



U.S. Department of Education  
NCES 2008-308

# **Education Longitudinal Study of 2002 (ELS:2002): A First Look at the Initial Postsecondary Experiences of the High School Sophomore Class of 2002**





U.S. Department of Education  
NCES 2008-308

# Education Longitudinal Study of 2002 (ELS:2002): A First Look at the Initial Postsecondary Experiences of the High School Sophomore Class of 2002

October 2007

Robert Bozick  
Erich Lauff  
RTI International

John Wirt  
*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, the Congress, the states, and other education policymakers, practitioners, data users, and the general public. Unless specifically noted, all information contained herein is in the public domain.

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

October 2007

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

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

**Suggested Citation**

Bozick, R., and Lauff, E. (2007). *Education Longitudinal Study of 2002 (ELS:2002): A First Look at the Initial Postsecondary Experiences of the Sophomore Class of 2002* (NCES 2008-308). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

**For ordering information on this report, write to**

U.S. Department of Education  
ED Pubs  
P.O. Box 1398  
Jessup, MD 20794-1398

or call toll free 1-877-4ED-Pubs or order online at <http://www.edpubs.org>.

**Content Contact**

John Wirt  
(202) 502-7478  
[John.Wirt@ed.gov](mailto:John.Wirt@ed.gov)

# Foreword

---

The Education Longitudinal Study of 2002 (ELS:2002) provides a wealth of information from multiple sources about the factors and circumstances related to the performance and social development of American high school sophomores as they enter and leave various levels of the education system. This First Look report draws upon ELS:2002 second follow-up data to describe the initial postsecondary experiences of the high school sophomore class of 2002. Particular attention is paid to rates of postsecondary participation, as well as to student background characteristics and high school factors associated with postsecondary destinations and decisions. Appendix A provides a description of the ELS:2002 design for data users, in addition to outlining a range of research questions that can be addressed using the survey data. We hope that the information provided in this brief overview will be useful to a wide range of interested readers, including policymakers and educators. We further hope that the results reported here will encourage other researchers to use the ELS:2002 data.

**Jeffrey A. Owings**  
*Associate Commissioner*  
*Elementary/Secondary & Libraries Studies*

# Acknowledgments

---

A number of people contributed to the production of this First Look report, and many more to the general development of the Education Longitudinal Study of 2002 (ELS:2002). In particular, we wish to thank Laura LoGerfo, Marilyn Seastrom, and John Wirt from the National Center for Education Statistics (NCES); Matt Adams, Alexandra Henning, Wendy Landers, Alie Slade, and Phuong Thien from Education Statistics Services Institute (ESSI); and Steven J. Ingels and Daniel J. Pratt from RTI International for the quality of their input into this document. We also would like to acknowledge the role of the ELS:2002 Technical Review Panel, whose members reviewed and helped refine plans for the ELS:2002 data collection and provided important suggestions to guide development of the instrumentation. The following individuals participated in the August 2005 Technical Review Panel for the ELS:2002 second follow-up: Frank Balz, Thomas B. Hoffer, Jacqueline King, Catherine Millett, Aaron Pallas, Kent Phillippe, and Leslie Scott.

Special thanks are in order to Jeffrey A. Owings, Associate Commissioner for Elementary/Secondary & Libraries Studies at NCES, in whose division ELS:2002 is housed, and to John G. Wirt, project officer for the second follow-up. Other NCES staff who have provided help, support, and assistance include James Griffith, Lisa Hudson, Andrew G. Malizio, Edith McArthur, Michael Ross, Neil Russell, and Marilyn M. Seastrom. Staff in other offices of the U.S. Department of Education who have contributed to the development of the second follow-up include Clifford Adelman (now of the Institute for Higher Education Policy) and Marsha Silverberg.

Daniel J. Pratt of RTI served as the ELS:2002 base-year through second follow-up project director. Steven J. Ingels of RTI was principal investigator. Key RTI second follow-up task leaders were Robert Bozick, Laura Burns, Doug Currivan, Brian Evans, Saju Joshua, Tiffany L. Mattox, James Rogers, and David Wilson.

Other RTI staff who played important roles in the ELS:2002 second follow-up were Chris Alexander, Brett Anderson, Donna Anderson, Kimberly Ault, Janet Austin, Edrina Bailey, Stephen Black, Ellen Causey, Jim Chromy, Elizabeth Copello, Lanting Dai, Ben Dalton, Marianne Daye, John Doherty, Kristin Dudley, David Higgins, Sherry Hubbard-Bednasz, Erich Lauff, Robert D. Lee, Ajay Maddi, Jeff Mahoney, Katherine Mason, Mani Medarametla, Chinh Nguyen, Joseph Nofziger, Bryce Norton, Jeremy Porter, Mike Planty (now of NCES), Neeraja Sathe, Ellen Scheib, Peter Siegel, Joe B. Simpson, Helen Smith, David Sroka, Milorad Stojanovic, Casey Tart, Chrystal Thompson, and Feng Yu. Many other individuals contributed to the success of the survey in their roles as interviewers, data collection supervisors, tracing specialists, or in data receipt and materials preparation.

We also wish to acknowledge Lutz Berkner, Ellen Bradburn, Vicky Dingler, and Laura Horn of our subcontractor MPR Associates, with whom we collaborated in production of the online Data Analysis System tool for analyzing the ELS:2002 data.

Lastly, we would like to acknowledge the help of several additional RTI staff members in the preparation of this report: Michelle Myers, Laura Small, and Wallace Campbell, who edited the document, and Sharon Powell, Daliah Rainone, and Judy Cannada, who provided assistance in document production.

# Contents

---

<b>Foreword</b> .....	<b>iii</b>
<b>Acknowledgments</b> .....	<b>iv</b>
<b>List of Tables</b> .....	<b>vi</b>
<b>List of Figures</b> .....	<b>viii</b>
<b>First Look</b> .....	<b>1</b>
Focus of This Report.....	1
Study Design of ELS:2002 .....	1
<b>Selected Findings</b> .....	<b>3</b>
<b>References</b> .....	<b>5</b>
<b>Figures and Tables</b> .....	<b>7</b>
<b>Appendix A: Technical Notes and Glossary</b> .....	<b>A-1</b>
<b>Appendix B: Standard Error Tables</b> .....	<b>B-1</b>

# List of Tables

Table		Page
1	Percentage of spring 2002 high school sophomores, by high school completion status and select student characteristics: 2006 .....	8
2	Percentage of spring 2002 high school sophomores, by the timing of first postsecondary enrollment and select student characteristics: 2006 .....	9
3	Percentage of spring 2002 high school sophomores, by the sector of the postsecondary institution first attended and select student characteristics: 2006 .....	10
4	Percentage of spring 2002 high school sophomores, by the selectivity of the first postsecondary institution attended and select student characteristics: 2006 .....	11
5	Percentage of spring 2002 high school sophomores who attended a postsecondary institution, by field of study most likely to pursue upon entering and select student characteristics: 2006 .....	13
6	Percentage of spring 2002 high school sophomores, by highest level of education attempted and select student characteristics: 2006 .....	16
7	Percentage of spring 2002 high school sophomores, by current educational expectation and select student characteristics: 2006 .....	17
A-1	Summary of ELS:2002 base-year to second follow-up school and student response rates: 2002–2006 .....	A-6
B-1	Standard errors for table 1 estimates (percentage of spring 2002 high school sophomores, by high school completion status and select student characteristics: 2006) .....	B-2
B-2	Standard errors for table 2 estimates (percentage of spring 2002 high school sophomores, by the timing of first postsecondary enrollment and select student characteristics: 2006) .....	B-3
B-3	Standard errors for table 3 estimates (percentage of spring 2002 high school sophomores, by the sector of the postsecondary institution first attended and select student characteristics: 2006) .....	B-4
B-4	Standard errors for table 4 estimates (percentage of spring 2002 high school sophomores, by the selectivity of the first postsecondary institution attended and select student characteristics: 2006) .....	B-5
B-5	Standard errors for figure 1 estimates (reasons for selecting first postsecondary institution among spring 2002 high school sophomores who first attended a 4-year postsecondary institution between 2002 and 2006) .....	B-6
B-6	Standard errors for figure 2 estimates (reasons for selecting first postsecondary institution among spring 2002 high school sophomores who first attended a 2-year postsecondary institution between 2002 and 2006) .....	B-6



B-7 Standard errors for table 5 estimates (percentage of spring 2002 high school sophomores who attended a postsecondary institution, by field of study most likely to pursue upon entering and select student characteristics: 2006).....B-7

B-8 Standard errors for figure 3 estimates (reasons for discontinuing postsecondary education among spring 2002 high school sophomores who were no longer enrolled in a postsecondary institution: 2006).....B-9

B-9 Standard errors for table 6 estimates (percentage of spring 2002 high school sophomores, by highest level of education attempted and select student characteristics: 2006) .....B-10

B-10 Standard errors for table 7 estimates (percentage of spring 2002 high school sophomores, by current educational expectation and select student characteristics: 2006) .....B-11

# List of Figures

---

<b>Figure</b>		<b>Page</b>
1	Reasons for selecting first postsecondary institution among spring 2002 high school sophomores who first attended a 4-year postsecondary institution between 2002 and 2006 .....	12
2	Reasons for selecting first postsecondary institution among spring 2002 high school sophomores who first attended a 2-year postsecondary institution between 2002 and 2006 .....	12
3	Reasons for discontinuing postsecondary education among spring 2002 high school sophomores who were no longer enrolled in a postsecondary institution: 2006 .....	15

# First Look

---

This brief report uses data from the Education Longitudinal Study of 2002 (ELS:2002) to describe the initial postsecondary enrollment experiences of the American high school sophomore class of 2002. ELS:2002, the most recent secondary school longitudinal survey conducted by the National Center for Educational Statistics (NCES), tracks the educational and developmental experiences of a nationally representative sample of students in public and private high schools in the United States. Since the base-year interview in 2002, sample members have participated in two follow-up surveys: the first follow-up took place in the spring of 2004 when most student participants were high school seniors, and the second follow-up took place in 2006 when most were 2 years out of high school. Second follow-up data include information related to postsecondary education, labor force participation, family life, and civic engagement. Using these second follow-up data, this report focuses specifically on the transition to higher education for the high school sophomore class of 2002.

## Focus of This Report

This current snapshot of postsecondary participation is intended to inform policymakers, higher education administrators, and other researchers about the experiences of contemporary American youth transitioning out of high school. With this goal in mind, this report updates past research by documenting the initial postsecondary participation of a recent cohort of American high school students. At what rates are today's high school students proceeding to higher education? In what types of postsecondary institutions are they enrolling? How do these postsecondary attendance rates and institution types vary across student background characteristics and high school experiences? Additionally, this report describes the enrollment decisions and postsecondary pathways taken by recent high school graduates. What reasons do students give for selecting the postsecondary institutions they attend? When do students begin college after leaving high school? What fields of study do they intend to pursue? If they withdraw from college, what reasons do they give for doing so?

## Study Design of ELS:2002

Currently, there are four major data components of ELS:2002: the base-year interview, the first follow-up interview, the high school transcript data collection, and the second follow-up interview. The base-year interview was carried out in a nationally representative probability sample of about 750 public, Catholic, and other private schools in the spring term of the 2001–02 school year.<sup>1</sup> Of about 17,600 eligible selected sophomores, about 15,400 completed a base-year questionnaire, for a weighted response rate of 87 percent. The first follow-up interview took place in the spring of 2004, when most sample members were seniors in high school. It included 16,500 students, of whom 15,000 participated, for a weighted response rate of 89 percent. Starting in the winter of 2004–05, almost 1 year after most sample members had graduated from high school, transcripts were requested for all sample members who participated in at least one of the first two student interviews. At least one transcript was collected for 14,900 of the 16,400 eligible students, for a weighted response rate of 91 percent. The second follow-up interview took place in 2006, approximately 2 years after most sample members had graduated from high

---

<sup>1</sup> The sample sizes reported throughout are rounded.

school. Of the 15,900 eligible sample members, 14,200 participated in the second follow-up, for a weighted response rate of 88 percent. Further details on the design and structure of each data component and associated data files are provided in appendix A of this report (see also Bozick et al. 2006; Ingels et al. 2004, 2005, 2007).

The analysis here focuses on members of the spring 2002 high school sophomore cohort who participated in the second follow-up interview. Two variables are used to select the desired analysis group: “Sophomore cohort member in 2001–02 school year” (G10COHRT), and “F2 questionnaire status” (F2QSTAT). Of the 14,200 second follow-up respondents (F2QSTAT=1 or 2), 14,000 are members of the spring 2002 sophomore cohort (G10COHRT=1). All estimates are weighted using the panel weight F2BYWT and therefore generalize to the population of in-school sophomores in the spring of 2002. Postsecondary experiences are examined by select student background characteristics and high school factors, including the following:

- Sex;
- Race/ethnicity (American Indian or Alaska Native, Asian or Pacific Islander [includes Native Hawaiian], Black or African American, Hispanic or Latino, White, and more than one race)—all racial/ethnic categories exclude Hispanic or Latino origin unless otherwise specified;
- Family income (\$0–\$20,000; \$20,001–\$50,000; \$50,001–\$100,000; and \$100,001 or more);
- Parental education (high school or less, some college, bachelor’s degree, graduate/professional degree);
- Native language<sup>2</sup> (English, non-English);
- High school sector (public, Catholic, other private);
- Educational expectations in 10th grade (high school or less, some college, bachelor’s degree, graduate/professional degree, and don’t know); and
- Highest math course taken in high school (no math; basic math or pre-algebra; algebra I, geometry, or algebra II; trigonometry, statistics, or pre-calculus; calculus; and no transcript collected).

Though this report is based on base-year characteristics of students, first follow-up versions of student background variables are used when they include updates for missing values in their base-year counterparts. More detail on the construction of these variables is provided in appendix A. Comparisons drawn in the text of this report have been tested for statistical significance at the .05 level using *t* statistics to ensure that the differences are larger than those that might be expected due to sampling variation. Additionally, when a standard error is large relative to its estimate, it is noted in the table with an exclamation point (!); readers should interpret these estimates with caution. More detailed information on these procedures is presented in appendix A.

---

<sup>2</sup> The first language respondents learned to speak.

## Selected Findings

---

- By 2006, approximately 2 years after their expected high school graduation date, 88 percent of spring 2002 sophomores had graduated with a diploma, and 4 percent had earned a General Educational Development certificate (GED) or other equivalency (table 1).<sup>3</sup>
- Seventy percent of spring 2002 sophomores had enrolled in a postsecondary institution by 2006; 60 percent had “immediate” enrollment,<sup>4</sup> and 10 percent had delayed their enrollment (table 2).
- By 2006, 27 percent of spring 2002 sophomores had enrolled in a 4-year public college or university, 13 percent had enrolled in a 4-year private college or university, and 27 percent had enrolled in a 2-year institution (table 3).
- Thirteen percent of the spring 2002 high school sophomore class first attended a highly selective 4-year postsecondary institution, 19 percent first attended a moderately selective 4-year institution, 5 percent first attended an inclusive 4-year institution, and 4 percent attended a 4-year institution of unknown selectivity (table 4).<sup>5</sup>
- The location of the school was the most common reason that spring 2002 sophomores who attended a postsecondary institution gave for choosing their first school. Seventy percent of those who started off in a 4-year college or university (figure 1) and 74 percent of those who started off in a 2-year college or university (figure 2) reported that location was a reason for their choice.
- Among spring 2002 high school sophomores who had attended a postsecondary institution, 15 percent entered college intending to study business/marketing, 17 percent entered college intending to study health, and 15 percent entered college intending to study engineering/computer science/natural sciences/mathematics (table 5).
- The most common reason that spring 2002 sophomores who had enrolled in and left a postsecondary institution by 2006 gave for their exit was financial considerations, reported by 37 percent (figure 3).
- By 2006, 43 percent of spring 2002 sophomores had enrolled in a 4-year college or university as their highest level of education (table 6).

---

<sup>3</sup> In 2006, respondents were interviewed between January 26 and September 10, with March being the median month for interviews. Their reported educational status is contingent upon the month in which they were interviewed. Sample members who were incarcerated or outside of the United States at the time of the second follow-up for any reason (including those on military assignments) were not eligible for the 2006 survey.

<sup>4</sup> Respondents are considered to have “immediate” enrollment if their postsecondary attendance began by October of the year they left high school (if the month they left high school was between January and July), or by the following February (if the month they left high school was between August and December).

<sup>5</sup> Selectivity is based on the Carnegie classification of postsecondary institutions using first-year students’ entrance exam scores. See appendix A for further details.

- Approximately 2 years out of high school, 34 percent of spring 2002 sophomores expected to receive graduate degrees: 11 expected to receive a Ph.D. and 23 percent expected to receive a master's degree (table 7).

## References

---

- Bozick, R., Lytle, T., Siegel, P.H., Ingels, S.J., Rogers, J.E., Lauff, E., and Planty, M. (2006). *Education Longitudinal Study of 2002: First Follow-up Transcript Component Data File Documentation* (NCES 2006-338). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.
- Burkam, D.T., and Lee, V.E. (2003). *Mathematics, Foreign Language, and Science Coursetaking and the NELS:88 Transcript Data* (NCES 2003-01). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC: National Center for Education Statistics Working Paper.
- Ingels, S.J., Pratt, D.J., Rogers, J.E., Siegel, P.H., and Stutts, E.S. (2004). *Education Longitudinal Study of 2002: Base Year Data File User's Manual* (NCES 2004-405). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.
- Ingels, S.J., Pratt, D.J., Rogers, J.E., Siegel, P.H., and Stutts, E.S. (2005). *Education Longitudinal Study of 2002: Base-Year to First Follow-up Data File Documentation* (NCES 2006-344). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.
- Ingels, S.J., Pratt, D.J., Wilson, D., Burns, L.J., Currivan, D., Rogers, J.E., and Hubbard-Bednasz, S. (2007). *Education Longitudinal Study of 2002: Base-Year to Second Follow-up Data File Documentation* (NCES 2008-347). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.





# Figures and Tables

---

**Table 1. Percentage of spring 2002 high school sophomores, by high school completion status and select student characteristics: 2006**

Characteristic	Received high school diploma	Received GED or other equivalency	Enrolled in high school or working toward equivalency	No diploma; not enrolled or working toward equivalency
Total	87.8	3.9	3.2	4.6
Sex				
Female	90.0	3.2	2.6	3.8
Male	85.7	4.7	3.8	5.4
Race/ethnicity <sup>1</sup>				
American Indian or Alaska Native	74.7	9.3	4.4	11.7!
Asian or Pacific Islander	92.6	2.1	2.6	2.4
Black or African American	82.2	4.6	6.0	5.7
Hispanic or Latino	80.9	4.3	4.3	10.0
White	91.1	3.5	2.2	2.9
More than one race	85.1	5.7	4.0	5.0
Family income				
\$0–20,000	78.0	6.2	5.6	9.1
\$20,001–50,000	85.3	4.5	3.9	6.0
\$50,001–100,000	92.1	3.0	2.1	2.5
\$100,001 or more	95.5	2.0	1.3	0.9
Parental education				
High school or less	80.4	4.6	5.1	9.1
Some college	88.1	4.6	3.2	3.7
Bachelor's degree	92.7	2.8	2.0	2.3
Graduate/professional degree	93.4	2.8	1.6	1.9
Native language <sup>2</sup>				
English	88.6	4.0	3.1	3.8
Non-English	82.8	3.2	3.7	9.5
School sector				
Public	87.0	4.1	3.4	4.9
Catholic	98.1	1.3	0.2	0.3
Other private	96.2	2.1	0.8	0.7
Educational expectation in 10th grade				
High school or less	62.5	10.1	8.8	17.3
Some college	79.0	7.2	5.6	7.6
Bachelor's degree	91.8	3.0	2.4	2.6
Graduate/professional degree	94.8	1.7	1.5	1.7
Don't know	82.9	5.8	4.4	6.5
Highest math course taken in high school				
No math	51.6	12.1	14.5	19.6
Basic math or pre-algebra	61.3	11.1	9.0	17.4
Algebra I, geometry, or algebra II	86.3	4.5	3.7	5.0
Trigonometry, statistics, or pre-calculus	98.6	0.6	0.3	0.5
Calculus	99.6	0.4	#	#
No transcript collected	73.6	9.1	7.3	8.5

# Rounds to zero.

! Interpret data with caution (standard error is large compared to estimate).

<sup>1</sup> All race categories exclude Hispanic or Latino origin, unless specified. Asian or Pacific Islander includes Native Hawaiian.

<sup>2</sup> The first language students learned to speak.

NOTE: High school completion status is unknown for less than 0.5 percent of the spring 2002 sophomore cohort, and certificate of attendance recipients are not displayed. Therefore, row percentages may sum to less than 100. GED = General Educational Development certificate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."

**Table 2. Percentage of spring 2002 high school sophomores, by the timing of first postsecondary enrollment and select student characteristics: 2006**

Characteristic	Ever attended a postsecondary institution	Immediate enrollment in postsecondary education <sup>1</sup>	Delayed enrollment in postsecondary education <sup>2</sup>	Nonenrollee, or still enrolled in high school
Total	70.1	60.3	9.8	29.9
Sex				
Female	74.8	64.9	9.9	25.2
Male	65.4	55.8	9.6	34.6
Race/ethnicity <sup>3</sup>				
American Indian or Alaska Native	51.0	37.8	13.2	49.0
Asian or Pacific Islander	82.3	76.6	5.7	17.7
Black or African American	62.3	48.6	13.6	37.7
Hispanic or Latino	58.5	45.0	13.5	41.5
White	75.1	66.9	8.2	24.9
More than one race	63.6	55.7	7.9	36.4
Family income				
\$0–20,000	52.3	40.4	11.9	47.7
\$20,001–50,000	63.1	52.1	11.0	36.9
\$50,001–100,000	78.2	69.5	8.7	21.8
\$100,001 or more	90.7	84.0	6.7	9.3
Parental education				
High school or less	53.1	41.7	11.4	46.9
Some college	68.0	56.7	11.3	32.0
Bachelor's degree	82.4	74.6	7.8	17.6
Graduate/professional degree	87.2	80.6	6.6	12.8
Native language <sup>4</sup>				
English	71.1	61.7	9.4	28.9
Non-English	64.0	52.2	11.9	36.0
School sector				
Public	68.3	58.1	10.1	31.7
Catholic	94.2	89.5	4.7	5.8
Other private	90.3	83.8	6.5	9.7
Educational expectation in 10th grade				
High school or less	26.3	16.9	9.5	73.7
Some college	48.8	36.5	12.3	51.2
Bachelor's degree	75.2	64.4	10.8	24.8
Graduate/professional degree	85.8	78.4	7.3	14.2
Don't know	55.4	43.0	12.4	44.6
Highest math course taken in high school				
No math	20.2	13.1	7.1	79.8
Basic math/pre-algebra	30.4	20.6	9.9	69.6
Algebra I, geometry, or algebra II	61.5	48.0	13.5	38.5
Trigonometry, statistics, pre-calculus	89.3	82.1	7.3	10.7
Calculus	97.3	95.4	1.9	2.7
No transcript collected	57.2	47.5	9.7	42.8

<sup>1</sup> Respondents are considered to have immediate enrollment if their postsecondary attendance began by October of the year they left high school (if the month they left high school was between January and July), or by the following February (if the month they left high school was between August and December).

<sup>2</sup> Respondents are considered to have delayed enrollment if their postsecondary attendance began later than October of the year they left high school (if the month they left high school was between January and July), or later than the following February (if the month they left high school was between August and December).

<sup>3</sup> All race categories exclude Hispanic or Latino origin, unless specified. Asian or Pacific Islander includes Native Hawaiian.

<sup>4</sup> The first language students learned to speak.

NOTE: Percentages are rounded.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."

**Table 3. Percentage of spring 2002 high school sophomores, by the sector of the postsecondary institution first attended and select student characteristics: 2006**

Characteristic	4-year public institution	4-year private institution	2-year institution	Less than 2-year institution	Nonenrollee or still enrolled in high school
Total	26.8	13.4	27.2	2.3	29.9
Sex					
Female	28.7	14.6	28.3	2.8	25.2
Male	24.9	12.3	26.1	1.8	34.6
Race/ethnicity <sup>1</sup>					
American Indian or Alaska Native	15.4	8.0	24.3	2.7	49.0
Asian or Pacific Islander	39.0	15.1	26.3	1.1	17.7
Black or African American	22.6	10.1	25.4	3.8	37.7
Hispanic or Latino	15.2	7.0	31.8	3.8	41.5
White	30.6	15.8	26.9	1.7	24.9
More than one race	23.9	15.9	21.3	2.2	36.4
Family income					
\$0–20,000	14.0	6.8	27.1	3.9	47.7
\$20,001–50,000	21.0	9.6	29.4	2.6	36.9
\$50,001–100,000	32.7	16.0	27.6	1.7	21.8
\$100,001 or more	43.7	25.8	19.3	1.3	9.3
Parental education					
High school or less	15.6	5.7	28.0	3.4	46.9
Some college	23.3	10.7	30.9	2.5	32.0
Bachelor's degree	37.1	17.5	26.1	1.5	17.6
Graduate/professional degree	39.5	27.1	19.2	1.2	12.8
Native language <sup>2</sup>					
English	27.8	14.4	26.4	2.2	28.9
Non-English	20.7	7.5	31.7	3.3	36.0
School sector					
Public	26.0	11.8	27.7	2.4	31.7
Catholic	42.1	31.7	19.4	0.9	5.8
Other private	29.0	36.6	22.2	1.5	9.7
Educational expectation in 10th grade					
High school or less	3.4	2.4	16.6	3.5	73.7
Some college	7.3	4.7	32.7	3.7	51.2
Bachelor's degree	28.9	13.2	30.6	2.1	24.8
Graduate/professional degree	39.0	20.8	24.3	1.4	14.2
Don't know	15.5	6.4	29.2	3.9	44.6
Highest math course taken in high school					
No math	1.1	3.0	13.4	2.7	79.8
Basic math/pre-algebra	2.5	1.8	22.2	3.2	69.6
Algebra I, geometry, or algebra II	15.0	7.3	35.4	3.3	38.5
Trigonometry, statistics, pre-calculus	44.3	18.9	25.1	0.9	10.7
Calculus	52.7	34.4	9.6	0.2	2.7
No transcript collected	20.2	11.1	21.6	4.0	42.8

<sup>1</sup>All race categories exclude Hispanic or Latino origin, unless specified. Asian or Pacific Islander includes Native Hawaiian.

<sup>2</sup>The first language students learned to speak.

NOTE: Less than 0.5 percent of cases noted postsecondary attendance, but the sector of their first-attended postsecondary institution is missing. Therefore, row percentages may sum to less than 100.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."

**Table 4. Percentage of spring 2002 high school sophomores, by the selectivity of the first postsecondary institution attended and select student characteristics: 2006**

Characteristic	4-year institution				Less than 4-year institution <sup>1</sup>	Nonenrollee or still enrolled in high school
	Highly selective	Moderately selective	Inclusive	Unknown selectivity		
Total	13.0	18.7	5.0	3.6	29.6	29.9
Sex						
Female	13.8	20.8	5.3	3.4	31.1	25.2
Male	12.2	16.6	4.7	3.8	28.0	34.6
Race/ethnicity <sup>2</sup>						
American Indian or Alaska Native	5.4	11.9	3.1!	3.0!	27.7	49.0
Asian or Pacific Islander	28.5	18.0	4.4	3.0	27.4	17.7
Black or African American	4.0	13.3	12.2	3.2	29.3	37.7
Hispanic or Latino	4.6	8.9	3.8	5.1	35.7	41.5
White	16.7	22.9	3.5	3.3	28.6	24.9
More than one race	10.6	17.6	6.4	5.2	23.7	36.4
Family income						
\$0–20,000	3.2	10.0	4.7	2.9	31.1	47.7
\$20,001–50,000	7.1	14.8	5.2	3.5	32.1	36.9
\$50,001–100,000	15.7	23.5	5.2	4.4	29.3	21.8
\$100,001 or more	34.7	28.0	3.9	2.9	20.6	9.3
Parental education						
High school or less	3.7	10.6	4.2	2.8	31.5	46.9
Some college	7.3	17.5	5.7	3.6	33.6	32.0
Bachelor's degree	18.8	25.8	5.8	4.2	27.6	17.6
Graduate/professional degree	32.9	25.7	3.8	4.3	20.4	12.8
Native language <sup>3</sup>						
English	13.6	20.0	5.1	3.5	28.7	28.9
Non-English	9.4	10.6	4.1	4.4	35.0	36.0
School sector						
Public	11.3	18.0	5.0	3.5	30.2	31.7
Catholic	33.6	31.3	5.0	3.9	20.3	5.8
Other private	34.1	21.3	3.0	7.3	24.3	9.7
Educational expectation in 10th grade						
High school or less	0.4	2.4	1.9	1.2	20.3	73.7
Some college	1.2	5.2	2.4	3.2	36.4	51.2
Bachelor's degree	10.6	21.2	6.1	4.3	32.8	24.8
Graduate/professional degree	23.4	27.0	5.8	3.7	25.8	14.2
Don't know	7.3	7.9	3.1	3.6	33.2	44.6
Highest math course taken in high school						
No math	#	1.9	1.7	0.5	16.1	79.8
Basic math/pre-algebra	0.2	1.8	1.3	1.3	25.5	69.6
Algebra I, geometry, or algebra II	2.7	10.9	4.8	3.9	38.7	38.5
Trigonometry, statistics, pre-calculus	18.9	33.5	6.8	4.0	26.0	10.7
Calculus	52.2	28.6	3.3	3.0	9.8	2.7
No transcript collected	9.0	13.3	5.3	3.8	25.5	42.8

# Rounds to zero.

! Interpret data with caution (standard error is large compared to estimate).

<sup>1</sup> Includes public, private for-profit, and private not-for-profit, both 2-year and less than 2-year.

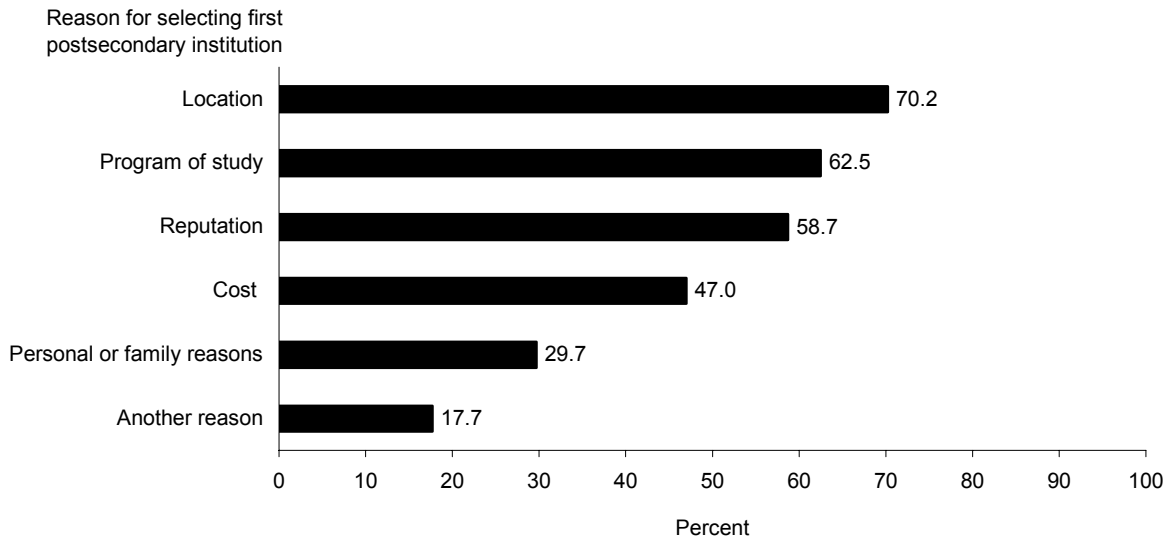
<sup>2</sup> All race categories exclude Hispanic or Latino origin, unless specified. Asian or Pacific Islander includes Native Hawaiian.

<sup>3</sup> The first language students learned to speak.

NOTE: Less than 0.5 percent of cases noted postsecondary attendance, but the level and selectivity of their first-attended postsecondary institution are missing. Therefore, row percentages may sum to less than 100. Selectivity is based on the Carnegie classification of postsecondary institutions using first-year students' entrance exam scores.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."

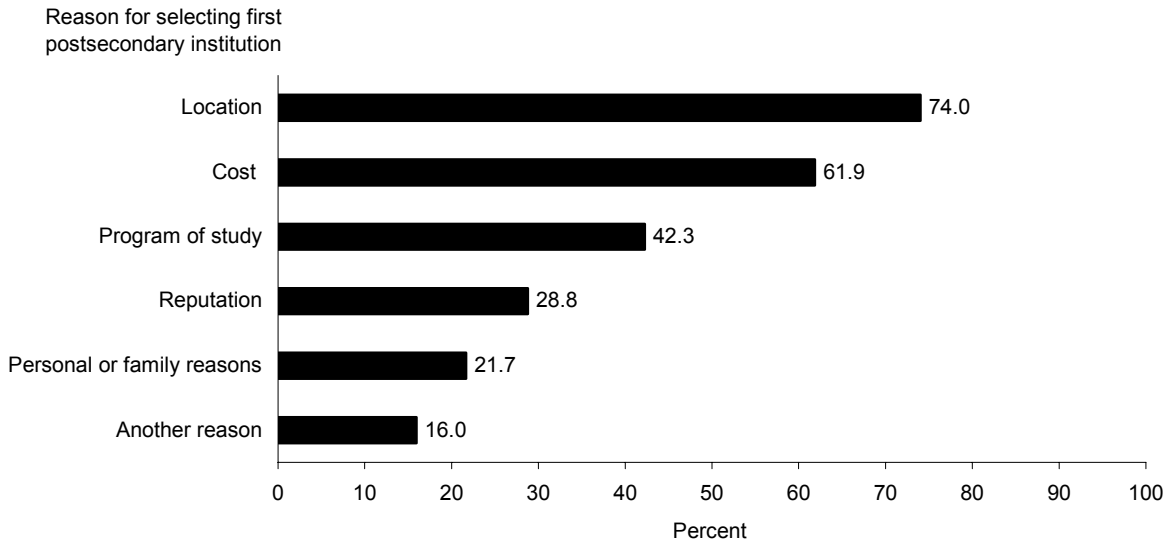
**Figure 1. Reasons for selecting first postsecondary institution among spring 2002 high school sophomores who first attended a 4-year postsecondary institution between 2002 and 2006**



NOTE: Reasons for selecting first postsecondary institution are not mutually exclusive; respondents may have reported multiple reasons.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."

**Figure 2. Reasons for selecting first postsecondary institution among spring 2002 high school sophomores who first attended a 2-year postsecondary institution between 2002 and 2006**



NOTE: Reasons for selecting first postsecondary institution are not mutually exclusive; respondents may have reported multiple reasons.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."

**Table 5. Percentage of spring 2002 high school sophomores who attended a postsecondary institution, by field of study most likely to pursue upon entering and select student characteristics: 2006**

Characteristic	Business/ marketing	Health	Education/ teaching	Engineering/ computer science/natural sciences/ mathematics	Social sciences/ social work	Architecture/ design/urban planning	Fine arts/ humanities	Communi- cations/ journalism	Other	Don't know/ undecided
Total	15.2	17.4	7.3	14.9	9.0	1.9	6.6	2.9	18.1	6.7
Sex										
Female	12.1	25.5	10.3	7.0	10.5	1.6	7.2	3.4	15.5	6.8
Male	18.6	8.1	3.8	24.0	7.3	2.2	6.0	2.2	21.2	6.6
Race/ethnicity <sup>1</sup>										
American Indian or Alaska Native	7.6	13.8!	7.1!	15.8!	13.8!	0.9!	2.0!	#	29.2	9.7
Asian or Pacific Islander	17.5	24.0	1.7	22.0	7.1	2.0	5.6	1.7	10.7	7.7
Black or African American	15.1	22.9	5.4	17.2	9.7	0.8	4.4	3.4	17.0	4.2
Hispanic or Latino	13.2	18.6	7.5	12.1	10.0	2.2	4.0	2.4	22.1	7.9
White	15.7	15.4	8.2	14.5	8.8	1.9	7.6	3.0	17.9	6.9
More than one race	12.6	19.9	5.2	13.8	9.6	3.4	9.2	2.9	18.5	5.1
Family income										
\$0–20,000	14.6	23.9	6.7	10.8	7.4	1.8	4.5	2.5	21.9	6.0
\$20,001–50,000	13.6	20.4	6.7	14.8	8.6	1.9	4.8	2.3	20.0	6.9
\$50,001–100,000	14.8	14.5	8.4	16.0	8.8	1.8	8.3	3.1	17.6	6.8
\$100,001 or more	19.8	13.6	6.4	15.4	11.6	2.0	8.3	3.8	12.9	6.4
Parental education										
High school or less	13.2	23.2	7.7	13.0	7.6	1.9	3.2	1.8	22.0	6.3
Some college	14.6	17.3	7.9	13.1	8.0	1.8	6.4	2.9	21.0	7.0
Bachelor's degree	16.7	15.6	7.4	15.8	9.5	1.7	6.9	3.7	16.1	6.7
Graduate/professional degree	16.2	13.9	5.9	18.6	11.6	2.1	10.3	2.8	12.1	6.6
Native language <sup>2</sup>										
English	15.2	16.9	7.5	14.8	9.1	1.8	6.9	3.1	18.1	6.5
Non-English	15.0	20.8	5.8	15.2	8.6	2.2	4.6	1.7	18.1	8.0
School sector										
Public	14.9	17.7	7.4	14.8	8.9	1.8	6.4	2.8	18.8	6.6
Catholic	18.9	15.0	6.4	16.0	11.0	1.8	7.5	4.6	11.5	7.4
Other private	16.5	15.6	7.3	15.7	10.1	2.6	9.9	2.5	13.2	6.5

See notes at end of table.

**Table 5. Percentage of spring 2002 high school sophomores who attended a postsecondary institution, by field of study most likely to pursue upon entering and select student characteristics: 2006—Continued**

Characteristic	Business/ marketing	Health	Education/ teaching	Engineering/ computer science/natural sciences/ mathematics	Social sciences/ social work	Architecture/ design/urban planning	Fine arts/ humanities	Communi- cations/ journalism	Other	Don't know/ undecided
Educational expectation in 10th grade										
High school or less	9.4	18.9	4.5	11.8	5.0	0.9	4.7	1.9	34.6	8.4
Some college	15.6	17.6	4.9	11.1	5.5	2.0	4.8	2.8	31.1	4.5
Bachelor's degree	16.0	14.1	8.2	13.6	8.3	1.8	8.1	3.3	18.8	7.9
Graduate/professional degree	14.9	20.8	7.4	16.5	11.0	2.1	6.7	2.5	13.0	5.1
Don't know	12.8	14.2	5.5	14.3	8.4	1.0	4.6	2.9	26.3	9.9
Highest math course taken in high school										
No math	3.7!	27.0	2.5!	20.5	7.6!	#	#	#	34.4	4.4
Basic math/pre-algebra	9.2	14.8	7.1	12.6	5.7	0.7	4.4	1.1	33.7	10.8
Algebra I, geometry, or algebra II	14.1	18.8	7.2	8.2	9.0	1.6	6.1	2.9	25.1	7.0
Trigonometry, statistics, pre-calculus	17.3	15.7	8.5	15.2	10.1	2.1	7.6	3.0	13.7	6.7
Calculus	14.0	18.0	5.1	31.1	7.5	2.1	6.7	2.8	7.1	5.4
No transcript collected	15.2	18.2	7.1	15.1	8.3	2.4	5.8	3.1	19.0	5.8

# Rounds to zero.

! Interpret data with caution (standard error is large compared to estimate).

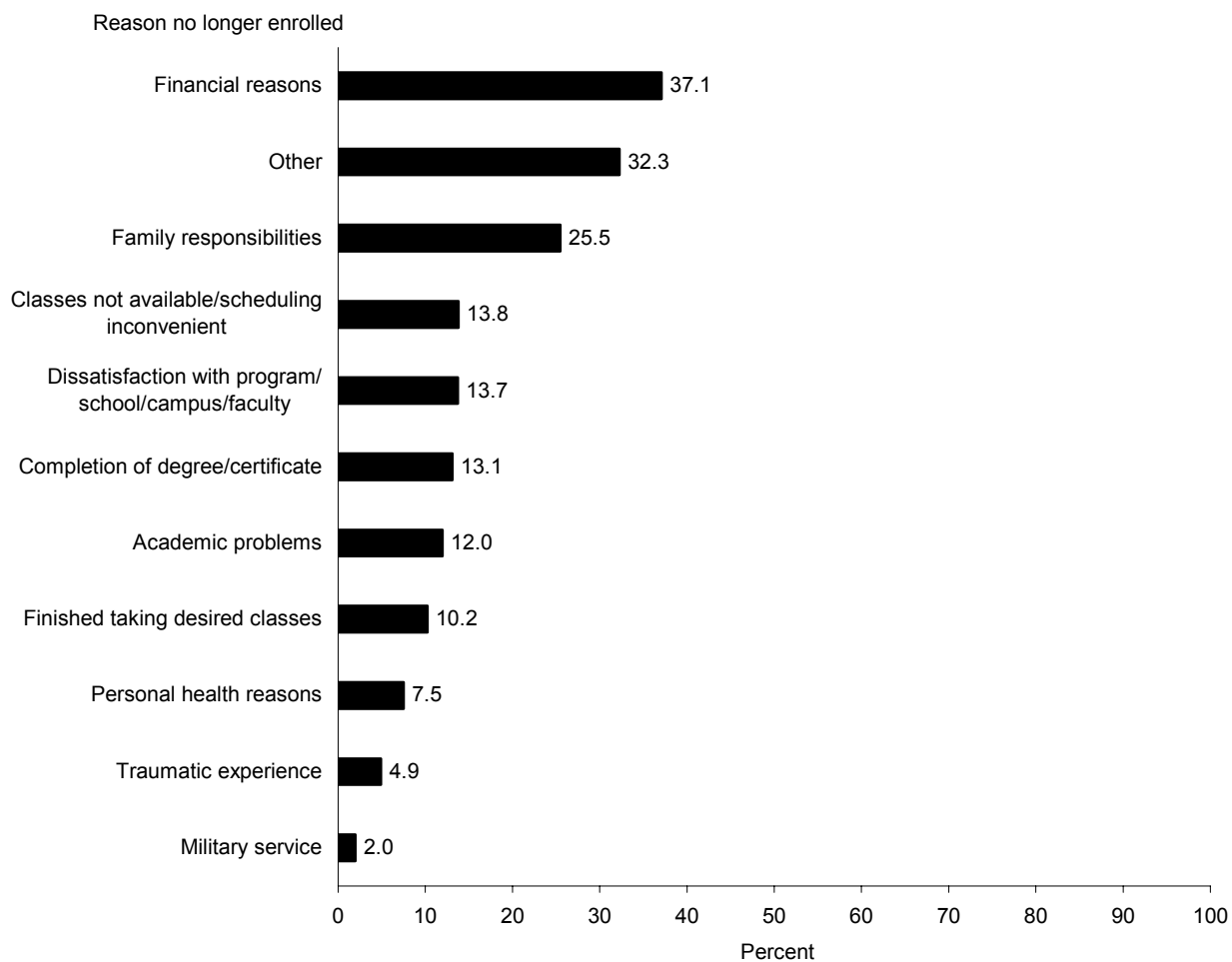
<sup>1</sup> All race categories exclude Hispanic or Latino origin, unless specified. Asian or Pacific Islander includes Native Hawaiian.

<sup>2</sup> The first language students learned to speak.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."



**Figure 3. Reasons for discontinuing postsecondary education among spring 2002 high school sophomores who were no longer enrolled in a postsecondary institution: 2006**



NOTE: Reasons no longer enrolled are not mutually exclusive; respondents may have reported multiple reasons. Reasons no longer enrolled were reported by respondents with postsecondary enrollment prior to, but not during, calendar year 2006.  
 SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."

**Table 6. Percentage of spring 2002 high school sophomores, by highest level of education attempted and select student characteristics: 2006**

Characteristic	Some high school	GED recipient <sup>1</sup>	High school diploma or certificate of attendance recipient	Less than 4-year college enrollment	4-year college or university enrollment
Total	7.2	2.5	20.3	27.0	43.1
Sex					
Female	5.8	2.1	17.3	28.4	46.4
Male	8.6	2.8	23.2	25.5	39.8
Race/ethnicity <sup>2</sup>					
American Indian or Alaska Native	15.2	7.2	26.7	23.2	27.8
Asian or Pacific Islander	4.6	1.2	11.9	24.8	57.5
Black or African American	10.5	3.2	24.1	27.0	35.2
Hispanic or Latino	13.4	2.4	25.9	34.0	24.3
White	4.7	2.2	18.0	25.8	49.3
More than one race	8.8	3.3	24.4	20.1	43.4
Family income					
\$0–20,000	13.3	4.3	30.3	29.0	23.1
\$20,001–50,000	9.2	3.0	24.7	29.8	33.2
\$50,001–100,000	4.2	1.7	16.0	26.4	51.7
\$100,001 or more	2.0	0.8	6.5	17.3	73.4
Parental education					
High school or less	13.2	3.4	30.5	29.8	23.1
Some college	6.4	3.0	22.8	31.5	36.4
Bachelor's degree	3.8	1.4	12.4	24.0	58.4
Graduate/professional degree	3.3	1.2	8.3	16.7	70.5
Native language <sup>3</sup>					
English	6.3	2.5	20.1	26.0	45.1
Non-English	12.5	2.0	21.6	33.0	30.9
School sector					
Public	7.7	2.6	21.5	27.6	40.6
Catholic	0.4	0.5	4.9	18.0	76.2
Other private	1.2	0.6	7.9	21.2	69.2
Educational expectation in 10th grade					
High school or less	24.2	7.5	42.1	19.8	6.4
Some college	12.1	4.9	34.3	35.6	13.1
Bachelor's degree	4.5	1.6	18.7	29.5	45.6
Graduate/professional degree	2.9	1.0	10.3	22.4	63.3
Don't know	10.1	4.0	30.6	31.7	23.7
Highest math course taken in high school					
No math	31.3	11.1	37.5	15.6	4.6
Basic math/pre-algebra	24.7	8.2	36.9	25.1	5.2
Algebra I, geometry, or algebra II	8.0	2.7	27.9	36.4	25.0
Trigonometry, statistics, pre-calculus	0.8	0.2	9.7	22.4	66.9
Calculus	#	#	2.7	7.2	90.1
No transcript collected	14.8	5.5	22.5	23.0	34.2

# Rounds to zero.

<sup>1</sup> GED = General Educational Development certificate.

<sup>2</sup> All race categories exclude Hispanic or Latino origin, unless specified. Asian or Pacific Islander includes Native Hawaiian.

<sup>3</sup> The first language students learned to speak.

NOTE: The row percentages may not sum to 100 because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."

**Table 7. Percentage of spring 2002 high school sophomores, by current educational expectation and select student characteristics: 2006**

Characteristic	Graduate from high school or less	Attend or complete a 1- or 2-year program	Attend a 4-year school, but not finish	Obtain a bachelor's degree	Obtain a master's degree or equivalent	Obtain a Ph.D., M.D., or equivalent	Don't Know
Total	7.8	16.2	2.9	31.5	23.2	10.7	7.6
Sex							
Female	6.2	14.8	3.0	30.3	26.0	12.3	7.3
Male	9.4	17.6	2.7	32.8	20.3	9.1	8.0
Race/ethnicity <sup>1</sup>							
American Indian or Alaska Native	18.6	18.4	6.0	31.0	9.6	6.2	10.2
Asian or Pacific Islander	2.7	10.8	2.6	30.4	28.6	18.2	6.6
Black or African American	9.6	18.4	4.5	30.5	20.6	10.1	6.3
Hispanic or Latino	9.8	19.4	3.1	31.5	18.3	8.1	9.8
White	7.0	15.3	2.4	31.9	25.1	11.1	7.3
More than one race	8.2	15.4	2.3	31.3	21.6	11.8	9.5
Family income							
\$0–20,000	13.2	21.5	3.7	30.5	16.4	6.4	8.4
\$20,001–50,000	10.2	19.8	3.6	31.6	17.6	8.4	9.0
\$50,001–100,000	4.9	13.5	2.2	32.8	27.5	12.0	7.0
\$100,001 or more	2.1	6.7	1.4	29.4	36.4	19.5	4.4
Parental education							
High school or less	13.4	22.9	3.6	29.8	14.1	5.9	10.3
Some college	8.1	19.4	2.9	32.9	20.9	7.4	8.3
Bachelor's degree	3.8	9.9	2.9	35.7	29.1	12.9	5.7
Graduate/professional degree	3.0	6.8	1.4	26.1	35.5	23.0	4.3
Native language <sup>2</sup>							
English	7.5	16.1	2.9	31.7	23.7	10.6	7.4
Non-English	9.5	17.0	2.7	30.4	20.0	11.5	8.8
School sector							
Public	8.3	17.0	3.0	31.5	22.3	10.1	7.8
Catholic	1.2	6.0	1.2	34.1	35.8	17.3	4.5
Other private	2.4	7.7	1.6	29.8	30.9	20.8	6.9
Educational expectation in 10th grade							
High school or less	28.1	27.9	1.7	20.7	6.8	0.9	13.8
Some college	14.2	33.6	5.2	24.7	9.5	1.7	11.1
Bachelor's degree	5.2	15.6	3.5	39.7	23.4	5.7	7.0
Graduate/professional degree	2.2	7.9	1.9	29.0	33.7	21.5	3.9
Don't know	12.4	21.4	2.7	28.2	13.6	6.3	15.4
Highest math course taken in high school							
No math	35.9	24.7	4.3	15.9	6.9	3.1	9.3
Basic math/pre-algebra	25.2	27.2	4.3	23.3	5.7	2.2	12.0
Algebra I, geometry, or algebra II	9.1	21.8	3.7	33.1	17.1	5.5	9.7
Trigonometry, statistics, pre-calculus	1.9	9.3	1.6	35.8	32.1	14.4	5.0
Calculus	0.1	2.3	0.6	24.0	39.4	30.0	3.5
No transcript collected	11.1	18.1	4.3	28.7	21.2	9.3	7.2

! Interpret data with caution (standard error is large compared to estimate).

<sup>1</sup>All race categories exclude Hispanic or Latino origin, unless specified. Asian or Pacific Islander includes Native Hawaiian.

<sup>2</sup>The first language students learned to speak.

NOTE: The row percentages may not sum to 100 because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."



# Appendix A

## Technical Notes and Glossary

---

## Technical Notes

### Overview

This report uses data from the Education Longitudinal Study of 2002 (ELS:2002), a longitudinal survey sponsored by the National Center for Education Statistics (NCES). ELS:2002 tracks the critical transitions experienced by students who were sophomores in the spring of 2002 (or seniors in 2004) as they proceed through high school and into postsecondary education or their careers. In the high school years, ELS:2002 is an integrated multilevel survey, involving multiple respondent populations, including students, their parents, their teachers, and their schools. Academic transcripts were collected from the schools in 2005, approximately 1 year after most of the students had graduated from high school. ELS:2002's multilevel focus supplies researchers with a comprehensive picture of the home, community, and school environments of youth during their transition from adolescence into adulthood. Additional information about the survey is available on the ELS:2002 web page (<http://nces.ed.gov/surveys/els2002/>). For more information on the study design, sampling, questionnaires, mathematics and reading assessments, weighting, imputation, and response rates see the *Education Longitudinal Study of 2002: Base-Year to Second Follow-up Data File Documentation* (Ingels et al. 2007).

### Study Design

*Base-year study design.* ELS:2002 was conducted with a national probability sample of about 750<sup>1</sup> participating (of 1,200 eligible contacted) public, Catholic, and other private schools in the spring term of the 2001–02 school year. Of 17,600 eligible selected sophomores, 15,400 completed a base-year questionnaire, as did 13,500 of their parents and 7,100 of their teachers.<sup>2</sup> Of the 750 participating schools, 740 principals and 720 librarians completed questionnaires.

Seven survey components comprised the base-year design: assessments of students in mathematics and reading; a survey of students; surveys of parents, teachers, school administrators, and librarians; and a facilities checklist (completed by survey administrators, based on their observations at the school). The student assessments measured achievement in mathematics and reading and were based on the test frameworks used in the National Education Longitudinal Study of 1988 (NELS:88). The assessments designed for ELS:2002 used items from NELS:88, the National Assessment of Educational Progress (NAEP), and the Program for International Student Assessment (PISA). The baseline scores from these assessments can serve as a covariate or a control variable for later analyses. Mathematics achievement was reassessed in the first follow-up, so that achievement gain over the last 2 years of high school can be measured and related to school processes and mathematics coursetaking. The student questionnaire gathered information about the student's background, school experiences and activities, plans and goals for the future, employment and out-of-school experiences, language background, and their orientation toward learning.

One parent of each participating sophomore was asked to respond to a parent survey. The parent questionnaire was designed to gauge parental aspirations for the child, home background,

---

<sup>1</sup> All sample numbers (for schools, students, teachers, principals, and librarians) have been rounded.

<sup>2</sup> Note that the participating student sample defines the eligible parent and teacher samples. The 7,100 teacher completions are those linked to student respondents. Of the 15,400 student participants, 14,100 had at least one associated teacher-provided student report for a coverage rate of 92 percent.

the amount and quality of academic support at home, the child's educational history prior to 10th grade, and parental interactions with and opinions about the student's school. For each student enrolled in English or mathematics, a teacher was also selected to be surveyed. Teachers typically (but not invariably) reported on multiple ELS:2002 sophomores. The teacher questionnaire collected the teacher's evaluation of the student and provided information about the teacher's professional and demographic background. The head librarian or media center director at each school was asked to complete a library media center questionnaire, which inquired into the school's library media center facility, its staffing, its technological resources, collection and expenditures, and scheduling and transactions. Finally, the facilities checklist was a brief observational form completed for each school by survey administrators. The form collected information about the condition of school buildings and facilities.

*First follow-up study design.* In the first follow-up, base-year students were surveyed whether they were still in their base-year school, had transferred to a new school, or were out of school. Seniors in 2004 who were not in the sophomore sampling frame 2 years before were given a chance of selection into the sample. This freshening process made the ELS:2002 spring 2004 senior cohort nationally representative of the 12th-grade class. In addition, a mathematics assessment was administered to first follow-up students in the original (base-year) sample of schools.

*Transcript study design.* The ELS:2002 transcripts were collected from sample members in late 2004 and early 2005, about 6 months to 1 year after most students had graduated from high school. Collecting the transcripts in the 2004–05 academic year allowed for more complete high school records. Transcripts were collected from the school that the students were originally sampled from in the base year (which was the only school for most sample members) and from their last school of attendance if it was learned during the first follow-up student data collection that they had transferred. Transcripts were collected for regular graduates, dropouts, early graduates, and students who were homeschooled after their sophomore year. School course offerings data were also collected (for base-year schools only).

*Second follow-up study design.* In the second follow-up, all base-year and/or first follow-up respondents were surveyed about their college experiences, labor force participation, family life, and civic engagement approximately 2 years after most cohort members had graduated from high school. Additional information about cohort members was also collected from extant data sources such as the American Council on Education (GED data), the U.S. Department of Education Central Processing System (financial aid data), and SAT/ACT (postsecondary entrance exam scores).

## Sampling

The ELS:2002 base-year sample design began with a nationally representative, two-stage stratified probability sample. The first stage of selection was schools; schools were selected with probability proportional to size (PPS). The public school sample was stratified by the nine U.S. Census divisions and by location (metropolitan status of urban, suburban, or rural). Private schools (Catholic and other private) were stratified by four levels of geography (Census region) and three of location (urbanicity); private schools were oversampled. The target sample size was 800 schools. Cooperation was sought from 1,200 eligible selections. The realized sample comprised 750 participating 10th-grade schools (68 percent participation rate). The second stage of selection was students. Of 17,600 eligible sampled students in the schools, 15,400 students

participated, with some groups (e.g., Asians, students in nonpublic schools) oversampled. The weighted student response rate was 87 percent.

The first follow-up returned to the same schools to seek their cooperation, and to base-year sophomore respondents and to a sample of base-year nonrespondents, regardless of whether they had remained in the base-year school or transferred to another school. In addition, at participating base-year schools in the first follow-up, a sample freshening procedure was implemented so that spring-term 2004 seniors who had not had a chance of selection into the sophomore cohort 2 years before would have a chance of selection into ELS:2002 as seniors. Ten base-year schools were ineligible in the first follow-up, because they no longer enrolled ELS:2002 sample members. Of the eligible schools, 700 (93 percent) agreed to participate in the 2004 first follow-up. Overall, there were 16,500 sample members (students, dropouts, homeschooled students, or early graduates), of whom 15,000 participated.

The second follow-up contacted sample members in 2006, at a time when the overwhelming majority of them were 2 years past high school graduation and had entered the labor force or postsecondary education, or some combination of the two. After adjusting for cases classified as out of scope permanently (e.g., deaths) or temporarily (such as individuals who were institutionalized, incarcerated, out of the United States, or otherwise unavailable in 2006), or cases that were not fielded (such as sample members with data missing for both the base-year and first follow-up data collections) the final second follow-up sample size totaled 15,900. Of these 15,900 sample members, 14,200 completed an interview, either through web-based self-administration or via computer-assisted telephone or personal interview.

## Weighting

The general purpose of the weighting scheme in the base year was to compensate for unequal probabilities of selection of schools and students into the base-year sample and to adjust for the fact that not all schools and students selected into the sample actually participated. Three sets of weights were computed in the base year: a school weight, a weight for student questionnaire completion, and a contextual data weight for the “expanded” sample of questionnaire-eligible and questionnaire-ineligible<sup>3</sup> students. School and student weights were adjusted for nonresponse bias to reduce or eliminate differences between the means for respondents and nonrespondents in population groups where the mean for nonrespondents is known from a nonresponding school’s questionnaire augmented with frame data. In addition, base-year school weights were poststratified to known population totals.

In the first follow-up, three individual-level weights were generated to accommodate the spring 2002 sophomore cohort 2 years later and the freshened senior cohort of 2004: a cross-sectional weight based on 2004 questionnaire completion, an expanded sample weight that extended the weighting to encompass questionnaire-ineligible sample members, and a panel weight for sophomore cohort members with data at both points in time. In addition, a cross-sectional weight, F1TRSCWT, was computed for transcript respondents.

---

<sup>3</sup> No students were excluded from the ELS:2002 sample. Students who, by virtue of severe disability or language barrier could not validly complete the survey instruments, were deemed “questionnaire-ineligible.” For this group, contextual data and transcripts were collected. For the “questionnaire-eligible” segment of the sample (about 99 percent), every effort was made to obtain a completed questionnaire (and in most instances, the assessment(s) as well).



Four sets of weights were computed for the second follow-up: (1) a cross-sectional weight for sample members who responded in the second follow-up (F2QWT), (2) a cross-sectional transcript weight for sample members who responded in the second follow-up and for whom a transcript was collected in the first follow-up transcript study (F2QTSCWT), (3) a second follow-up panel weight for longitudinal analysis using all sample members who responded in the second follow-up and responded in the first follow-up (F2F1WT), and (4) a second follow-up panel weight for all sample members who were sophomores in spring 2002 and who responded in the second follow-up (F2BYWT). All estimates in this report are weighted using the panel weight (F2BYWT).

## Imputation

In the base year and first follow-up, missing questionnaire data for 14 key demographic variables, such as race/ethnicity and parental education, were replaced with imputed values, using single imputation (by means of a weighted sequential hot deck procedure). Missing assessment data were replaced using multiple imputation of the ability estimate (*theta*) for both reading and mathematics in the base year and mathematics in the first follow-up. In addition, enrollment status (dropout and graduation) was imputed in the first follow-up when missing. In the second follow-up, missing data for five new variables were imputed: ever applied to a postsecondary institution, ever attended a postsecondary institution, highest level of education expected to complete, ever held a job for pay since high school, and total job earnings in the 2005 calendar year. Enrollment status was not imputed in the second follow-up. Enrollment status is unknown for less than 0.5 percent of the spring 2002 sophomore cohort. Therefore, the distributions of this variable presented in table 1 may not sum to 100.

## Response Rates

Response rates for ELS:2002 are calculated by dividing the number of sample units who completed a particular study component by the number of sample units eligible for participation that are fielded. Sample members are not eligible if they are classified as deceased, sampling errors, or temporarily out of scope (unavailable for duration of study, out of the country, ineligible, incarcerated, institutionalized). Eligible (in-scope) cases who were not contacted for participation (i.e., unfielded cases) are not counted in the response rate.<sup>4</sup> All response rates are calculated using the base weight. For each round of data collection, nonresponse bias analyses were performed to ensure that any identified biases due to nonresponse were small or were adjusted for, and that the data could be used with confidence.

Rounded sample size, response rate data for ELS:2002 are summarized in table A-1 on the next page.

---

<sup>4</sup> Response rates for the second follow-up do not include unfielded cases ( $n = 370$ ) in the denominator of the rate. The unfielded cases include the following: a handful of sample members who asked to be removed from the study; about 330 double (base-year and first follow-up) nonrespondents, and about 40 first follow-up freshened nonrespondents (who also lack data for both prior rounds). Also excluded are 460 out-of-scope cases; these include permanent and temporary out-of-scope cases. Permanently out-of-scope cases include deceased sample members ( $n = 40$ ) and a handful of corrected sampling errors. Temporarily out-of-scope cases include sample members who were unavailable for the second follow-up ( $n = 80$ ), sample members who were out of the country ( $n = 210$ ), sample members who were incarcerated or otherwise institutionalized ( $n = 50$ ), and sample members who were incapacitated or otherwise incapable of completing the questionnaire ( $n = 80$ ). Ineligible/out-of-scope sample members are not included in the calculation of the response rate. Further detail can be found in the *Education Longitudinal Study of 2002: Base-Year to Second Follow-up Data File Documentation* (Ingels et al. 2007).

**Table A-1. Summary of ELS:2002 base-year to second follow-up school and student response rates: 2002–2006**

Survey	Selected	Participated	Weighted percent	Unweighted percent
Base-year school sample	1,220	750	67.8	61.6
Base-year student questionnaire <sup>1</sup>	17,600	15,400	87.3	87.3
First follow-up questionnaire <sup>1</sup>	16,500	15,000	88.7	90.8
First follow-up high school transcripts	16,400	14,900	90.7	90.9
Second follow-up questionnaire <sup>2</sup>	15,900	14,200	88.4	89.2
2002 Sophomore cohort in 2006 <sup>2</sup>	15,700	14,000	88.4	89.1

<sup>1</sup> Based on public release file.

<sup>2</sup> Response rate based on fielded in-scope cases. In the second follow-up, about 370 in-scope cases were not fielded and about 460 cases were out of scope.

NOTE: Sample sizes are rounded for all counts. The analysis sample for this report is the 2002 sophomore cohort in 2006.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Base Year, 2002."

*Base-year school and student questionnaire response rates.* Of approximately 1,200 eligible contacted schools, about 750 participated in the survey for an overall weighted school participation rate of 68 percent. These schools are nationally representative of public and private schools. Of about 17,600 selected eligible students, around 15,400 participated, for a weighted student response rate of approximately 87 percent. A nonresponse bias analysis was performed and it confirmed that any identified biases due to nonresponse were small and that the data could be used with confidence.

*First follow-up student questionnaire response rates.* In the first follow-up, there were 16,500 eligible sample members, which included 15,400 base-year participants and 1,200 retained base-year nonparticipants.<sup>5</sup> This subsample of nonrespondents was pursued to further improve the representativeness and reduce the bias of the base-year sophomore cohort participating sample. Fifteen thousand sample members responded to the questionnaire for a first follow-up response rate of 89 percent. First follow-up weighted response rates are reported at the student level only (the school sample was not strictly representative of the nation's high schools that had a 12th grade in 2003–04).

*High school transcript response rates.* A total of about 1,500 base-year and transfer schools provided at least one transcript for sample members. Ninety-one percent (weighted) of the student sample have some transcript information (14,900 out of 16,400).

*Second follow-up response rates.* A total of about 14,200 individuals (out of 15,900 eligible) responded to the second follow-up interview, for a weighted response rate of 88 percent overall.

## Disclosure Risk Analysis and Protections

To protect the confidentiality of NCES data that contain information about specific individuals, ELS:2002 second follow-up data were subject to various procedures to minimize disclosure risk. As a first step, all ELS:2002 data files were reviewed to identify high-risk variables (public-use variables that might point to specific individuals or schools, e.g., some fine-grained variables, particularly those in continuous form, and variables with extreme outliers) and were altered through data coarsening techniques, such as top coding, bottom coding, or recasting

<sup>5</sup> The questionnaire-ineligible sample (students whose severe disabilities or nonproficiency in English rendered them ineligible for being validly surveyed with the ELS:2002 instruments), available only in the restricted-use file, is not included in these numbers, nor in base-year or first follow-up completion statistics.

into categorical form. As a second step, a technique called “data swapping” was carried out, whereby some variables for a sample case that has been paired with another case were exchanged. As a final step, the ELS:2002 data were analyzed to confirm that the disclosure limitation techniques did not compromise the analytic utility of the data.

### Statistical Procedures

Comparisons involving reasons for selecting a postsecondary institution (figure 1 and figure 2) and reasons for discontinuing postsecondary education (figure 3) have been tested for statistical significance (set at a probability of .05) to ensure that the differences are larger than those that might be expected due to sampling variation. These comparisons were based on the *t* statistic. Whether the statistical test is considered significant is determined by calculating a *t* value for the difference between a pair of means or proportions and comparing this value to published tables of values, called critical values. The alpha level is an *a priori* statement of the probability that a difference exists in fact rather than by chance.

The *t* statistic between estimates from various subgroups presented in the tables can be computed by using the following formula:

$$t = \frac{x_1 - x_2}{\sqrt{(SE_1^2 + SE_2^2)}}$$

where  $x_1$  and  $x_2$  are the estimates to be compared (e.g., the means of sample members in two groups), and  $SE_1$  and  $SE_2$  are their corresponding standard errors. This formula is valid only for independent estimates.

To test whether estimates are considered large relative to their standard error, the standard error of each estimate was divided by the estimate. An estimate is considered unstable and noted in the table with an exclamation point (!) if it meets one of the following criteria: (1) if the estimate is greater or equal to 10 and the standard error of the estimate divided by the estimate is greater than .30; or (2) if the estimate is greater or equal to 3 but less than 10 and the standard error of the estimate divided by the estimate is greater than .50; or (3) if the estimate is less than 3 and the standard error of the estimate is greater than .75. Readers should interpret these estimates with caution.

### Survey Standard Errors

Because the ELS:2002 sample design involves stratification, the disproportionate sampling of certain strata, and clustered (i.e., multistage) probability sampling, estimated means and other statistics estimated from the data have higher variance than if they were based on data from a simple random sample of the same size.

Several procedures are available for estimating sampling errors for complex samples. The ELS:2002 analyses included in this report used STATA and the Taylor Series procedure to calculate standard errors.

### Electronic Codebooks

An electronic codebook (ECB) for the ELS:2002 base-year, first follow-up, high school transcript, and second follow-up combined data (Ingels et al. 2007) is available from NCES through a restricted-use licensing process. The ECB system is primarily an electronic version of

a fully documented survey codebook. The data user can browse through all interview or instrument items (variables) contained in the ELS:2002 data files, search variable and value labels for key words related to particular research questions, review the actual wording of these items along with notes and other pertinent information related to them, examine the definitions and programs used to develop derived variables, and importantly, produce data files for statistical analysis. The ECB also provides an electronic display of the distribution of counts and percentages for each variable in the dataset. Analysts can use the ECB to select or “tag” variables of interest, print hardcopy codebooks that display the distributions of the tagged variables, and generate SAS and SPSS program syntax (including variable and value labels) that can be used with the analyst’s own statistical software.

### **Data Analysis System**

In addition to the ECB, users can analyze ELS:2002 using the Data Analysis System (DAS). This system, which allows users to specify and generate their own tables, contains a detailed description of how each variable was created and includes question wording for items coming directly from an interview. With the DAS, users can replicate or expand on the tables presented in this report with proper standard errors and weighted sample sizes. In addition to tables, the DAS will also produce a correlation matrix of selected variables to be used for linear regression models. Included in the output with the correlation matrix are the design effects (DEFTs) for each variable in the matrix. Because most statistical procedures compute regression coefficients based on simple random sample assumptions, the standard errors reported by the procedures should be adjusted with these design effects to take into account the stratified sampling method used in ELS:2002. The DAS can be accessed electronically at <http://nces.ed.gov/das>.

### **Glossary—Description of Variables Used**

Variables used in analysis for this report are described below, each listed under one of the following topic headings: student/family demographics, high school educational characteristics, and postsecondary educational characteristics. Within each heading, variables are listed in the order in which they appear in the tables. To see the original questionnaires and obtain specific item wording and information about the context in which particular questions were posed, researchers can consult web-published portable document format (PDF) files containing the base-year, first follow-up, and second follow-up questionnaires at <http://www.nces.ed.gov/surveys/els2002/index.asp>. Further information about the construction of composite variables (such as parental education [F1PARED]), as well as the code used to construct these variables, can be found in the ECB (Ingels et al. 2007).

#### **Student/Family Demographics**

A special feature of the ELS:2002 data is the imputation of missing values for key variables, such as the following student background variables. The imputation of selected demographic variables occurred in the base year (BY) for base-year respondents, while remaining missing values were imputed in the first follow-up (F1). As a result, the F1-versions of these variables are more complete than their BY counterparts (i.e., they contain only nonmissing values, even for BY or F1 nonrespondents), and are therefore used in analysis for this report.

SEX (F1SEX): For base-year respondents, this variable was constructed from the base-year student questionnaire or, where missing, from (in order of preference) the school roster or logical imputation based on first name. Base-year nonrespondents were asked to self-report their sex in the first follow-up interview.

RACE/ETHNICITY (F1RACE): This race/ethnicity variable includes seven categories: (1) American Indian or Alaska Native; (2) Asian or Pacific Islander, including Native Hawaiian; (3) Black or African American; (4) Hispanic, no race specified; (5) Hispanic, race specified; (6) More than one race; and (7) White. Categories 1, 2, 3, 6, and 7 exclude individuals of Hispanic or Latino origin. For clarity of presentation in this report, categories 4 and 5 are combined into “Hispanic or Latino.”

The ELS:2002 race variables reflect new federal standards that require collecting race separately from ethnicity and allow respondents to mark more than one choice for race. For base-year respondents, information on race/ethnicity was obtained from the base-year student questionnaire when available, or (in order of preference) from the sampling roster, the parent questionnaire (if the parent respondent was a biological parent), or logical imputation based on other questionnaire items (e.g., surname, native language). Base-year nonrespondents were asked to self-report their race/ethnicity in the first follow-up interview.

FAMILY INCOME (BYINCOME): This variable is taken directly from the parent questionnaire, when available, and imputed otherwise. Missing values for base year respondents were imputed in the base year; all other missing values were imputed in the first follow up. BYINCOME is composed of 13 distinct levels: (1) None; (2) \$1,000 or less; (3) \$1,001–\$5,000; (4) \$5,001–\$10,000; (5) \$10,001–\$15,000; (6) \$15,001–\$20,000; (7) \$20,001–\$25,000; (8) \$25,001–\$35,000; (9) \$35,001–\$50,000; (10) \$50,001–\$75,000; (11) \$75,001–\$100,000; (12) \$100,001–\$200,000; and (13) \$200,001 or more. For the purposes of this report, four categories were created from the 13 levels of BYINCOME for ease of interpretation: \$0–\$20,000 (income levels 1, 2, 3, 4, 5, and 6); \$20,001–\$50,000 (income levels 7, 8, and 9); \$50,001–\$100,000 (income levels 10 and 11); and \$100,001 or more (income levels 12 and 13).

PARENTS’ HIGHEST LEVEL OF EDUCATION (F1PARED): F1PARED is equivalent to either F1MOTHED (mother’s highest level of education) or F1FATHED (father’s highest level of education), whichever is the higher level of education. For base-year respondents, F1MOTHED and F1FATHED are taken from the parent questionnaire or, where missing, from (in order of preference) the base-year student questionnaire or imputation. For base-year nonrespondents who were first follow-up respondents, this information was taken from the new participant supplement. F1PARED is composed of eight distinct levels of education: (1) Did not finish high school; (2) Graduated from high school or GED; (3) Attended 2-year school, no degree; (4) Graduated from 2-year school; (5) Attended college, no 4-year degree; (6) Graduated from college; (7) Completed master’s degree or equivalent; and (8) Completed Ph.D., M.D., or other advanced degree. For the purposes of this report, the eight levels of F1PARED were collapsed into four: High school or less (1 and 2), Some college (3, 4, and 5), Bachelor’s degree (6), and Graduate/professional degree (7 and 8).

NATIVE LANGUAGE (F1STLANG): This variable classifies students’ native language as either English or a language other than English. F1STLANG is taken directly from the base-year student questionnaire or, where missing, from (in order of preference) the first follow-up new participant supplement or imputation.

## High School Educational Characteristics

**SECONDARY SCHOOL SECTOR (BYSCTRL):** This variable indicates the type of school attended by the respondent in the base-year interview; sources include the Common Core of Data (CCD) 1999–2000, and the Private School Survey (PSS) 1999–2000. School control is classified as Public, Catholic, or Other Private.

**EDUCATIONAL EXPECTATIONS IN 10TH GRADE (BYSTEXP):** This variable is taken directly from the base-year student questionnaire, when available, and is imputed when missing for base-year respondents. Students were asked, “As things stand now, how far in school do you think you will get?” The eight response options were: (1) Less than high school graduation; (2) High school graduation or GED only; (3) Attend or complete a 2-year school course in a community college or vocational school; (4) Attend college, but not complete a 4-year degree; (5) Graduate from college; (6) Obtain a master’s degree or equivalent; (7) Obtain a Ph.D., M.D., or other advanced degree; and (8) Don’t know. For the purposes of this report, these categories are collapsed into five: High school diploma or less (1 and 2), Some college (3 and 4), Bachelor’s degree (5), Graduate/professional degree (6 and 7), and Don’t Know (8).

**HIGHEST MATH COURSE TAKEN IN HIGH SCHOOL (FIRMAPIP):** This variable, also called a “pipeline measure,” was taken from student transcripts and indicates the highest level of math for which the student received non-zero credit while in high school. The math pipeline measure was originally created by Burkam and Lee (2003) using transcript data from NELS:88. They assigned 47 high school courses (with nonzero enrollment) to one of four levels based on their Classification of Secondary School Courses (CSSC) codes and a description of course content: nonacademic math courses, low academic math courses, middle academic math courses, and advanced academic math courses. This 4-level measure originally created by Burkam and Lee was later expanded to create a more sensitive 8-level measure. Additionally, as new courses were detected in subsequent transcript studies, they were incorporated into the pipeline at the appropriate level. The 8-level measure is:

1. No math;
2. Nonacademic math (basic mathematics, consumer mathematics);
3. Low academic math (pre-algebra);
4. Middle academic math I (algebra I and geometry);
5. Middle academic math II (algebra II);
6. Advanced math I (trigonometry, analytical geometry, statistics);
7. Advanced math II (pre-calculus); and
8. Advanced math III (calculus).

For this report, the highest level of math taken in high school is reported by collapsing the eight levels of FIRMAPIP into five categories and including a category for respondents whose transcripts were not collected:

1. No math;
2. Basic math or pre-algebra (combines categories 2 and 3 above);
3. Algebra I, geometry, or algebra II (combines categories 4 and 5 above);

4. Trigonometry, statistics, or pre-calculus (combines categories 6 and 7 above);
5. Calculus; and
6. No transcript collected.

HIGH SCHOOL COMPLETION STATUS IN 2006 (F2HSSTAT): This variable indicates high school completion status as of the second follow-up interview in 2006. High school completion status is categorized as follows:

1. Fall 2003–Summer 2004 graduate (9/1/03–8/31/04);
2. Post-Summer 2004 graduate (9/1/04 or after);
3. Pre-Fall 2003 graduate (8/31/03 or before);
4. Graduate, date unknown;
5. Received certificate of attendance;
6. Received GED or other equivalency;
7. Enrolled in high school;
8. Working toward GED or equivalent;
9. No high school credential, not enrolled, and not working toward GED or equivalent;  
and
10. Unknown.

First follow-up, transcript, and second follow-up data are all used as inputs for F2HSSTAT. First follow-up data are used in cases where the respondent indicated during the first follow-up he or she had already received a high school credential; transcript data are used in cases where the respondent's transcript indicated he or she received a May or June 2004 diploma or certificate of attendance. For second follow-up respondents for whom neither of these conditions apply, F2HSSTAT is updated by the following variables: type of high school credential received (F2A02); high school credential date (F2A03); or, for respondents who had not yet received a high school credential, whether they are currently pursuing any such credential (F2A07).

For clarity of presentation in this report, F2HSSTAT has been collapsed into four categories: (1) Received high school diploma (combines categories 1, 2, 3, and 4 above); (2) Received GED or other equivalency (category 6 above); (3) Enrolled in high school or working toward GED/equivalent (combines categories 7 and 8 above); and (4) No high school credential, not enrolled, and not working toward GED or equivalent (category 9 above).

### **Postsecondary Educational Characteristics**

RESPONDENT TYPE (F2RTYPE): This second follow-up variable classifies respondents on the basis of their postsecondary participation and the timing of their postsecondary enrollment. Categories include:

1. Standard enrollee: indicates a respondent with “immediate” postsecondary enrollment, in addition to continuing enrollment into 2006. Respondents are considered to have “immediate” enrollment if their postsecondary attendance began

- by October of the year they left high school (if the month they left high school was between January and July), or by the following February (if the month they left high school was between August and December).
2. **Delayer:** indicates a respondent with delayed postsecondary enrollment. Respondents are considered to have delayed enrollment when they did not begin their postsecondary attendance by October of the year they left high school (if the month they left high school was between January and July), or by the following February (if the month they left high school was between August and December). The Delayer designation (as opposed to Delayer-Leaver—see below) also indicates the respondent’s postsecondary enrollment continued into 2006.
  3. **Leaver:** indicates a respondent who began enrollment at a postsecondary institution “on time” (as with Standard enrollee), but has no 2006 enrollment.
  4. **Delayer-Leaver:** indicates a respondent with delayed postsecondary enrollment (as with Delayer), and has no 2006 enrollment.
  5. **Nonenrollee:** indicates a respondent who has not enrolled in a postsecondary institution since leaving high school.
  6. **High school student:** indicates a respondent still enrolled in high school.

Categories 2 and 4 (delayers and delayer-leavers) are used to identify respondents with delayed postsecondary attendance (Table 2). Categories 3 and 4 (leavers and delayer-leavers) are the subset of respondents who reported reasons for discontinuing their postsecondary education (Figure 3).

**WHETHER RESPONDENT HAS EVER ATTENDED A POSTSECONDARY INSTITUTION (F2EVRATT):** F2EVRATT indicates whether the sample member has ever attended a postsecondary institution since high school; it is taken directly from the second follow-up interview (F2B07) and is imputed, when missing, for second follow-up respondents.

**LEVEL OF OFFERING OF FIRST POSTSECONDARY INSTITUTION (F2PS1LVL):** This variable indicates the level of the respondent’s first-attended postsecondary institution. For most respondents, this is the level associated with the Integrated Postsecondary Education Data System (IPEDS) code of the first institution attended. For institutions without an IPEDS code, institutional level (if available) was provided by the respondent. Institutional levels include: (1) 4-year college/university, (2) 2-year college/university, and (3) less-than-2-year school.

**SECTOR OF FIRST POSTSECONDARY INSTITUTION (F2PS1SEC):** This variable indicates the sector of the respondent’s first-attended postsecondary institution. For most respondents, this is the sector associated with the IPEDS code of the first institution attended. For institutions without an IPEDS code, institutional level and control were provided by the respondent and, if available, used to construct institutional sector. Institutional sectors include:

1. Four-year public college or university;
2. Four-year private, not-for-profit, college or university;
3. Four-year private, for-profit, college or university;
4. Two-year public college or university;



5. Two-year private, not-for-profit, college or university;
6. Two-year private, for-profit, college or university;
7. Public, less-than-2-year school;
8. Private, not-for-profit, less-than-2-year school; and
9. Private, for-profit, less-than-2-year school.

For the purposes of this report, these categories are collapsed into four: Four-year public college or university (1); Four-year private college or university (2 and 3); Two-year college or university (4, 5, and 6); and Less-than 2-year school (7, 8, and 9).

**SELECTIVITY OF FIRST ATTENDED POSTSECONDARY INSTITUTION (F2PS1SLC):** This variable indicates the selectivity of the respondent's first-attended postsecondary institution, based on the IPEDS institutional level and Carnegie institutional selectivity measure (available in IPEDS data). The six categories of F2PS1SLC are as follows:

1. Highly selective 4-year institution (corresponds to 25th percentile ACT-equivalent scores of greater than 21);
2. Moderately selective 4-year institution (corresponds to 25th percentile ACT-equivalent scores of 18 to 21);
3. Inclusive, 4-year institution (corresponds to 25th percentile ACT-equivalent scores of less than 18);
4. Other 4-year institution;
5. Two-year institution; and
6. Less-than-2-year institution.

Institutions identified as 4-year schools via IPEDS data with unknown Carnegie selectivity are classified as "other four-year institutions." For clarity of presentation in this report, "Two-year institution" and "Less-than-2-year institution" are combined into "Less-than-4-year institution."

**REASONS FOR SELECTING FIRST-ATTENDED POSTSECONDARY INSTITUTION (F2B13A–F):** These variables are taken directly from the second follow-up interview; respondents were asked to select all that apply from a list of reasons for choosing their first attended postsecondary institution. Response categories include: (1) Program of study, (2) Reputation, (3) Cost, (4) Location, (5) Personal or family reasons, or (6) Another reason.

**FIELD OF STUDY MOST LIKELY TO PURSUE UPON ENTERING POSTSECONDARY SCHOOL (F2B15):** This variable is taken directly from the second follow-up interview. Respondents were asked, "When you began your postsecondary education, what field of study did you think you were most likely to pursue?" The 16 response options are as follows:

1. Business or marketing;
2. Health (for example, medical technology, nursing, pre-med);
3. Education (for example, teaching);

4. Engineering or engineering technology;
5. Computer or information sciences;
6. Natural sciences or mathematics (for example, biology, physics, or statistics);
7. Environmental studies;
8. Social sciences or social work (for example, psychology, history, political science);
9. Architecture, design, or urban planning;
10. Fine arts (for example, music, theatre, dance);
11. Humanities (for example, English, philosophy, foreign languages);
12. Communications (for example, journalism);
13. University transfer or general education;
14. Other vocational programs (for example, cosmetology, culinary arts, or construction);
15. Other; and
16. Don't know/undecided.

For clarity of presentation in this report, these original 16 categories have been collapsed into the following 10 categories:

1. Business/marketing;
2. Health;
3. Education/teaching;
4. Engineering/computer science/natural sciences/mathematics (combines categories 4, 5, and 6 above);
5. Social sciences/social work;
6. Architecture/design/urban planning;
7. Fine arts/humanities (combines categories 10 and 11 above);
8. Communications/journalism;
9. Other (combines categories 7, 13, 14, and 15 above)<sup>6</sup>; and
10. Don't know/undecided.

**REASONS NO LONGER ENROLLED IN A POSTSECONDARY INSTITUTION (F2B29A–K):** These variables are taken directly from the second follow-up interview. Respondents who reported attending a postsecondary institution, but only had enrollment prior to 2006, were asked to select all that apply from the following list of reasons they were no longer enrolled: (1) Completion of degree/certificate, (2) Finished taking desired classes, (3) Academic problems, (4) Scheduling problems, (5) Dissatisfaction with school, (6) Financial reasons, (7) Family responsibilities, (8) Personal health reasons, (9) Traumatic experience, and (10) Other.

---

<sup>6</sup> Environmental Studies was included in the Other category due to small cell sizes.

HIGHEST LEVEL OF EDUCATION ATTEMPTED (F2EDLEVL): This variable is primarily constructed from second follow-up information, supplemented when necessary with transcript information. F2EDLEVL indicates the respondent's highest level of education attempted as of the second follow-up interview. Education levels are categorized as follows: (1) Some high school, (2) GED recipient, (3) High school diploma recipient, (4) Less-than-2-year school, (5) 2-year community college enrollment, and (6) 4-year college or university enrollment.

EDUCATIONAL EXPECTATIONS IN 2006 (F2STEXP): This variable is taken directly from the second follow-up interview (F2B30); it is imputed, when missing, for second follow-up respondents. The nine response options are (1) Less than high school graduation; (2) GED or other equivalency only; (3) High school graduation only; (4) Attend or complete a 2-year school course in a community college or vocational school; (5) Attend college, but not complete a 4-year degree; (6) Graduate from college; (7) Obtain a master's degree or equivalent; (8) Obtain a Ph.D., M.D., or other advanced degree; and (9) Don't know. For the purposes of this report, categories 1, 2, and 3 are collapsed into "High school completion or less."



# Appendix B

## Standard Error Tables

---

**Table B-1. Standard errors for table 1 estimates (percentage of spring 2002 high school sophomores, by high school completion status and select student characteristics: 2006)**

Characteristic	Received high school diploma	Received GED or other equivalency	Enrolled in high school or working toward equivalency	No diploma; not enrolled or working toward equivalency
Total	0.45	0.22	0.22	0.28
Sex				
Female	0.51	0.28	0.24	0.31
Male	0.59	0.33	0.36	0.39
Race/ethnicity <sup>1</sup>				
American Indian or Alaska Native	5.18	3.34	2.17	3.97
Asian or Pacific Islander	0.90	0.45	0.55	0.49
Black or African American	1.23	0.55	0.73	0.68
Hispanic or Latino	1.19	0.68	0.55	0.91
White	0.49	0.26	0.24	0.27
More than one race	1.75	1.20	0.99	1.05
Family income				
\$0–\$20,000	1.13	0.66	0.63	0.76
\$20,001–\$50,000	0.65	0.35	0.36	0.46
\$50,001–\$100,000	0.57	0.32	0.30	0.30
\$100,001 or more	0.62	0.41	0.35	0.29
Parental education				
High school or less	0.90	0.44	0.49	0.65
Some college	0.63	0.40	0.36	0.39
Bachelor's degree	0.68	0.39	0.33	0.44
Graduate/professional degree	0.69	0.41	0.36	0.40
Native language <sup>2</sup>				
English	0.44	0.22	0.23	0.24
Non-English	1.18	0.57	0.52	0.96
School sector				
Public	0.49	0.23	0.24	0.30
Catholic	0.37	0.32	0.07	0.17
Other private	0.89	0.60	0.35	0.28
Educational expectation in 10th grade				
High school or less	1.85	1.22	1.10	1.56
Some college	1.59	0.93	0.94	0.93
Bachelor's degree	0.52	0.32	0.29	0.29
Graduate/professional degree	0.45	0.23	0.23	0.26
Don't know	1.41	0.89	0.82	0.92
Highest math course taken in high school				
No math	4.59	2.74	3.53	3.36
Basic math/pre-algebra	2.08	1.24	1.12	1.71
Algebra I, geometry, or algebra II	0.68	0.37	0.34	0.42
Trigonometry, statistics, pre-calculus	0.27	0.15	0.13	0.14
Calculus	0.19	0.18	†	†
No transcript collected	2.55	1.15	1.10	1.26

† Not applicable.

<sup>1</sup>All race categories exclude Hispanic or Latino origin, unless specified. Asian or Pacific Islander includes Native Hawaiian.

<sup>2</sup>The first language students learned to speak.

NOTE: GED = General Educational Development certificate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."

**Table B-2. Standard errors for table 2 estimates (percentage of spring 2002 high school sophomores, by the timing of first postsecondary enrollment and select student characteristics: 2006)**

Characteristic	Ever attended a postsecondary institution	Immediate enrollment in postsecondary education <sup>1</sup>	Delayed enrollment in postsecondary education <sup>2</sup>	Nonenrollee, or still enrolled in high school
Total	0.68	0.75	0.32	0.68
Sex				
Female	0.77	0.84	0.45	0.77
Male	0.85	0.93	0.46	0.85
Race/ethnicity <sup>3</sup>				
American Indian or Alaska Native	6.99	6.11	3.70	6.99
Asian or Pacific Islander	1.64	1.80	0.73	1.64
Black or African American	1.53	1.59	0.93	1.53
Hispanic or Latino	1.64	1.56	0.94	1.64
White	0.75	0.85	0.36	0.75
More than one race	2.49	2.55	1.27	2.49
Family income				
\$0–\$20,000	1.40	1.35	0.79	1.40
\$20,001–\$50,000	0.88	0.89	0.53	0.88
\$50,001–\$100,000	0.87	0.93	0.50	0.87
\$100,001 or more	0.86	1.23	0.85	0.86
Parental education				
High school or less	1.11	1.05	0.62	1.11
Some college	0.89	0.99	0.56	0.89
Bachelor's degree	0.95	1.10	0.59	0.95
Graduate/professional degree	1.04	1.28	0.76	1.04
Native language <sup>4</sup>				
English	0.68	0.76	0.33	0.68
Non-English	1.57	1.53	0.86	1.57
School sector				
Public	0.73	0.80	0.34	0.73
Catholic	0.78	1.07	0.66	0.78
Other private	1.75	2.43	1.02	1.75
Educational expectation in 10th grade				
High school or less	1.69	1.37	1.12	1.69
Some college	1.78	1.66	1.22	1.78
Bachelor's degree	0.83	0.96	0.59	0.83
Graduate/professional degree	0.67	0.80	0.45	0.67
Don't know	1.78	1.73	1.17	1.78
Highest math course taken in high school				
No math	3.29	2.95	2.36	3.29
Basic math/pre-algebra	1.96	1.77	1.03	1.96
Algebra I, geometry, or algebra II	0.96	0.92	0.52	0.96
Trigonometry, statistics, pre-calculus	0.72	0.95	0.57	0.72
Calculus	0.57	0.67	0.39	0.57
No transcript collected	2.70	2.92	0.95	2.70

<sup>1</sup> Respondents are considered to have immediate enrollment if their postsecondary attendance began by October of the year they left high school (if the month they left high school was between January and July), or by the following February (if the month they left high school was between August and December).

<sup>2</sup> Respondents are considered to have delayed enrollment if their postsecondary attendance began later than October of the year they left high school (if the month they left high school was between January and July), or later than the following February (if the month they left high school was between August and December).

<sup>3</sup> All race categories exclude Hispanic or Latino origin, unless specified. Asian or Pacific Islander includes Native Hawaiian.

<sup>4</sup> The first language students learned to speak.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."

**Table B-3. Standard errors for table 3 estimates (percentage of spring 2002 high school sophomores, by the sector of the postsecondary institution first attended and select student characteristics: 2006)**

Characteristic	4-year public institution	4-year private institution	2-year institution	Less than 2-year institution	Nonenrollee or still enrolled in high school
Total	0.61	0.45	0.63	0.15	0.68
Sex					
Female	0.78	0.57	0.77	0.24	0.77
Male	0.73	0.54	0.77	0.19	0.85
Race/ethnicity <sup>1</sup>					
American Indian or Alaska Native	3.93	3.20	5.94	1.71	6.99
Asian or Pacific Islander	1.86	1.27	1.63	0.43	1.64
Black or African American	1.15	0.88	1.32	0.51	1.53
Hispanic or Latino	1.21	0.67	1.72	0.47	1.64
White	0.75	0.64	0.78	0.18	0.75
More than one race	2.12	1.84	1.87	0.73	2.49
Family income					
\$0–\$20,000	0.95	0.63	1.42	0.50	1.40
\$20,001–\$50,000	0.74	0.54	0.89	0.27	0.88
\$50,001–\$100,000	0.92	0.70	0.92	0.23	0.87
\$100,001 or more	1.49	1.42	1.28	0.35	0.86
Parental education					
High school or less	0.77	0.45	1.02	0.36	1.11
Some college	0.79	0.55	0.97	0.26	0.89
Bachelor's degree	1.14	0.94	1.05	0.29	0.95
Graduate/professional degree	1.46	1.32	1.09	0.26	1.04
Native language <sup>2</sup>					
English	0.63	0.51	0.66	0.16	0.68
Non-English	1.30	0.65	1.48	0.47	1.57
School sector					
Public	0.65	0.46	0.67	0.17	0.73
Catholic	1.84	2.14	1.93	0.22	0.78
Other private	2.26	2.95	2.69	0.38	1.75
Educational expectation in 10th grade					
High school or less	0.66	0.57	1.49	0.66	1.69
Some college	0.83	0.66	1.63	0.60	1.78
Bachelor's degree	0.86	0.63	0.94	0.25	0.83
Graduate/professional degree	0.85	0.75	0.87	0.20	0.67
Don't know	1.33	0.87	1.62	0.68	1.78
Highest math course taken in high school					
No math	0.81	1.44	2.98	1.17	3.29
Basic math/pre-algebra	0.56	0.60	1.83	0.68	1.96
Algebra I, geometry, or algebra II	0.73	0.46	0.94	0.26	0.96
Trigonometry, statistics, pre-calculus	1.14	0.82	1.08	0.18	0.72
Calculus	1.73	1.72	1.07	0.12	0.57
No transcript collected	1.81	1.26	1.68	0.79	2.70

<sup>1</sup> All race categories exclude Hispanic or Latino origin, unless specified. Asian or Pacific Islander includes Native Hawaiian.

<sup>2</sup> The first language students learned to speak.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."



**Table B-4. Standard errors for table 4 estimates (percentage of spring 2002 high school sophomores, by the selectivity of the first postsecondary institution attended and select student characteristics: 2006)**

Characteristic	4-year institution				Less than 4-year institution <sup>1</sup>	Nonenrollee or still enrolled in high school
	Highly selective	Moderately selective	Inclusive	Unknown selectivity		
Total	0.59	0.50	0.28	0.25	0.63	0.68
Sex						
Female	0.74	0.64	0.34	0.32	0.79	0.77
Male	0.60	0.62	0.33	0.34	0.77	0.85
Race/ethnicity <sup>2</sup>						
American Indian or Alaska Native	2.59	3.55	1.91	1.60	6.13	6.99
Asian or Pacific Islander	2.17	1.26	0.74	0.56	1.55	1.64
Black or African American	0.53	0.99	0.96	0.49	1.38	1.53
Hispanic or Latino	0.53	0.72	0.56	0.82	1.68	1.64
White	0.79	0.67	0.30	0.27	0.77	0.75
More than one race	1.57	1.89	1.22	1.11	1.94	2.49
Family income						
\$0–\$20,000	0.43	0.84	0.55	0.49	1.40	1.40
\$20,001–\$50,000	0.45	0.60	0.41	0.35	0.87	0.88
\$50,001–\$100,000	0.82	0.83	0.42	0.41	0.93	0.87
\$100,001 or more	1.79	1.36	0.57	0.50	1.28	0.86
Parental education						
High school or less	0.36	0.68	0.39	0.35	1.00	1.11
Some college	0.46	0.71	0.46	0.37	0.96	0.89
Bachelor's degree	1.10	0.97	0.55	0.47	1.08	0.95
Graduate/professional degree	1.54	1.20	0.45	0.53	1.12	1.04
Native language <sup>3</sup>						
English	0.64	0.54	0.30	0.24	0.66	0.68
Non-English	0.89	0.83	0.50	0.67	1.45	1.57
School sector						
Public	0.60	0.53	0.30	0.27	0.67	0.73
Catholic	2.68	1.69	0.75	0.67	1.94	0.78
Other private	4.02	2.05	0.77	1.38	2.73	1.75
Educational expectation in 10th grade						
High school or less	0.17	0.52	0.57	0.36	1.56	1.69
Some college	0.34	0.73	0.51	0.54	1.62	1.78
Bachelor's degree	0.66	0.79	0.46	0.41	0.93	0.83
Graduate/professional degree	0.90	0.78	0.42	0.37	0.87	0.67
Don't know	0.98	0.97	0.54	0.70	1.67	1.78
Highest math course taken in high school						
No math	†	1.06	1.17	0.51	3.10	3.29
Basic math/pre-algebra	0.16	0.57	0.46	0.47	1.87	1.96
Algebra I, geometry, or algebra II	0.32	0.61	0.38	0.38	0.94	0.96
Trigonometry, statistics, pre-calculus	1.05	1.10	0.59	0.46	1.08	0.72
Calculus	1.85	1.46	0.55	0.53	1.07	0.57
No transcript collected	1.44	1.53	1.04	0.68	1.58	2.70

† Not applicable.

<sup>1</sup> Includes public, private for-profit, and private not-for-profit, both 2-year and less-than-2-year.<sup>2</sup> All race categories exclude Hispanic or Latino origin, unless specified. Asian or Pacific Islander includes Native Hawaiian.<sup>3</sup> The first language students learned to speak.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."

**Table B-5. Standard errors for figure 1 estimates (reasons for selecting first postsecondary institution among spring 2002 high school sophomores who first attended a 4-year postsecondary institution between 2002 and 2006)**

Reason for selecting first postsecondary institution	Standard error
Location	0.72
Program of study	0.81
Reputation	0.85
Cost	0.86
Personal or family reasons	0.77
Another reason	0.63

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."

**Table B-6. Standard errors for figure 2 estimates (reasons for selecting first postsecondary institution among spring 2002 high school sophomores who first attended a 2-year postsecondary institution between 2002 and 2006)**

Reason for selecting first postsecondary institution	Standard error
Location	0.93
Cost	0.99
Program of study	1.02
Reputation	0.98
Personal or family reasons	0.81
Another reason	0.70

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."

**Table B-7. Standard errors for table 5 estimates (percentage of spring 2002 high school sophomores who attended a postsecondary institution, by field of study most likely to pursue upon entering and select student characteristics: 2006)**

Characteristic	Business/ marketing	Health	Education/ teaching	Engineering/ computer science/natural sciences/ mathematics	Social sciences/ social work	Architecture/ design/urban planning	Fine arts/ humanities	Communi- cations/ journalism	Other	Don't know/ undecided
Total	0.46	0.46	0.34	0.44	0.36	0.17	0.31	0.19	0.49	0.30
Sex										
Female	0.53	0.72	0.52	0.43	0.52	0.21	0.43	0.28	0.57	0.43
Male	0.74	0.48	0.35	0.82	0.48	0.26	0.44	0.28	0.77	0.46
Race/ethnicity <sup>1</sup>										
American Indian or Alaska Native	3.29	4.51	4.38	5.36	5.21	0.88	1.70	†	6.34	4.57
Asian or Pacific Islander	1.32	1.57	0.39	1.44	0.82	0.52	0.82	0.46	0.98	0.94
Black or African American	1.20	1.36	0.88	1.31	0.90	0.27	0.71	0.61	1.11	0.62
Hispanic or Latino	1.10	1.18	0.95	1.01	1.05	0.46	0.69	0.51	1.52	0.88
White	0.61	0.56	0.44	0.52	0.45	0.23	0.40	0.24	0.61	0.39
More than one race	1.90	2.54	1.23	2.16	1.90	1.17	1.76	0.89	2.33	1.07
Family income										
\$0–\$20,000	1.35	1.49	0.94	1.02	0.88	0.51	0.77	0.63	1.51	0.85
\$20,001–\$50,000	0.71	0.83	0.55	0.75	0.57	0.28	0.44	0.29	0.82	0.54
\$50,001–\$100,000	0.71	0.65	0.54	0.65	0.53	0.27	0.55	0.33	0.78	0.48
\$100,001 or more	1.34	1.01	0.73	1.03	1.05	0.44	0.74	0.51	1.06	0.77
Parental education										
High school or less	0.93	1.06	0.72	0.86	0.71	0.38	0.47	0.35	1.10	0.67
Some college	0.77	0.83	0.64	0.73	0.59	0.30	0.47	0.33	0.87	0.53
Bachelor's degree	0.92	0.86	0.59	0.84	0.71	0.29	0.62	0.44	0.96	0.63
Graduate/professional degree	1.01	0.84	0.63	1.00	0.90	0.38	0.84	0.41	0.89	0.64
Native language <sup>2</sup>										
English	0.51	0.49	0.37	0.46	0.37	0.18	0.34	0.21	0.53	0.31
Non-English	1.04	1.21	0.81	1.15	1.00	0.47	0.65	0.41	1.32	0.87
School sector										
Public	0.50	0.50	0.37	0.47	0.39	0.18	0.34	0.21	0.54	0.33
Catholic	1.11	1.02	0.56	1.17	0.94	0.34	0.69	0.55	0.88	0.79
Other private	1.66	1.17	1.39	1.46	1.03	0.66	1.30	0.48	1.30	0.84

See notes at end of table.

**Table B-7. Standard errors for table 5 estimates (percentage of spring 2002 high school sophomores who attended a postsecondary institution, by field of study most likely to pursue upon entering and select student characteristics: 2006)—Continued**

Characteristic	Business/ marketing	Health	Education/ teaching	Engineering/ computer science/natural sciences/ mathematics	Social sciences/ social work	Architecture/ design/urban planning	Fine arts/ humanities	Communi- cations/ journalism	Other	Don't know/ undecided
Educational expectation in 10th grade										
High school or less	1.97	2.75	1.40	2.25	1.52	0.56	1.36	0.91	3.19	2.16
Some college	1.88	1.74	1.14	1.55	0.99	0.65	0.97	0.90	2.14	0.82
Bachelor's degree	0.68	0.67	0.54	0.67	0.54	0.27	0.58	0.33	0.80	0.58
Graduate/professional degree	0.62	0.72	0.48	0.66	0.60	0.29	0.45	0.25	0.59	0.42
Don't know	1.36	1.57	1.05	1.53	1.42	0.52	1.01	0.78	1.94	1.28
Highest math course taken in high school										
No math	3.61	9.35	2.24	8.00	6.90	†	†	†	9.53	4.25
Basic math/pre-algebra	1.92	2.57	1.96	2.70	1.35	0.47	1.48	0.63	3.51	2.30
Algebra I, geometry, or algebra II	0.68	0.81	0.50	0.53	0.54	0.25	0.47	0.33	0.90	0.55
Trigonometry, statistics, pre-calculus	0.78	0.74	0.57	0.74	0.60	0.31	0.54	0.32	0.70	0.47
Calculus	1.04	1.12	0.76	1.27	0.78	0.41	0.68	0.49	0.67	0.66
No transcript collected	1.62	1.42	1.37	2.25	1.55	0.66	1.11	0.96	1.77	1.05

† Not applicable.

<sup>1</sup> All race categories exclude Hispanic or Latino origin, unless specified. Asian or Pacific Islander includes Native Hawaiian.<sup>2</sup> The first language students learned to speak.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."

**Table B-8. Standard errors for figure 3 estimates (reasons for discontinuing postsecondary education among spring 2002 high school sophomores who were no longer enrolled in a postsecondary institution: 2006)**

Reason no longer enrolled	Standard error
Financial reasons	1.33
Other	1.31
Family responsibilities	1.13
Classes not available/scheduling inconvenient	1.01
Dissatisfaction with program/school/campus/faculty	0.85
Completion of degree/certificate	0.95
Academic problems	0.86
Finished taking desired classes	0.89
Personal health reasons	0.72
Traumatic experience	0.57
Military service	0.41

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."

**Table B-9. Standard errors for table 6 estimates (percentage of spring 2002 high school sophomores, by highest level of education attempted and select student characteristics: 2006)**

Characteristic	Some high school	GED <sup>1</sup> recipient	High school diploma or certificate of attendance recipient	Less than 4-year college enrollment	4-year college or university enrollment
Total	0.37	0.18	0.49	0.61	0.84
Sex					
Female	0.39	0.23	0.61	0.77	1.01
Male	0.50	0.26	0.66	0.76	0.95
Race/ethnicity <sup>2</sup>					
American Indian or Alaska Native	4.07	2.97	5.25	5.10	5.05
Asian or Pacific Islander	0.75	0.38	1.27	1.40	1.96
Black or African American	1.03	0.52	1.36	1.37	1.49
Hispanic or Latino	1.07	0.46	1.25	1.62	1.48
White	0.35	0.22	0.58	0.74	1.01
More than one race	1.39	0.90	2.09	1.78	2.60
Family income					
\$0–\$20,000	0.87	0.60	1.25	1.35	1.19
\$20,001–\$50,000	0.55	0.30	0.74	0.86	0.91
\$50,001–\$100,000	0.44	0.25	0.67	0.89	1.04
\$100,001 or more	0.43	0.27	0.69	1.23	1.52
Parental education					
High school or less	0.76	0.38	0.93	0.99	0.94
Some college	0.51	0.34	0.73	0.93	0.92
Bachelor's degree	0.52	0.27	0.74	1.02	1.26
Graduate/professional degree	0.52	0.28	0.83	1.04	1.42
Native language <sup>3</sup>					
English	0.35	0.19	0.52	0.63	0.86
Non-English	0.99	0.40	1.21	1.44	1.57
School sector					
Public	0.39	0.19	0.53	0.65	0.88
Catholic	0.19	0.20	0.65	1.77	2.10
Other private	0.43	0.29	1.52	2.55	3.23
Educational expectation in 10th grade					
High school or less	1.66	1.02	1.83	1.56	0.91
Some college	1.31	0.78	1.75	1.61	1.15
Bachelor's degree	0.40	0.25	0.72	0.92	1.08
Graduate/professional degree	0.34	0.18	0.53	0.85	1.03
Don't know	1.18	0.74	1.55	1.63	1.57
Highest math course taken in high school					
No math	4.17	2.66	4.08	3.09	1.67
Basic math/pre-algebra	1.88	1.10	1.94	1.89	0.96
Algebra I, geometry, or algebra II	0.54	0.27	0.80	0.89	0.91
Trigonometry, statistics, pre-calculus	0.18	0.09	0.65	0.97	1.20
Calculus	†	†	0.57	0.94	1.14
No transcript collected	1.87	0.99	1.74	1.50	2.59

† Not applicable.

<sup>1</sup>GED = General Educational Development certificate.<sup>2</sup>All race categories exclude Hispanic or Latino origin, unless specified. Asian or Pacific Islander includes Native Hawaiian.<sup>3</sup>The first language students learned to speak.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."

**Table B-10. Standard errors for table 7 estimates (percentage of spring 2002 high school sophomores, by current educational expectation and select student characteristics: 2006)**

Characteristic	Graduate from high school or less	Attend or complete a 1- or 2-year program	Attend a 4-year school, but not finish	Obtain a bachelor's degree	Obtain a master's degree or equivalent	Obtain a Ph.D., M.D., or equivalent	Don't Know
Total	0.32	0.43	0.17	0.48	0.52	0.33	0.29
Sex							
Female	0.37	0.58	0.27	0.69	0.73	0.49	0.39
Male	0.47	0.59	0.22	0.67	0.64	0.46	0.42
Race/ethnicity <sup>1</sup>							
American Indian or Alaska Native	3.99	4.12	2.47	5.26	3.00	2.53	2.94
Asian or Pacific Islander	0.58	1.14	0.44	1.43	1.50	1.29	0.77
Black or African American	0.81	0.98	0.55	1.29	1.08	0.73	0.71
Hispanic or Latino	0.89	1.32	0.44	1.16	1.08	0.73	0.83
White	0.40	0.53	0.21	0.62	0.67	0.45	0.36
More than one race	1.39	1.74	0.77	2.39	2.11	1.56	1.53
Family income							
\$0–\$20,000	0.96	1.10	0.51	1.27	1.05	0.62	0.68
\$20,001–\$50,000	0.51	0.66	0.29	0.86	0.63	0.46	0.49
\$50,001–\$100,000	0.43	0.60	0.27	0.82	0.80	0.58	0.46
\$100,001 or more	0.47	0.78	0.34	1.41	1.52	1.14	0.59
Parental education							
High school or less	0.74	0.84	0.36	0.90	0.70	0.47	0.62
Some college	0.48	0.70	0.29	0.77	0.70	0.47	0.47
Bachelor's degree	0.47	0.66	0.40	0.96	0.96	0.69	0.48
Graduate/professional degree	0.46	0.66	0.26	1.09	1.27	1.04	0.52
Native language <sup>2</sup>							
English	0.34	0.46	0.18	0.51	0.56	0.36	0.32
Non-English	0.85	1.21	0.38	1.29	1.07	0.90	0.80
School sector							
Public	0.34	0.46	0.18	0.51	0.55	0.35	0.31
Catholic	0.28	0.78	0.25	1.20	1.33	0.99	0.59
Other private	0.77	0.87	0.42	2.25	1.88	1.57	0.91
Educational expectation in 10th grade							
High school or less	1.65	1.78	0.43	1.51	1.01	0.37	1.37
Some college	1.30	1.68	0.73	1.29	0.95	0.40	1.01
Bachelor's degree	0.39	0.61	0.33	0.84	0.73	0.41	0.46
Graduate/professional degree	0.28	0.51	0.22	0.79	0.88	0.71	0.32
Don't know	1.18	1.36	0.56	1.56	1.22	0.91	1.30
Highest math course taken in high school							
No math	4.16	3.45	2.03	2.97	2.10	1.74	2.21
Basic math/pre-algebra	1.63	1.71	0.67	1.65	0.96	0.58	1.29
Algebra I, geometry, or algebra II	0.52	0.70	0.30	0.78	0.61	0.38	0.50
Trigonometry, statistics, pre-calculus	0.27	0.64	0.23	0.87	0.98	0.63	0.40
Calculus	0.10	0.47	0.26	1.30	1.43	1.42	0.45
No transcript collected	1.37	1.38	0.75	1.82	1.70	0.96	0.76

<sup>1</sup> All race categories exclude Hispanic or Latino origin, unless specified. Asian or Pacific Islander includes Native Hawaiian.

<sup>2</sup> The first language students learned to speak.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Second Follow-up, 2006."