64.81            | 2.38                  | 0.53                                | 4.48 | 20.04 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 46.07            | 1.79                  | 0.56                                | 3.22 | 10.35 |
| Received any employer aid                     | ANYEMP=1                 | 10.69            | 0.91                  | 0.34                                | 2.64 | 6.95  |
| Worked while in school                        | JOBENR IN (2,3)          | 69.40            | 1.11                  | 0.51                                | 2.16 | 4.68  |
| Worked full-time while in school              | JOBENR = 3               | 31.77            | 2.18                  | 0.52                                | 4.20 | 17.62 |
| Worked part-time while in school              | JOBENR = 2               | 37.63            | 1.64                  | 0.54                                | 3.04 | 9.25  |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 27.94            | 1.14                  | 0.50                                | 2.28 | 5.21  |
| Registered to vote                            | VOTEREG=1                | 82.24            | 0.89                  | 0.43                                | 2.09 | 4.35  |
| Has a disability                              | DISABLE=1                | 11.31            | 0.64                  | 0.35                                | 1.81 | 3.29  |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 6.52             | 0.54                  | 0.28                                | 1.98 | 3.93  |
| Has dependents other than a spouse            | DEPANY=1                 | 26.79            | 2.05                  | 0.49                                | 4.16 | 17.27 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 4.64             | 0.79                  | 0.23                                | 3.36 | 11.32 |
| Ever attended a community college             | EVER2PUB=1               | 42.40            | 1.28                  | 0.55                                | 2.32 | 5.39  |
| Summary statistics                            |                          |                  |                       |                                     |      |       |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.81 | 3.29  |
| 25th percentile                               | †                        | †                | †                     | †                                   | 2.30 | 5.30  |
| Median                                        | †                        | †                | †                     | †                                   | 2.86 | 8.20  |
| 75th percentile                               | †                        | †                | †                     | †                                   | 3.46 | 12.00 |
| Maximum                                       | †                        | †                | †                     | †                                   | 5.44 | 29.56 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table N-11. Design effects for undergraduate students at private not-for-profit 4-year doctorate-granting/first-professional institutions: 2004**

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF  |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|-------|
| Received any aid                              | TOTAID>0                 | 80.29            | 1.15                  | 0.52                                | 2.22 | 4.91  |
| Received any federal aid                      | ANYFED=1                 | 58.58            | 1.71                  | 0.64                                | 2.67 | 7.14  |
| Received any state grant aid                  | ANYSTGRT=1               | 19.04            | 1.49                  | 0.51                                | 2.92 | 8.50  |
| Received any institution grant aid            | ANYINSTG=1               | 53.24            | 2.67                  | 0.65                                | 4.11 | 16.86 |
| Received any work-study aid                   | ANYWKST=1                | 22.47            | 1.43                  | 0.54                                | 2.63 | 6.91  |
| Received a Pell grant                         | ANYPELL=1                | 21.33            | 2.60                  | 0.53                                | 4.86 | 23.67 |
| Received a Stafford loan                      | ANYSTAF=1                | 49.34            | 1.96                  | 0.65                                | 3.01 | 9.04  |
| Subsidized                                    | STAFSUB>0                | 41.42            | 1.67                  | 0.64                                | 2.60 | 6.75  |
| Unsubsidized                                  | STAFUNSB>0               | 22.46            | 1.46                  | 0.54                                | 2.68 | 7.17  |
| Married                                       | SMARITAL=2               | 9.79             | 1.34                  | 0.39                                | 3.47 | 12.01 |
| U.S. citizen                                  | CITIZEN2=1               | 93.47            | 0.59                  | 0.32                                | 1.83 | 3.34  |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 70.37            | 1.96                  | 0.59                                | 3.30 | 10.86 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 34.78            | 1.61                  | 0.62                                | 2.60 | 6.76  |
| Received any employer aid                     | ANYEMP=1                 | 6.26             | 0.71                  | 0.32                                | 2.24 | 5.01  |
| Worked while in school                        | JOBENR IN (2,3)          | 59.56            | 1.10                  | 0.64                                | 1.72 | 2.95  |
| Worked full-time while in school              | JOBENR = 3               | 15.51            | 1.28                  | 0.47                                | 2.71 | 7.32  |
| Worked part-time while in school              | JOBENR = 2               | 44.05            | 1.21                  | 0.65                                | 1.87 | 3.50  |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 22.48            | 1.44                  | 0.54                                | 2.65 | 7.00  |
| Registered to vote                            | VOTEREG=1                | 77.92            | 0.75                  | 0.54                                | 1.38 | 1.90  |
| Has a disability                              | DISABLE=1                | 9.05             | 0.64                  | 0.37                                | 1.70 | 2.89  |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 5.01             | 0.44                  | 0.28                                | 1.57 | 2.45  |
| Has dependents other than a spouse            | DEPANY=1                 | 9.65             | 1.45                  | 0.38                                | 3.78 | 14.28 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 1.12             | 0.35                  | 0.14                                | 2.54 | 6.43  |
| Ever attended a community college             | EVER2PUB=1               | 33.53            | 1.71                  | 0.62                                | 2.77 | 7.69  |
| Summary statistics                            |                          |                  |                       |                                     |      |       |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.38 | 1.90  |
| 25th percentile                               | †                        | †                | †                     | †                                   | 2.04 | 4.21  |
| Median                                        | †                        | †                | †                     | †                                   | 2.64 | 6.95  |
| 75th percentile                               | †                        | †                | †                     | †                                   | 2.96 | 8.77  |
| Maximum                                       | †                        | †                | †                     | †                                   | 4.86 | 23.67 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table N-12. Design effects for undergraduate students at private for-profit institutions: 2004**

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF  |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|-------|
| Received any aid                              | TOTAID>0                 | 89.14            | 0.39                  | 0.27                                | 1.44 | 2.09  |
| Received any federal aid                      | ANYFED=1                 | 81.20            | 0.69                  | 0.34                                | 2.02 | 4.09  |
| Received any state grant aid                  | ANYSTGRT=1               | 8.14             | 1.00                  | 0.24                                | 4.18 | 17.46 |
| Received any institution grant aid            | ANYINSTG=1               | 6.80             | 0.86                  | 0.22                                | 3.88 | 15.04 |
| Received any work-study aid                   | ANYWKST=1                | 2.30             | 0.29                  | 0.13                                | 2.21 | 4.90  |
| Received a Pell grant                         | ANYPELL=1                | 50.99            | 0.77                  | 0.44                                | 1.76 | 3.11  |
| Received a Stafford loan                      | ANYSTAF=1                | 71.53            | 0.75                  | 0.40                                | 1.89 | 3.59  |
| Subsidized                                    | STAFSUB>0                | 67.89            | 0.92                  | 0.41                                | 2.24 | 5.03  |
| Unsubsidized                                  | STAFUNSB>0               | 62.08            | 0.80                  | 0.43                                | 1.88 | 3.53  |
| Married                                       | SMARITAL=2               | 26.08            | 1.23                  | 0.39                                | 3.19 | 10.18 |
| U.S. citizen                                  | CITIZEN2=1               | 91.81            | 0.57                  | 0.24                                | 2.35 | 5.55  |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 69.76            | 1.86                  | 0.40                                | 4.62 | 21.37 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 65.74            | 1.32                  | 0.42                                | 3.17 | 10.02 |
| Received any employer aid                     | ANYEMP=1                 | 9.64             | 0.94                  | 0.26                                | 3.62 | 13.11 |
| Worked while in school                        | JOBENR IN (2,3)          | 75.84            | 0.76                  | 0.38                                | 2.04 | 4.15  |
| Worked full-time while in school              | JOBENR = 3               | 47.39            | 1.32                  | 0.44                                | 3.01 | 9.06  |
| Worked part-time while in school              | JOBENR = 2               | 28.45            | 0.99                  | 0.40                                | 2.49 | 6.21  |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 30.32            | 1.51                  | 0.40                                | 3.74 | 13.99 |
| Registered to vote                            | VOTEREG=1                | 79.39            | 0.80                  | 0.35                                | 2.25 | 5.07  |
| Has a disability                              | DISABLE=1                | 13.09            | 0.70                  | 0.30                                | 2.36 | 5.56  |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 3.99             | 0.54                  | 0.17                                | 3.15 | 9.90  |
| Has dependents other than a spouse            | DEPANY=1                 | 46.19            | 1.51                  | 0.44                                | 3.46 | 11.94 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 6.05             | 0.61                  | 0.21                                | 2.92 | 8.53  |
| Ever attended a community college             | EVER2PUB=1               | 44.83            | 0.97                  | 0.44                                | 2.22 | 4.94  |
| Summary statistics                            |                          |                  |                       |                                     |      |       |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.44 | 2.09  |
| 25th percentile                               | †                        | †                | †                     | †                                   | 2.12 | 4.52  |
| Median                                        | †                        | †                | †                     | †                                   | 2.42 | 5.88  |
| 75th percentile                               | †                        | †                | †                     | †                                   | 3.32 | 11.06 |
| Maximum                                       | †                        | †                | †                     | †                                   | 4.62 | 21.37 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table N-13. Design effects for dependent undergraduate students: 2004

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|------|
| Received any aid                              | TOTAID>0                 | 63.79            | 0.53                  | 0.23                                | 2.30 | 5.28 |
| Received any federal aid                      | ANYFED=1                 | 47.82            | 0.44                  | 0.24                                | 1.81 | 3.28 |
| Received any state grant aid                  | ANYSTGRT=1               | 17.91            | 0.39                  | 0.19                                | 2.11 | 4.44 |
| Received any institution grant aid            | ANYINSTG=1               | 25.47            | 0.52                  | 0.21                                | 2.49 | 6.20 |
| Received any work-study aid                   | ANYWKST=1                | 11.15            | 0.32                  | 0.15                                | 2.12 | 4.49 |
| Received a Pell grant                         | ANYPELL=1                | 21.85            | 0.23                  | 0.20                                | 1.15 | 1.31 |
| Received a Stafford loan                      | ANYSTAF=1                | 35.74            | 0.46                  | 0.23                                | 1.97 | 3.89 |
| Subsidized                                    | STAFSUB>0                | 26.96            | 0.42                  | 0.21                                | 1.96 | 3.83 |
| Unsubsidized                                  | STAFUNSB>0               | 17.11            | 0.31                  | 0.18                                | 1.68 | 2.84 |
| Married                                       | SMARITAL=2               | †                | †                     | †                                   | †    | †    |
| U.S. citizen                                  | CITIZEN2=1               | 93.85            | 0.22                  | 0.12                                | 1.94 | 3.75 |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 64.23            | 0.64                  | 0.23                                | 2.76 | 7.64 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 40.73            | 0.57                  | 0.24                                | 2.41 | 5.82 |
| Received any employer aid                     | ANYEMP=1                 | 1.83             | 0.10                  | 0.06                                | 1.49 | 2.22 |
| Worked while in school                        | JOBENR IN (2,3)          | 70.06            | 0.45                  | 0.22                                | 2.04 | 4.15 |
| Worked full-time while in school              | JOBENR = 3               | 15.81            | 0.27                  | 0.18                                | 1.54 | 2.37 |
| Worked part-time while in school              | JOBENR = 2               | 54.25            | 0.43                  | 0.24                                | 1.79 | 3.22 |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 16.33            | 0.29                  | 0.18                                | 1.65 | 2.71 |
| Registered to vote                            | VOTEREG=1                | 74.26            | 0.36                  | 0.21                                | 1.70 | 2.89 |
| Has a disability                              | DISABLE=1                | 8.98             | 0.22                  | 0.14                                | 1.56 | 2.45 |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 7.83             | 0.18                  | 0.13                                | 1.42 | 2.02 |
| Has dependents other than a spouse            | DEPANY=1                 | †                | †                     | †                                   | †    | †    |
| U.S. Armed Forces veteran                     | VETERAN=1                | †                | †                     | †                                   | †    | †    |
| Ever attended a community college             | EVER2PUB=1               | 55.56            | 0.50                  | 0.24                                | 2.08 | 4.33 |
| Summary statistics                            |                          |                  |                       |                                     |      |      |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.15 | 1.31 |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.65 | 2.71 |
| Median                                        | †                        | †                | †                     | †                                   | 1.94 | 3.75 |
| 75th percentile                               | †                        | †                | †                     | †                                   | 2.11 | 4.44 |
| Maximum                                       | †                        | †                | †                     | †                                   | 2.76 | 7.64 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table N-14. Design effects for independent undergraduate students: 2004

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF  |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|-------|
| Received any aid                              | TOTAID>0                 | 62.70            | 0.49                  | 0.25                                | 1.93 | 3.72  |
| Received any federal aid                      | ANYFED=1                 | 44.95            | 0.46                  | 0.26                                | 1.79 | 3.19  |
| Received any state grant aid                  | ANYSTGRT=1               | 11.46            | 0.53                  | 0.17                                | 3.19 | 10.19 |
| Received any institution grant aid            | ANYINSTG=1               | 9.72             | 0.39                  | 0.15                                | 2.52 | 6.33  |
| Received any work-study aid                   | ANYWKST=1                | 3.97             | 0.15                  | 0.10                                | 1.43 | 2.06  |
| Received a Pell grant                         | ANYPELL=1                | 31.61            | 0.32                  | 0.24                                | 1.32 | 1.74  |
| Received a Stafford loan                      | ANYSTAF=1                | 30.65            | 0.44                  | 0.24                                | 1.85 | 3.42  |
| Subsidized                                    | STAFSUB>0                | 28.41            | 0.43                  | 0.23                                | 1.81 | 3.28  |
| Unsubsidized                                  | STAFUNSB>0               | 24.15            | 0.32                  | 0.22                                | 1.45 | 2.10  |
| Married                                       | SMARITAL=2               | 42.34            | 0.64                  | 0.26                                | 2.50 | 6.23  |
| U.S. citizen                                  | CITIZEN2=1               | 91.89            | 0.35                  | 0.14                                | 2.45 | 5.99  |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 33.77            | 0.72                  | 0.25                                | 2.91 | 8.47  |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 76.95            | 0.46                  | 0.22                                | 2.11 | 4.44  |
| Received any employer aid                     | ANYEMP=1                 | 12.13            | 0.28                  | 0.17                                | 1.65 | 2.73  |
| Worked while in school                        | JOBENR IN (2,3)          | 78.28            | 0.28                  | 0.21                                | 1.32 | 1.73  |
| Worked full-time while in school              | JOBENR = 3               | 49.50            | 0.50                  | 0.26                                | 1.94 | 3.76  |
| Worked part-time while in school              | JOBENR = 2               | 28.77            | 0.43                  | 0.24                                | 1.83 | 3.34  |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 30.68            | 0.56                  | 0.24                                | 2.33 | 5.44  |
| Registered to vote                            | VOTEREG=1                | 84.71            | 0.38                  | 0.19                                | 2.05 | 4.22  |
| Has a disability                              | DISABLE=1                | 13.63            | 0.28                  | 0.18                                | 1.54 | 2.38  |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 7.18             | 0.19                  | 0.13                                | 1.43 | 2.04  |
| Has dependents other than a spouse            | DEPANY=1                 | 53.95            | 0.45                  | 0.26                                | 1.74 | 3.02  |
| U.S. Armed Forces veteran                     | VETERAN=1                | 6.74             | 0.29                  | 0.13                                | 2.24 | 5.01  |
| Ever attended a community college             | EVER2PUB=1               | 80.57            | 0.47                  | 0.21                                | 2.30 | 5.29  |
| Summary statistics                            |                          |                  |                       |                                     |      |       |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.32 | 1.73  |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.60 | 2.55  |
| Median                                        | †                        | †                | †                     | †                                   | 1.89 | 3.57  |
| 75th percentile                               | †                        | †                | †                     | †                                   | 2.32 | 5.37  |
| Maximum                                       | †                        | †                | †                     | †                                   | 3.19 | 10.19 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table N-15. Design effects for White non-Hispanic undergraduate students: 2004

| Variable                                      | Defined as                  | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF |
|-----------------------------------------------|-----------------------------|------------------|-----------------------|-------------------------------------|------|------|
| Received any aid                              | TOTAID>0                    | 61.49            | 0.56                  | 0.22                                | 2.55 | 6.53 |
| Received any federal aid                      | ANYFED=1                    | 42.86            | 0.52                  | 0.22                                | 2.32 | 5.37 |
| Received any state grant aid                  | ANYSTGRT=1                  | 13.82            | 0.42                  | 0.16                                | 2.69 | 7.22 |
| Received any institution grant aid            | ANYINSTG=1                  | 18.39            | 0.48                  | 0.18                                | 2.72 | 7.37 |
| Received any work-study aid                   | ANYWKST=1                   | 7.32             | 0.27                  | 0.12                                | 2.27 | 5.15 |
| Received a Pell grant                         | ANYPELL=1                   | 20.50            | 0.40                  | 0.18                                | 2.16 | 4.66 |
| Received a Stafford loan                      | ANYSTAF=1                   | 33.47            | 0.48                  | 0.21                                | 2.23 | 4.99 |
| Subsidized                                    | STAFSUB>0                   | 26.74            | 0.40                  | 0.20                                | 1.99 | 3.95 |
| Unsubsidized                                  | STAFUNSB>0                  | 20.70            | 0.39                  | 0.18                                | 2.13 | 4.55 |
| Married                                       | SMARITAL=2                  | 22.25            | 0.48                  | 0.19                                | 2.54 | 6.47 |
| U.S. citizen                                  | CITIZEN2=1                  | 97.29            | 0.14                  | 0.07                                | 1.90 | 3.62 |
| Enrolled exclusively full-time                | ATTNPTRN=1                  | 50.50            | 0.67                  | 0.23                                | 2.94 | 8.64 |
| Enrolled part-time or part-year               | ATTNSTAT IN<br>(3, 4, 5, 6) | 56.39            | 0.60                  | 0.23                                | 2.67 | 7.14 |
| Received any employer aid                     | ANYEMP=1                    | 7.52             | 0.20                  | 0.12                                | 1.66 | 2.76 |
| Worked while in school                        | JOBENR IN (2,3)             | 74.99            | 0.35                  | 0.20                                | 1.79 | 3.21 |
| Worked full-time while in school              | JOBENR = 3                  | 31.35            | 0.38                  | 0.21                                | 1.81 | 3.27 |
| Worked part-time while in school              | JOBENR = 2                  | 43.65            | 0.41                  | 0.23                                | 1.81 | 3.28 |
| Principal job in 2003–04 related to major     | JOBMAJOR=1                  | 23.71            | 0.38                  | 0.19                                | 1.99 | 3.95 |
| Registered to vote                            | VOTEREG=1                   | 83.29            | 0.29                  | 0.17                                | 1.70 | 2.89 |
| Has a disability                              | DISABLE=1                   | 11.68            | 0.21                  | 0.15                                | 1.45 | 2.12 |
| Attended more than one institution in 2003–04 | STUDMULT>1                  | 7.31             | 0.17                  | 0.12                                | 1.40 | 1.97 |
| Has dependents other than a spouse            | DEPANY=1                    | 23.55            | 0.45                  | 0.19                                | 2.35 | 5.52 |
| U.S. Armed Forces veteran                     | VETERAN=1                   | 3.38             | 0.18                  | 0.08                                | 2.24 | 5.02 |
| Ever attended a community college             | EVER2PUB=1                  | 66.36            | 0.56                  | 0.21                                | 2.63 | 6.92 |
| Summary statistics                            |                             |                  |                       |                                     |      |      |
| Minimum                                       | †                           | †                | †                     | †                                   | 1.40 | 1.97 |
| 25th percentile                               | †                           | †                | †                     | †                                   | 1.81 | 3.27 |
| Median                                        | †                           | †                | †                     | †                                   | 2.20 | 4.82 |
| 75th percentile                               | †                           | †                | †                     | †                                   | 2.55 | 6.50 |
| Maximum                                       | †                           | †                | †                     | †                                   | 2.94 | 8.64 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table N-16. Design effects for Black non-Hispanic undergraduate students: 2004**

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF  |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|-------|
| Received any aid                              | TOTAID>0                 | 75.79            | 0.88                  | 0.38                                | 2.32 | 5.40  |
| Received any federal aid                      | ANYFED=1                 | 62.13            | 1.15                  | 0.43                                | 2.68 | 7.16  |
| Received any state grant aid                  | ANYSTGRT=1               | 18.22            | 0.89                  | 0.34                                | 2.60 | 6.77  |
| Received any institution grant aid            | ANYINSTG=1               | 14.95            | 0.84                  | 0.32                                | 2.65 | 7.05  |
| Received any work-study aid                   | ANYWKST=1                | 8.52             | 0.45                  | 0.25                                | 1.83 | 3.35  |
| Received a Pell grant                         | ANYPELL=1                | 46.80            | 0.99                  | 0.44                                | 2.24 | 5.00  |
| Received a Stafford loan                      | ANYSTAF=1                | 41.57            | 1.65                  | 0.44                                | 3.77 | 14.25 |
| Subsidized                                    | STAFSUB>0                | 37.81            | 1.51                  | 0.43                                | 3.51 | 12.30 |
| Unsubsidized                                  | STAFUNSB>0               | 27.89            | 1.03                  | 0.40                                | 2.58 | 6.64  |
| Married                                       | SMARITAL=2               | 17.68            | 0.80                  | 0.34                                | 2.37 | 5.61  |
| U.S. citizen                                  | CITIZEN2=1               | 91.10            | 0.73                  | 0.25                                | 2.89 | 8.35  |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 47.33            | 1.29                  | 0.44                                | 2.91 | 8.47  |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 65.27            | 1.51                  | 0.42                                | 3.58 | 12.79 |
| Received any employer aid                     | ANYEMP=1                 | 6.92             | 0.46                  | 0.23                                | 2.04 | 4.15  |
| Worked while in school                        | JOBENR IN (2,3)          | 73.81            | 0.73                  | 0.39                                | 1.86 | 3.46  |
| Worked full-time while in school              | JOBENR = 3               | 39.52            | 0.96                  | 0.43                                | 2.20 | 4.85  |
| Worked part-time while in school              | JOBENR = 2               | 34.29            | 0.74                  | 0.42                                | 1.75 | 3.05  |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 26.56            | 0.69                  | 0.39                                | 1.75 | 3.08  |
| Registered to vote                            | VOTEREG=1                | 81.30            | 0.89                  | 0.35                                | 2.56 | 6.56  |
| Has a disability                              | DISABLE=1                | 10.71            | 0.47                  | 0.27                                | 1.72 | 2.96  |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 6.89             | 0.31                  | 0.23                                | 1.37 | 1.87  |
| Has dependents other than a spouse            | DEPANY=1                 | 42.96            | 1.12                  | 0.44                                | 2.54 | 6.45  |
| U.S. Armed Forces veteran                     | VETERAN=1                | 4.86             | 0.35                  | 0.19                                | 1.82 | 3.30  |
| Ever attended a community college             | EVER2PUB=1               | 70.80            | 1.49                  | 0.40                                | 3.69 | 13.63 |
| Summary statistics                            |                          |                  |                       |                                     |      |       |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.37 | 1.87  |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.85 | 3.41  |
| Median                                        | †                        | †                | †                     | †                                   | 2.45 | 6.03  |
| 75th percentile                               | †                        | †                | †                     | †                                   | 2.78 | 7.75  |
| Maximum                                       | †                        | †                | †                     | †                                   | 3.77 | 14.25 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).



Table N-17. Design effects for Asian undergraduate students: 2004

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|------|
| Received any aid                              | TOTAID>0                 | 51.56            | 1.55                  | 0.82                                | 1.90 | 3.62 |
| Received any federal aid                      | ANYFED=1                 | 37.04            | 1.27                  | 0.79                                | 1.61 | 2.60 |
| Received any state grant aid                  | ANYSTGRT=1               | 15.12            | 0.85                  | 0.59                                | 1.45 | 2.09 |
| Received any institution grant aid            | ANYINSTG=1               | 18.73            | 0.98                  | 0.64                                | 1.54 | 2.38 |
| Received any work-study aid                   | ANYWKST=1                | 9.53             | 0.59                  | 0.48                                | 1.23 | 1.52 |
| Received a Pell grant                         | ANYPELL=1                | 21.89            | 0.99                  | 0.68                                | 1.46 | 2.13 |
| Received a Stafford loan                      | ANYSTAF=1                | 21.67            | 0.85                  | 0.67                                | 1.27 | 1.60 |
| Subsidized                                    | STAFSUB>0                | 18.78            | 0.78                  | 0.64                                | 1.23 | 1.51 |
| Unsubsidized                                  | STAFUNSB>0               | 10.87            | 0.65                  | 0.51                                | 1.29 | 1.65 |
| Married                                       | SMARITAL=2               | 20.41            | 1.12                  | 0.66                                | 1.69 | 2.87 |
| U.S. citizen                                  | CITIZEN2=1               | 63.44            | 1.03                  | 0.79                                | 1.31 | 1.72 |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 48.44            | 1.64                  | 0.82                                | 2.00 | 4.01 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 55.06            | 1.44                  | 0.81                                | 1.77 | 3.15 |
| Received any employer aid                     | ANYEMP=1                 | 4.66             | 0.48                  | 0.34                                | 1.39 | 1.94 |
| Worked while in school                        | JOBENR IN (2,3)          | 63.31            | 0.99                  | 0.79                                | 1.25 | 1.57 |
| Worked full-time while in school              | JOBENR = 3               | 21.80            | 1.11                  | 0.68                                | 1.64 | 2.69 |
| Worked part-time while in school              | JOBENR = 2               | 41.51            | 1.11                  | 0.81                                | 1.37 | 1.89 |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 17.79            | 1.01                  | 0.63                                | 1.62 | 2.63 |
| Registered to vote                            | VOTEREG=1                | 48.71            | 1.04                  | 0.82                                | 1.27 | 1.61 |
| Has a disability                              | DISABLE=1                | 7.09             | 0.65                  | 0.42                                | 1.54 | 2.38 |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 11.30            | 0.72                  | 0.52                                | 1.39 | 1.92 |
| Has dependents other than a spouse            | DEPANY=1                 | 17.94            | 0.87                  | 0.63                                | 1.39 | 1.92 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 1.49             | 0.28                  | 0.20                                | 1.41 | 1.99 |
| Ever attended a community college             | EVER2PUB=1               | 71.62            | 1.11                  | 0.74                                | 1.51 | 2.28 |
| Summary statistics                            |                          |                  |                       |                                     |      |      |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.23 | 1.51 |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.30 | 1.69 |
| Median                                        | †                        | †                | †                     | †                                   | 1.43 | 2.04 |
| 75th percentile                               | †                        | †                | †                     | †                                   | 1.62 | 2.62 |
| Maximum                                       | †                        | †                | †                     | †                                   | 2.00 | 4.01 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table N-18. Design effects for Hispanic undergraduate students: 2004**

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|------|
| Received any aid                              | TOTAID>0                 | 63.20            | 0.82                  | 0.46                                | 1.79 | 3.22 |
| Received any federal aid                      | ANYFED=1                 | 50.42            | 0.86                  | 0.47                                | 1.81 | 3.28 |
| Received any state grant aid                  | ANYSTGRT=1               | 14.83            | 0.65                  | 0.34                                | 1.94 | 3.78 |
| Received any institution grant aid            | ANYINSTG=1               | 16.08            | 0.96                  | 0.35                                | 2.76 | 7.64 |
| Received any work-study aid                   | ANYWKST=1                | 6.84             | 0.52                  | 0.24                                | 2.18 | 4.76 |
| Received a Pell grant                         | ANYPELL=1                | 36.94            | 0.80                  | 0.46                                | 1.75 | 3.06 |
| Received a Stafford loan                      | ANYSTAF=1                | 27.88            | 0.93                  | 0.42                                | 2.19 | 4.78 |
| Subsidized                                    | STAFSUB>0                | 25.02            | 0.87                  | 0.41                                | 2.12 | 4.49 |
| Unsubsidized                                  | STAFUNSB>0               | 16.68            | 0.81                  | 0.35                                | 2.29 | 5.26 |
| Married                                       | SMARITAL=2               | 20.96            | 0.71                  | 0.39                                | 1.83 | 3.37 |
| U.S. citizen                                  | CITIZEN2=1               | 86.08            | 0.52                  | 0.33                                | 1.58 | 2.51 |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 43.72            | 1.15                  | 0.47                                | 2.45 | 5.99 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 65.49            | 0.93                  | 0.45                                | 2.07 | 4.29 |
| Received any employer aid                     | ANYEMP=1                 | 5.83             | 0.33                  | 0.22                                | 1.46 | 2.15 |
| Worked while in school                        | JOBENR IN (2,3)          | 75.63            | 0.57                  | 0.41                                | 1.39 | 1.94 |
| Worked full-time while in school              | JOBENR = 3               | 36.77            | 0.79                  | 0.46                                | 1.73 | 2.98 |
| Worked part-time while in school              | JOBENR = 2               | 38.86            | 0.76                  | 0.46                                | 1.64 | 2.71 |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 22.05            | 0.69                  | 0.39                                | 1.75 | 3.06 |
| Registered to vote                            | VOTEREG=1                | 72.92            | 0.72                  | 0.42                                | 1.72 | 2.95 |
| Has a disability                              | DISABLE=1                | 10.90            | 0.49                  | 0.30                                | 1.66 | 2.75 |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 7.13             | 0.35                  | 0.24                                | 1.44 | 2.07 |
| Has dependents other than a spouse            | DEPANY=1                 | 31.28            | 0.87                  | 0.44                                | 1.98 | 3.92 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 2.43             | 0.21                  | 0.15                                | 1.47 | 2.15 |
| Ever attended a community college             | EVER2PUB=1               | 71.67            | 1.08                  | 0.43                                | 2.52 | 6.36 |
| Summary statistics                            |                          |                  |                       |                                     |      |      |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.39 | 1.94 |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.65 | 2.73 |
| Median                                        | †                        | †                | †                     | †                                   | 1.80 | 3.25 |
| 75th percentile                               | †                        | †                | †                     | †                                   | 2.15 | 4.63 |
| Maximum                                       | †                        | †                | †                     | †                                   | 2.76 | 7.64 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table N-19. Design effects for other race undergraduate students: 2004

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|------|
| Received any aid                              | TOTAID>0                 | 62.99            | 1.27                  | 0.78                                | 1.63 | 2.66 |
| Received any federal aid                      | ANYFED=1                 | 46.47            | 1.34                  | 0.81                                | 1.66 | 2.77 |
| Received any state grant aid                  | ANYSTGRT=1               | 14.41            | 0.80                  | 0.57                                | 1.41 | 1.99 |
| Received any institution grant aid            | ANYINSTG=1               | 16.77            | 0.81                  | 0.60                                | 1.34 | 1.79 |
| Received any work-study aid                   | ANYWKST=1                | 7.26             | 0.59                  | 0.42                                | 1.41 | 1.99 |
| Received a Pell grant                         | ANYPELL=1                | 28.99            | 1.03                  | 0.73                                | 1.40 | 1.96 |
| Received a Stafford loan                      | ANYSTAF=1                | 31.97            | 1.10                  | 0.75                                | 1.47 | 2.15 |
| Subsidized                                    | STAFSUB>0                | 27.66            | 0.95                  | 0.72                                | 1.32 | 1.73 |
| Unsubsidized                                  | STAFUNSB>0               | 20.34            | 1.02                  | 0.65                                | 1.56 | 2.45 |
| Married                                       | SMARITAL=2               | 20.99            | 0.88                  | 0.66                                | 1.34 | 1.78 |
| U.S. citizen                                  | CITIZEN2=1               | 90.81            | 0.73                  | 0.47                                | 1.55 | 2.41 |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 47.04            | 1.58                  | 0.81                                | 1.96 | 3.86 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 60.94            | 1.31                  | 0.79                                | 1.66 | 2.77 |
| Received any employer aid                     | ANYEMP=1                 | 6.37             | 0.58                  | 0.39                                | 1.46 | 2.14 |
| Worked while in school                        | JOBENR IN (2,3)          | 73.07            | 1.17                  | 0.72                                | 1.63 | 2.66 |
| Worked full-time while in school              | JOBENR = 3               | 32.96            | 1.36                  | 0.76                                | 1.79 | 3.22 |
| Worked part-time while in school              | JOBENR = 2               | 40.11            | 1.33                  | 0.79                                | 1.68 | 2.82 |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 22.87            | 0.90                  | 0.68                                | 1.33 | 1.76 |
| Registered to vote                            | VOTEREG=1                | 76.72            | 1.21                  | 0.68                                | 1.77 | 3.12 |
| Has a disability                              | DISABLE=1                | 14.20            | 0.78                  | 0.56                                | 1.38 | 1.92 |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 8.55             | 0.46                  | 0.45                                | 1.02 | 1.05 |
| Has dependents other than a spouse            | DEPANY=1                 | 27.16            | 1.13                  | 0.72                                | 1.57 | 2.46 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 3.92             | 0.46                  | 0.31                                | 1.46 | 2.13 |
| Ever attended a community college             | EVER2PUB=1               | 70.38            | 1.34                  | 0.74                                | 1.82 | 3.32 |
| Summary statistics                            |                          |                  |                       |                                     |      |      |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.02 | 1.05 |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.39 | 1.94 |
| Median                                        | †                        | †                | †                     | †                                   | 1.51 | 2.28 |
| 75th percentile                               | †                        | †                | †                     | †                                   | 1.66 | 2.77 |
| Maximum                                       | †                        | †                | †                     | †                                   | 1.96 | 3.86 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table N-20. Design effects for low-income undergraduate students: 2004**

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|------|
| Received any aid                              | TOTAID>0                 | 74.37            | 0.61                  | 0.31                                | 1.96 | 3.85 |
| Received any federal aid                      | ANYFED=1                 | 64.02            | 0.66                  | 0.34                                | 1.95 | 3.82 |
| Received any state grant aid                  | ANYSTGRT=1               | 22.64            | 0.76                  | 0.30                                | 2.55 | 6.50 |
| Received any institution grant aid            | ANYINSTG=1               | 21.03            | 0.61                  | 0.29                                | 2.12 | 4.48 |
| Received any work-study aid                   | ANYWKST=1                | 11.67            | 0.52                  | 0.23                                | 2.27 | 5.15 |
| Received a Pell grant                         | ANYPELL=1                | 58.71            | 0.59                  | 0.35                                | 1.71 | 2.91 |
| Received a Stafford loan                      | ANYSTAF=1                | 35.77            | 0.68                  | 0.34                                | 2.01 | 4.05 |
| Subsidized                                    | STAFSUB>0                | 34.98            | 0.69                  | 0.34                                | 2.06 | 4.24 |
| Unsubsidized                                  | STAFUNSB>0               | 17.50            | 0.48                  | 0.27                                | 1.79 | 3.21 |
| Married                                       | SMARITAL=2               | 4.98             | 0.25                  | 0.15                                | 1.64 | 2.68 |
| U.S. citizen                                  | CITIZEN2=1               | 88.79            | 0.45                  | 0.22                                | 2.00 | 4.01 |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 54.74            | 0.79                  | 0.35                                | 2.23 | 4.98 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 55.08            | 0.65                  | 0.35                                | 1.84 | 3.38 |
| Received any employer aid                     | ANYEMP=1                 | 2.98             | 0.20                  | 0.12                                | 1.67 | 2.79 |
| Worked while in school                        | JOBENR IN (2,3)          | 67.53            | 0.62                  | 0.33                                | 1.88 | 3.53 |
| Worked full-time while in school              | JOBENR = 3               | 23.35            | 0.55                  | 0.30                                | 1.83 | 3.34 |
| Worked part-time while in school              | JOBENR = 2               | 44.18            | 0.66                  | 0.35                                | 1.88 | 3.54 |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 18.09            | 0.44                  | 0.27                                | 1.62 | 2.61 |
| Registered to vote                            | VOTEREG=1                | 73.69            | 0.60                  | 0.31                                | 1.91 | 3.67 |
| Has a disability                              | DISABLE=1                | 12.42            | 0.41                  | 0.23                                | 1.74 | 3.01 |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 7.44             | 0.30                  | 0.19                                | 1.61 | 2.58 |
| Has dependents other than a spouse            | DEPANY=1                 | 19.98            | 0.48                  | 0.28                                | 1.68 | 2.82 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 1.95             | 0.19                  | 0.10                                | 1.98 | 3.91 |
| Ever attended a community college             | EVER2PUB=1               | 66.78            | 0.48                  | 0.33                                | 1.43 | 2.04 |
| Summary statistics                            |                          |                  |                       |                                     |      |      |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.43 | 2.04 |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.69 | 2.86 |
| Median                                        | †                        | †                | †                     | †                                   | 1.88 | 3.53 |
| 75th percentile                               | †                        | †                | †                     | †                                   | 2.01 | 4.03 |
| Maximum                                       | †                        | †                | †                     | †                                   | 2.55 | 6.50 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table N-21. Design effects for middle-income undergraduate students: 2004

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|------|
| Received any aid                              | TOTAID>0                 | 66.42            | 0.45                  | 0.24                                | 1.92 | 3.70 |
| Received any federal aid                      | ANYFED=1                 | 50.49            | 0.39                  | 0.25                                | 1.57 | 2.46 |
| Received any state grant aid                  | ANYSTGRT=1               | 16.39            | 0.44                  | 0.19                                | 2.38 | 5.65 |
| Received any institution grant aid            | ANYINSTG=1               | 18.79            | 0.47                  | 0.20                                | 2.42 | 5.86 |
| Received any work-study aid                   | ANYWKST=1                | 7.97             | 0.24                  | 0.14                                | 1.80 | 3.26 |
| Received a Pell grant                         | ANYPELL=1                | 27.56            | 0.32                  | 0.22                                | 1.44 | 2.07 |
| Received a Stafford loan                      | ANYSTAF=1                | 37.41            | 0.37                  | 0.24                                | 1.53 | 2.34 |
| Subsidized                                    | STAFSUB>0                | 33.17            | 0.34                  | 0.24                                | 1.43 | 2.06 |
| Unsubsidized                                  | STAFUNSB>0               | 22.28            | 0.31                  | 0.21                                | 1.47 | 2.18 |
| Married                                       | SMARITAL=2               | 14.29            | 0.43                  | 0.18                                | 2.47 | 6.11 |
| U.S. citizen                                  | CITIZEN2=1               | 93.44            | 0.27                  | 0.12                                | 2.15 | 4.64 |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 50.27            | 0.67                  | 0.25                                | 2.67 | 7.11 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 57.78            | 0.63                  | 0.25                                | 2.55 | 6.49 |
| Received any employer aid                     | ANYEMP=1                 | 5.86             | 0.15                  | 0.12                                | 1.29 | 1.67 |
| Worked while in school                        | JOBENR IN (2,3)          | 76.41            | 0.33                  | 0.21                                | 1.57 | 2.45 |
| Worked full-time while in school              | JOBENR = 3               | 32.94            | 0.45                  | 0.24                                | 1.92 | 3.70 |
| Worked part-time while in school              | JOBENR = 2               | 43.47            | 0.43                  | 0.25                                | 1.75 | 3.05 |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 23.43            | 0.39                  | 0.21                                | 1.84 | 3.38 |
| Registered to vote                            | VOTEREG=1                | 79.63            | 0.38                  | 0.20                                | 1.89 | 3.59 |
| Has a disability                              | DISABLE=1                | 11.26            | 0.29                  | 0.16                                | 1.86 | 3.47 |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 7.27             | 0.19                  | 0.13                                | 1.45 | 2.12 |
| Has dependents other than a spouse            | DEPANY=1                 | 25.62            | 0.50                  | 0.22                                | 2.29 | 5.24 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 2.84             | 0.15                  | 0.08                                | 1.78 | 3.15 |
| Ever attended a community college             | EVER2PUB=1               | 67.93            | 0.42                  | 0.23                                | 1.78 | 3.18 |
| Summary statistics                            |                          |                  |                       |                                     |      |      |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.29 | 1.67 |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.55 | 2.40 |
| Median                                        | †                        | †                | †                     | †                                   | 1.82 | 3.32 |
| 75th percentile                               | †                        | †                | †                     | †                                   | 2.22 | 4.94 |
| Maximum                                       | †                        | †                | †                     | †                                   | 2.67 | 7.11 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table N-22. Design effects for high-income undergraduate students: 2004

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|------|
| Received any aid                              | TOTAID>0                 | 50.10            | 0.61                  | 0.35                                | 1.71 | 2.93 |
| Received any federal aid                      | ANYFED=1                 | 27.08            | 0.48                  | 0.31                                | 1.52 | 2.32 |
| Received any state grant aid                  | ANYSTGRT=1               | 6.17             | 0.29                  | 0.17                                | 1.68 | 2.82 |
| Received any institution grant aid            | ANYINSTG=1               | 13.06            | 0.49                  | 0.24                                | 2.04 | 4.16 |
| Received any work-study aid                   | ANYWKST=1                | 3.92             | 0.21                  | 0.14                                | 1.52 | 2.31 |
| Received a Pell grant                         | ANYPELL=1                | 2.87             | 0.18                  | 0.12                                | 1.52 | 2.30 |
| Received a Stafford loan                      | ANYSTAF=1                | 24.33            | 0.44                  | 0.30                                | 1.46 | 2.13 |
| Subsidized                                    | STAFSUB>0                | 13.41            | 0.39                  | 0.24                                | 1.60 | 2.57 |
| Unsubsidized                                  | STAFUNSB>0               | 20.15            | 0.41                  | 0.28                                | 1.43 | 2.04 |
| Married                                       | SMARITAL=2               | 44.43            | 0.77                  | 0.35                                | 2.19 | 4.78 |
| U.S. citizen                                  | CITIZEN2=1               | 94.79            | 0.28                  | 0.16                                | 1.80 | 3.25 |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 42.55            | 0.77                  | 0.35                                | 2.21 | 4.90 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 63.59            | 0.68                  | 0.34                                | 2.00 | 4.02 |
| Received any employer aid                     | ANYEMP=1                 | 11.76            | 0.43                  | 0.23                                | 1.90 | 3.61 |
| Worked while in school                        | JOBENR IN (2,3)          | 75.19            | 0.50                  | 0.31                                | 1.65 | 2.72 |
| Worked full-time while in school              | JOBENR = 3               | 39.06            | 0.59                  | 0.35                                | 1.70 | 2.88 |
| Worked part-time while in school              | JOBENR = 2               | 36.14            | 0.55                  | 0.34                                | 1.62 | 2.63 |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 27.58            | 0.57                  | 0.32                                | 1.81 | 3.27 |
| Registered to vote                            | VOTEREG=1                | 83.43            | 0.41                  | 0.26                                | 1.56 | 2.43 |
| Has a disability                              | DISABLE=1                | 10.64            | 0.32                  | 0.22                                | 1.49 | 2.21 |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 7.95             | 0.26                  | 0.19                                | 1.36 | 1.84 |
| Has dependents other than a spouse            | DEPANY=1                 | 34.64            | 0.70                  | 0.34                                | 2.07 | 4.27 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 5.31             | 0.34                  | 0.16                                | 2.16 | 4.65 |
| Ever attended a community college             | EVER2PUB=1               | 69.42            | 0.48                  | 0.33                                | 1.48 | 2.19 |
| Summary statistics                            |                          |                  |                       |                                     |      |      |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.36 | 1.84 |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.52 | 2.30 |
| Median                                        | †                        | †                | †                     | †                                   | 1.66 | 2.77 |
| 75th percentile                               | †                        | †                | †                     | †                                   | 1.95 | 3.81 |
| Maximum                                       | †                        | †                | †                     | †                                   | 2.21 | 4.90 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

Table N-23. Design effects for all graduate students: 2004

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|------|
| Received any aid                              | TOTAID>0                 | 70.27            | 1.09                  | 0.47                                | 2.34 | 5.49 |
| Received any federal aid                      | ANYFED=1                 | 35.65            | 0.95                  | 0.49                                | 1.95 | 3.79 |
| Received any state grant aid                  | ANYSTGRT=1               | 1.86             | 0.34                  | 0.14                                | 2.48 | 6.15 |
| Received any institution grant aid            | ANYINSTG=1               | 16.33            | 0.80                  | 0.38                                | 2.11 | 4.45 |
| Received any work-study aid                   | ANYWKST=1                | 1.52             | 0.20                  | 0.12                                | 1.60 | 2.55 |
| Received any assistantship                    | ANYGAST=1                | 15.93            | 0.72                  | 0.37                                | 1.92 | 3.70 |
| Received a Stafford loan                      | ANYSTAF=1                | 34.67            | 0.93                  | 0.49                                | 1.91 | 3.64 |
| Subsidized                                    | STAFSUB>0                | 31.96            | 1.01                  | 0.48                                | 2.12 | 4.50 |
| Unsubsidized                                  | STAFUNSB>0               | 28.61            | 0.91                  | 0.46                                | 1.98 | 3.93 |
| Married                                       | SMARITAL=2               | 46.15            | 1.21                  | 0.51                                | 2.38 | 5.65 |
| U.S. citizen                                  | CITIZEN2=1               | 88.01            | 0.66                  | 0.33                                | 1.99 | 3.96 |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 30.44            | 1.17                  | 0.47                                | 2.49 | 6.22 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 74.04            | 1.09                  | 0.45                                | 2.43 | 5.89 |
| Received any employer aid                     | ANYEMP=1                 | 21.59            | 1.10                  | 0.42                                | 2.62 | 6.87 |
| Worked while in school                        | JOBENR IN (2,3)          | 75.57            | 0.96                  | 0.44                                | 2.18 | 4.76 |
| Worked full-time while in school              | JOBENR = 3               | 53.55            | 1.31                  | 0.51                                | 2.57 | 6.61 |
| Worked part-time while in school              | JOBENR = 2               | 22.02            | 0.91                  | 0.42                                | 2.15 | 4.64 |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 50.25            | 1.20                  | 0.51                                | 2.35 | 5.54 |
| Registered to vote                            | VOTEREG=1                | 84.92            | 0.87                  | 0.37                                | 2.37 | 5.63 |
| Has a disability                              | DISABLE=1                | 6.81             | 0.57                  | 0.26                                | 2.20 | 4.84 |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 3.80             | 0.47                  | 0.20                                | 2.39 | 5.72 |
| Has dependents other than a spouse            | DEPANY=1                 | 36.63            | 1.29                  | 0.49                                | 2.62 | 6.84 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 3.99             | 0.54                  | 0.20                                | 2.71 | 7.32 |
| Ever attended a community college             | EVER2PUB=1               | 46.20            | 0.88                  | 0.51                                | 1.72 | 2.97 |
| Summary statistics                            |                          |                  |                       |                                     |      |      |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.60 | 2.55 |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.99 | 3.95 |
| Median                                        | †                        | †                | †                     | †                                   | 2.27 | 5.16 |
| 75th percentile                               | †                        | †                | †                     | †                                   | 2.45 | 6.02 |
| Maximum                                       | †                        | †                | †                     | †                                   | 2.71 | 7.32 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table N-24. Design effects for graduate students at public 4-year institutions: 2004**

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|------|
| Received any aid                              | TOTAID>0                 | 67.15            | 1.17                  | 0.60                                | 1.94 | 3.75 |
| Received any federal aid                      | ANYFED=1                 | 29.50            | 0.80                  | 0.58                                | 1.37 | 1.87 |
| Received any state grant aid                  | ANYSTGRT=1               | 2.13             | 0.26                  | 0.19                                | 1.40 | 1.96 |
| Received any institution grant aid            | ANYINSTG=1               | 18.31            | 0.77                  | 0.50                                | 1.55 | 2.41 |
| Received any work-study aid                   | ANYWKST=1                | 1.45             | 0.17                  | 0.15                                | 1.08 | 1.17 |
| Received any assistantship                    | ANYGAST=1                | 22.66            | 0.74                  | 0.54                                | 1.37 | 1.89 |
| Received a Stafford loan                      | ANYSTAF=1                | 28.32            | 0.77                  | 0.58                                | 1.34 | 1.79 |
| Subsidized                                    | STAFSUB>0                | 25.87            | 0.81                  | 0.56                                | 1.44 | 2.08 |
| Unsubsidized                                  | STAFUNSB>0               | 21.23            | 0.73                  | 0.52                                | 1.38 | 1.91 |
| Married                                       | SMARITAL=2               | 44.76            | 0.97                  | 0.64                                | 1.52 | 2.32 |
| U.S. citizen                                  | CITIZEN2=1               | 85.87            | 0.59                  | 0.45                                | 1.32 | 1.74 |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 27.11            | 1.09                  | 0.57                                | 1.90 | 3.63 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 75.45            | 1.01                  | 0.55                                | 1.82 | 3.32 |
| Received any employer aid                     | ANYEMP=1                 | 18.53            | 0.83                  | 0.50                                | 1.67 | 2.80 |
| Worked while in school                        | JOBENR IN (2,3)          | 71.45            | 0.99                  | 0.58                                | 1.71 | 2.92 |
| Worked full-time while in school              | JOBENR = 3               | 48.27            | 0.84                  | 0.64                                | 1.31 | 1.72 |
| Worked part-time while in school              | JOBENR = 2               | 23.18            | 0.87                  | 0.54                                | 1.61 | 2.61 |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 47.47            | 1.18                  | 0.64                                | 1.84 | 3.37 |
| Registered to vote                            | VOTEREG=1                | 83.47            | 0.73                  | 0.48                                | 1.53 | 2.33 |
| Has a disability                              | DISABLE=1                | 7.05             | 0.49                  | 0.33                                | 1.49 | 2.22 |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 3.98             | 0.35                  | 0.25                                | 1.38 | 1.92 |
| Has dependents other than a spouse            | DEPANY=1                 | 34.11            | 0.99                  | 0.61                                | 1.63 | 2.65 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 2.86             | 0.35                  | 0.21                                | 1.61 | 2.60 |
| Ever attended a community college             | EVER2PUB=1               | 45.29            | 1.08                  | 0.64                                | 1.68 | 2.84 |
| Summary statistics                            |                          |                  |                       |                                     |      |      |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.08 | 1.17 |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.38 | 1.90 |
| Median                                        | †                        | †                | †                     | †                                   | 1.53 | 2.33 |
| 75th percentile                               | †                        | †                | †                     | †                                   | 1.68 | 2.82 |
| Maximum                                       | †                        | †                | †                     | †                                   | 1.94 | 3.75 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).



**Table N-25. Design effects for graduate students at private not-for-profit 4-year institutions: 2004**

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF  |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|-------|
| Received any aid                              | TOTAID>0                 | 72.05            | 2.05                  | 0.77                                | 2.68 | 7.16  |
| Received any federal aid                      | ANYFED=1                 | 39.30            | 2.28                  | 0.84                                | 2.73 | 7.47  |
| Received any state grant aid                  | ANYSTGRT=1               | 1.66             | 0.71                  | 0.22                                | 3.26 | 10.66 |
| Received any institution grant aid            | ANYINSTG=1               | 15.59            | 1.38                  | 0.62                                | 2.22 | 4.94  |
| Received any work-study aid                   | ANYWKST=1                | 1.80             | 0.41                  | 0.23                                | 1.82 | 3.32  |
| Received any assistantship                    | ANYGAST=1                | 8.77             | 0.84                  | 0.48                                | 1.74 | 3.03  |
| Received a Stafford loan                      | ANYSTAF=1                | 38.47            | 2.25                  | 0.83                                | 2.70 | 7.28  |
| Subsidized                                    | STAFSUB>0                | 35.73            | 2.40                  | 0.82                                | 2.93 | 8.57  |
| Unsubsidized                                  | STAFUNSB>0               | 33.31            | 1.98                  | 0.81                                | 2.46 | 6.06  |
| Married                                       | SMARITAL=2               | 46.80            | 2.34                  | 0.85                                | 2.74 | 7.52  |
| U.S. citizen                                  | CITIZEN2=1               | 90.47            | 0.96                  | 0.50                                | 1.91 | 3.66  |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 30.10            | 2.45                  | 0.78                                | 3.12 | 9.74  |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 75.49            | 2.13                  | 0.74                                | 2.89 | 8.36  |
| Received any employer aid                     | ANYEMP=1                 | 23.21            | 2.00                  | 0.72                                | 2.77 | 7.68  |
| Worked while in school                        | JOBENR IN (2,3)          | 79.18            | 1.58                  | 0.69                                | 2.27 | 5.15  |
| Worked full-time while in school              | JOBENR = 3               | 57.40            | 2.78                  | 0.85                                | 3.28 | 10.77 |
| Worked part-time while in school              | JOBENR = 2               | 21.78            | 1.85                  | 0.71                                | 2.62 | 6.85  |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 53.67            | 2.10                  | 0.85                                | 2.47 | 6.08  |
| Registered to vote                            | VOTEREG=1                | 87.28            | 1.25                  | 0.57                                | 2.19 | 4.78  |
| Has a disability                              | DISABLE=1                | 6.62             | 1.15                  | 0.43                                | 2.71 | 7.32  |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 3.55             | 0.75                  | 0.32                                | 2.35 | 5.54  |
| Has dependents other than a spouse            | DEPANY=1                 | 36.97            | 2.76                  | 0.83                                | 3.34 | 11.14 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 4.34             | 0.97                  | 0.35                                | 2.78 | 7.74  |
| Ever attended a community college             | EVER2PUB=1               | 46.71            | 1.69                  | 0.85                                | 1.98 | 3.93  |
| Summary statistics                            |                          |                  |                       |                                     |      |       |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.74 | 3.03  |
| 25th percentile                               | †                        | †                | †                     | †                                   | 2.25 | 5.05  |
| Median                                        | †                        | †                | †                     | †                                   | 2.69 | 7.22  |
| 75th percentile                               | †                        | †                | †                     | †                                   | 2.84 | 8.05  |
| Maximum                                       | †                        | †                | †                     | †                                   | 3.34 | 11.14 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table N-26. Design effects for all first-professional students: 2004**

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|------|
| Received any aid                              | TOTAID>0                 | 88.76            | 1.17                  | 0.88                                | 1.33 | 1.76 |
| Received any federal aid                      | ANYFED=1                 | 76.82            | 2.11                  | 1.18                                | 1.79 | 3.21 |
| Received any state grant aid                  | ANYSTGRT=1               | 6.17             | 1.83                  | 0.67                                | 2.73 | 7.44 |
| Received any institution grant aid            | ANYINSTG=1               | 23.06            | 2.04                  | 1.18                                | 1.73 | 3.00 |
| Received any work-study aid                   | ANYWKST=1                | 5.82             | 1.66                  | 0.65                                | 2.54 | 6.43 |
| Received any assistantship                    | ANYGAST=1                | 6.93             | 0.74                  | 0.71                                | 1.04 | 1.09 |
| Received a Stafford loan                      | ANYSTAF=1                | 74.04            | 2.00                  | 1.22                                | 1.63 | 2.66 |
| Subsidized                                    | STAFSUB>0                | 72.05            | 2.00                  | 1.25                                | 1.60 | 2.55 |
| Unsubsidized                                  | STAFUNSB>0               | 67.45            | 2.02                  | 1.31                                | 1.54 | 2.37 |
| Married                                       | SMARITAL=2               | 23.28            | 2.31                  | 1.18                                | 1.96 | 3.84 |
| U.S. citizen                                  | CITIZEN2=1               | 92.97            | 1.35                  | 0.71                                | 1.89 | 3.56 |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 79.78            | 3.12                  | 1.12                                | 2.78 | 7.73 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 19.81            | 3.13                  | 1.11                                | 2.82 | 7.93 |
| Received any employer aid                     | ANYEMP=1                 | 5.79             | 0.85                  | 0.65                                | 1.31 | 1.71 |
| Worked while in school                        | JOBENR IN (2,3)          | 40.48            | 1.87                  | 1.37                                | 1.37 | 1.87 |
| Worked full-time while in school              | JOBENR = 3               | 10.26            | 1.29                  | 0.85                                | 1.52 | 2.30 |
| Worked part-time while in school              | JOBENR = 2               | 30.22            | 1.63                  | 1.28                                | 1.27 | 1.62 |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 27.59            | 1.44                  | 1.25                                | 1.15 | 1.33 |
| Registered to vote                            | VOTEREG=1                | 87.90            | 1.43                  | 0.91                                | 1.57 | 2.47 |
| Has a disability                              | DISABLE=1                | 5.73             | 0.74                  | 0.65                                | 1.13 | 1.28 |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 2.46             | 1.08                  | 0.43                                | 2.50 | 6.23 |
| Has dependents other than a spouse            | DEPANY=1                 | 13.19            | 1.99                  | 0.94                                | 2.11 | 4.43 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 2.63             | 1.02                  | 0.45                                | 2.29 | 5.26 |
| Ever attended a community college             | EVER2PUB=1               | 37.55            | 1.94                  | 1.35                                | 1.44 | 2.06 |
| Summary statistics                            |                          |                  |                       |                                     |      |      |
| Minimum                                       | †                        | †                | †                     | †                                   | 1.04 | 1.09 |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.35 | 1.82 |
| Median                                        | †                        | †                | †                     | †                                   | 1.61 | 2.61 |
| 75th percentile                               | †                        | †                | †                     | †                                   | 2.20 | 4.85 |
| Maximum                                       | †                        | †                | †                     | †                                   | 2.82 | 7.93 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table N-27. Design effects for first-professional students at public 4-year institutions: 2004**

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|------|
| Received any aid                              | TOTAID>0                 | 90.99            | 1.00                  | 1.17                                | 0.85 | 0.73 |
| Received any federal aid                      | ANYFED=1                 | 80.38            | 1.48                  | 1.62                                | 0.92 | 0.84 |
| Received any state grant aid                  | ANYSTGRT=1               | 4.49             | 0.86                  | 0.85                                | 1.02 | 1.04 |
| Received any institution grant aid            | ANYINSTG=1               | 25.90            | 1.61                  | 1.79                                | 0.90 | 0.81 |
| Received any work-study aid                   | ANYWKST=1                | 2.54             | 0.53                  | 0.64                                | 0.82 | 0.67 |
| Received any assistantship                    | ANYGAST=1                | 9.40             | 1.49                  | 1.19                                | 1.25 | 1.56 |
| Received a Stafford loan                      | ANYSTAF=1                | 77.03            | 1.60                  | 1.72                                | 0.93 | 0.87 |
| Subsidized                                    | STAFSUB>0                | 75.06            | 1.66                  | 1.77                                | 0.94 | 0.89 |
| Unsubsidized                                  | STAFUNSB>0               | 67.95            | 1.89                  | 1.91                                | 0.99 | 0.99 |
| Married                                       | SMARITAL=2               | 21.88            | 1.99                  | 1.69                                | 1.18 | 1.39 |
| U.S. citizen                                  | CITIZEN2=1               | 95.81            | 0.95                  | 0.82                                | 1.16 | 1.34 |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 86.62            | 1.42                  | 1.39                                | 1.02 | 1.05 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 9.58             | 1.13                  | 1.20                                | 0.94 | 0.88 |
| Received any employer aid                     | ANYEMP=1                 | 4.40             | 0.75                  | 0.84                                | 0.90 | 0.80 |
| Worked while in school                        | JOBENR IN (2,3)          | 35.22            | 2.23                  | 1.95                                | 1.14 | 1.30 |
| Worked full-time while in school              | JOBENR = 3               | 6.44             | 1.21                  | 1.00                                | 1.21 | 1.47 |
| Worked part-time while in school              | JOBENR = 2               | 28.78            | 2.26                  | 1.85                                | 1.22 | 1.50 |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 25.13            | 1.91                  | 1.77                                | 1.08 | 1.17 |
| Registered to vote                            | VOTEREG=1                | 92.69            | 1.00                  | 1.06                                | 0.94 | 0.89 |
| Has a disability                              | DISABLE=1                | 5.30             | 1.10                  | 0.91                                | 1.20 | 1.44 |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 2.00             | 0.41                  | 0.57                                | 0.72 | 0.52 |
| Has dependents other than a spouse            | DEPANY=1                 | 9.03             | 1.15                  | 1.17                                | 0.98 | 0.96 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 1.60             | 0.46                  | 0.51                                | 0.91 | 0.82 |
| Ever attended a community college             | EVER2PUB=1               | 36.79            | 1.63                  | 1.97                                | 0.83 | 0.69 |
| Summary statistics                            |                          |                  |                       |                                     |      |      |
| Minimum                                       | †                        | †                | †                     | †                                   | 0.72 | 0.52 |
| 25th percentile                               | †                        | †                | †                     | †                                   | 0.90 | 0.82 |
| Median                                        | †                        | †                | †                     | †                                   | 0.96 | 0.93 |
| 75th percentile                               | †                        | †                | †                     | †                                   | 1.15 | 1.32 |
| Maximum                                       | †                        | †                | †                     | †                                   | 1.25 | 1.56 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).

**Table N-28. Design effects for first-professional students at private not-for-profit 4-year institutions: 2004**

| Variable                                      | Defined as               | Percent estimate | Design standard error | Simple random sample standard error | DEFT | DEFF |
|-----------------------------------------------|--------------------------|------------------|-----------------------|-------------------------------------|------|------|
| Received any aid                              | TOTAID>0                 | 87.24            | 1.81                  | 1.28                                | 1.42 | 2.01 |
| Received any federal aid                      | ANYFED=1                 | 74.39            | 3.40                  | 1.67                                | 2.04 | 4.14 |
| Received any state grant aid                  | ANYSTGRT=1               | 7.31             | 2.89                  | 1.00                                | 2.90 | 8.42 |
| Received any institution grant aid            | ANYINSTG=1               | 21.11            | 3.10                  | 1.56                                | 1.99 | 3.94 |
| Received any work-study aid                   | ANYWKST=1                | 8.06             | 2.74                  | 1.04                                | 2.63 | 6.90 |
| Received any assistantship                    | ANYGAST=1                | 5.23             | 0.82                  | 0.85                                | 0.96 | 0.92 |
| Received a Stafford loan                      | ANYSTAF=1                | 71.99            | 3.21                  | 1.72                                | 1.87 | 3.48 |
| Subsidized                                    | STAFSUB>0                | 69.99            | 3.11                  | 1.75                                | 1.77 | 3.14 |
| Unsubsidized                                  | STAFUNSB>0               | 67.10            | 3.38                  | 1.80                                | 1.88 | 3.53 |
| Married                                       | SMARITAL=2               | 24.24            | 3.38                  | 1.64                                | 2.06 | 4.25 |
| U.S. citizen                                  | CITIZEN2=1               | 91.03            | 2.16                  | 1.09                                | 1.98 | 3.92 |
| Enrolled exclusively full-time                | ATTNPTRN=1               | 75.09            | 4.94                  | 1.65                                | 2.99 | 8.93 |
| Enrolled part-time or part-year               | ATTNSTAT IN (3, 4, 5, 6) | 26.80            | 4.83                  | 1.69                                | 2.85 | 8.13 |
| Received any employer aid                     | ANYEMP=1                 | 6.74             | 1.38                  | 0.96                                | 1.44 | 2.08 |
| Worked while in school                        | JOBENR IN (2,3)          | 44.09            | 2.86                  | 1.90                                | 1.51 | 2.27 |
| Worked full-time while in school              | JOBENR = 3               | 12.87            | 2.20                  | 1.28                                | 1.72 | 2.95 |
| Worked part-time while in school              | JOBENR = 2               | 31.21            | 2.25                  | 1.77                                | 1.27 | 1.61 |
| Principal job in 2003–04 related to major     | JOBMAJOR=1               | 29.26            | 2.08                  | 1.74                                | 1.20 | 1.43 |
| Registered to vote                            | VOTEREG=1                | 84.62            | 2.20                  | 1.38                                | 1.60 | 2.55 |
| Has a disability                              | DISABLE=1                | 6.03             | 0.95                  | 0.91                                | 1.04 | 1.08 |
| Attended more than one institution in 2003–04 | STUDMULT>1               | 2.79             | 1.80                  | 0.63                                | 2.86 | 8.18 |
| Has dependents other than a spouse            | DEPANY=1                 | 16.03            | 3.04                  | 1.40                                | 2.17 | 4.70 |
| U.S. Armed Forces veteran                     | VETERAN=1                | 3.33             | 1.80                  | 0.69                                | 2.63 | 6.89 |
| Ever attended a community college             | EVER2PUB=1               | 38.06            | 2.84                  | 1.86                                | 1.53 | 2.34 |
| Summary statistics                            |                          |                  |                       |                                     |      |      |
| Minimum                                       | †                        | †                | †                     | †                                   | 0.96 | 0.92 |
| 25th percentile                               | †                        | †                | †                     | †                                   | 1.48 | 2.18 |
| Median                                        | †                        | †                | †                     | †                                   | 1.87 | 3.50 |
| 75th percentile                               | †                        | †                | †                     | †                                   | 2.40 | 5.80 |
| Maximum                                       | †                        | †                | †                     | †                                   | 2.99 | 8.93 |

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04).