DOCUMENT RESUME

ED 269 465 TM 860 320

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TITLE	National Longitudinal Study of the High School Class of 1972 Fifth Follow-Up Survey and High School and Beyond Third Follow-Up Survey. Field Test Report.
INSTITUTION	National Opinion Research Center, Chicago, Ill.
SPONS AGENCY	National Center for Education Statistics (ED), Washington, DC.
PUB DATE	15 Jul 85
CONTRACT	OE-300-82-0273
NOTE	132p.
PUB TYPE	Reports - Research/Technical (143)
EDRS PRICE	MF01/PC06 Plus Postage.
DESCRIPTORS	Adults; Data Collection; *Evaluation Methods; *Field Tests; Followup Studies; *Graduate Surveys; High Schools; Item Analysis; *Longitudinal Studies; National Surveys; *Questionnaires; Research Methodology; Responses; Statistical Distributions
IDENTIFIERS	*High School and Beyond (NCES); *National Longitudinal Study High School Class 1972; Response Rates (Questionnaires)

ABSTRACT

The combined field tests for the third follow-up survey of High School and Beyond (HSB) and the fifth follow-up survey of the National Longitudinal Study of the High School Class of 1972 (NLS-72) were conducted during the spring of 1985. The overall purposes of the field tests were to evaluate questionnaires and procedures to be used for the full-scale surveys scheduled for 1986. Both the NLS-72 and the HSB questionnaires were reviewed for item nonresponse for all items with four percent or more missing data. Both questionnaires included a large number of skip patterns. Empirical results concerning response rates to skip patterns were discussed and special problems requiring revision were analyzed. A calendar format was tested to offer an effective way of capturing periods of interrupted schooling and employment, reducing the size of the main survey data file without compromising data quality. The effectiveness of new and revised HSB and NLS-72 items were evaluated by frequency distributions and evaluators' observations. The current follow-up surveys of HSB and NLS-72 were conducted primarily by mail. However, locating for the NLS-72 field test was done by telephone. In addition, a separate questionnaire, the Teaching Supplement was developed for a subset of the NLS-72 sample. (PN)

FIELD TEST REPORT

NATIONAL LONGITUDINAL STUDY OF THE HIGH SCHOOL CLASS OF 1972 FIFTH FOLLOW-UP SURVEY

AND

HIGH SCHOOL AND BEYOND THIRD FOLLOW-UP SURVEY

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July 15, 1985

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Contents

1. FIELD TEST ACTIVITIES

The combined field tests for the third follow-up survey of High School and Beyond (HS&B) and the fifth follow-up survey of the National Longitudinal Study of the High School Class of 1972 (NLS-72) were conducted during the spring of 1985. Both HS&B and NLS-72 are longitudinal studies sponsored by the National Center for Education Statistics (NCES) of the Department of Education. The overall purpose of the field test was to evaluate questionnaires and procedures to be used for the full-scale surveys scheduled for 1986.

Since the surveys are longitudinal, most of the questionnaire items used in the field tests have appeared in previous waves. A few new items were added to HS&B; and many new items were added to NLS-72, especially in relation to the teaching profession. In addition, a separate questionnaire, the Teaching Supplement, was developed for a subset of the NLS-72 sample. The questions on teaching and the Teaching Supplement were supported by a National Science Foundation (NSF) contract.

Survey materials were submitted to the Federal Education Data Acquisition Council (FEDAC) in November 1984. Minor revisions requested by FEDAC were made, and the packages were submitted to the Office of Management and Budget (OMB). Approval was granted in January 1985.

Although the current rounds of HS&B and NLS-72 will be conducted in tandem, they were begun approximately eight years apart. There are many similarities between the two studies; however, each has its unique characteristics and history.

HS&B began in 1980 with a base year collection of test and survey data from approximately 30,000 high school sophomores and 28,000 seniors. Since that time, two follow-up surveys have occurred--one in 1982 and the other in 1984. For the first follow-up survey, the senior cohort was subsampled and has since remained constant. The sophomore cohort was subsampled at the time of the second follow-up survey. Hence, the third follow-up sample consists of 11,995 members of the senior cohort and 14,825 members of the sophomore cohort.

In preparation for the full-scale third follow-up survey, a field test was conducted with 408 individuals who were selected from an independent sample that was drawn for the base year field test in 1979. These young adults were sophomores and seniors at the time of the field test for the base year survey.

The primary objective of the HS&B third follow-up field test was to evaluate new and revised survey items. Although the questionnaire core was well established, the third follow-up survey will be the first time the same instrument will be used for both the sophomore and senior cohorts. Thus the applicability of questions to both cohorts, as well as the performance of new and revised items, was of interest during the field test.

The schedule and procedures for the full-scale third follow-up survey in 1986 will be the same as those used during the second follow-up survey. Therefore, there was no reason to alter the schedule for the current field test. Survey members were located during the fall of 1984, data collection began in February 1985, and data preparation was completed by June 1985.

During the NLS-72 base year, test and survey data from 23,000 high school seniors were collected. The sample for the fifth follow-up survey scheduled for 1986 involves close to 14,500 members of the original sample. Approximately 700 individuals were selected from the main fifth follow-up sample to participate in a field test prior to the full-scale survey.

The general purpose of the field test for the fifth follow-up survey of NLS-72, as for HS&B, was the evaluation of survey instruments and procedures. However, due to the long time lapse since the fourth follow-up and the emergence of new analytic issues, there were a greater number of specific objectives. One major objective was to assess the scope of locating and persuasion tasks that would be needed to ensure a satisfactory response rate of the NLS-72 sample. Although there had been two address updating efforts (in 1981 and 1983), a thorough tracing of unlocated or nonresponding survey members had not been undertaken since the fourth follow-up survey in 1979. Furthermore, since there had been an extended interval between data collection waves (the cohort had not been surveyed since 1979), the willingness of the fifth follow-up sample members to participate was unpredictable.

In contrast to the HS&B questionnaire, the NLS-72 instrument had been modified extensivly, thus requiring a considerable amount of instrument assessment. (See the section on new NLS-72 questionnaire items.) Some questionnaire items were modified to gather data for a relatively long period of time (six years) since the last follow-up survey. Modifications also were made to facilitate the study of the current life cycle period of the NLS-

72 cohort. Finally, revisions were made to permit comparative analyses of the NLS-72 sample and the HS&B cohorts. Many NLS-72 items and formats were changed to conform to the HS&B questionnaire.

The Teaching Supplement is an entirely new set of questions for the NLS-72 cohort. This supplementary questionnaire was developed to address topics such as teacher quality, career motivation, teaching experiences, and career satisfaction.

The rest of Section 1 describes the field test questionnaires, the samples, data collection, and data preparation tasks. Field test procedures and their results are reviewed and discussed with attention to their implications for the full-scale surveys in 1986.

Analyses of field test data are presented in subsequent sections of this report. Each section is designed to discuss a specific objective of the field test and to yield recommendations for modification of questionnaires and survey procedures.

1.1 Survey Instruments

A principal field test objective for both HS&B and NLS-72 was the evaluation of questionnaire performance to inform revisions of the instruments for the full-scale survey. The field test provided an opportunity to test questionnaire items that had been revised substantially since the last follow-up survey and to gauge the performance of items that were completely new. The questionnaires, therefore, included more items than were planned for the full-scale survey.

Evaluation of the field test instruments was based on analyses of field test data, on respondents' comments (both written and offered during telephone follow-up), and on a thorough review of completed questionnaires by the NORC coding staff. One of the goals of the evaluation process was to make recommendations about minimizing the burden imposed on respondents by lengthy questionnaires and, specifically, to recommend questionnaire items to be eliminated during the finalization of the survey documents. These recommendations, supported by discussions of issues related to questionnaire performance such as response variation, item nonresponse, and respondent burden, are addressed in other sections of this report.

This section reviews the current structure and contents of the HS&B questionnaire, and the NLS-72 core questionnaire and Teaching Supplement.

1.1 Survey Instruments

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1.1.1 HS&B Core Questionnaire

Due to the longitudinal nature of the study, a core of HS&B questionnaire items have remained mostly the same from one follow-up to the next. Yet with each wave a unique set of questions has been added to provide information that has current policy relevance. For instance, the first follow-up survey included questions on drug knowledge and use, and the second follow-up survey contained questions on familiarity with computers.

The HS&B third follow-up questionnaire currently includes the following sections which cover the topics indicated.

> Background Information: Respondent's birthdate, current activities, household composition, and geographic proximity to his/herhigh school.
>
> Work Experience: Information on up to four jobs, salary, how jobs were found and reasons for leaving; job training, employer-related training benefits and programs; attitudes toward current job, job

satisfaction; expectations about future careers or employment situations.

Periods Unemployed: Periods of unemployment, time devoted to looking for work, methods used for job searches.

Education: If and when respondent completed high school; educational aspirations; information on up to two postsecondary schools; attitudes toward personal educational experiences; and school finances.

Other Training: Participation in apprenticeships, manpower training programs; noncredit educational activities.

Family Information: Current marital status; marital history; occupation and educational background of spouse; anticipated family size; information on up to seven children.

Income: Sources and amounts of respondent income.

Experiences and Opinions: Attitudes toward financial matters, sex roles, and self; political and voting behavior, participation in voluntary organizations; leisure activities; importance of family, friends, work, and other aspects of personal life; physical and psychological disabilities.

School Record Information: Permission form to release postsecondary school records for survey purposes; request for social security number.

1.1.2 NLS-72 Core Questionnaire

The NLS-72 questionnaire has been revised extensively. Many questions appeared in previous NLS-72 follow-ups and constitute the "core" of the instrument. Some of these items have been modified only slightly (e.g., references to years were updated and minor wording changes made). Other items have been revised more substantially with major changes in content or format. New questions were added to the core to gather information on job training and child care. The new and significantly modified items are reviewed in detail in the sections on "New Questionnaire

Items--NLS-72 Core Questionnaire" and "Event History Item Formatting (Calendars)" sections of this report.

Substantial additions to the questionnaire were sponsored by the National Institute of Child Heath and Human Development (NICHD). Included were items that ask about marriages and marriage-like relationships, with special focus on first marriages, separations, and divorces. Also included were items that gather event histories on respondents' fertility, child-care responsibilities, and behavior of noncustodial parents. Questionnaire items that covered flows of resources between respondents and individuals outside the respondent's household and intergenerational transfers of resources were included as well. Most of the NICHD questions are in the Family Information and Household and Parents sections of the questionnaire (see list below).

Other substantial additions to the questionnaire were sponsored by the National Science Foundation (NSF). These items were included to investigate aspects of the teaching profession that have encouraged or discouraged the pursuit of teaching as a career. They are the final series of questions in the instrument and are referred to on the list below as Teaching Interest and Attitudes.

The NLS-72 fifth follow-up questionnaire currently includes the following sections and covers the topics indicated.

General Information: Respondent's birthdate; current activities.

Work Experience: Information about up to four jobs, salary, how jobs were found and reasons for leaving; employer-related job training benefits and programs;

attitudes toward current job, job satisfaction; periods of unemployment, unemployment insurance.

Education: Information about up to three postsecondary schools attended; current level of education; educational aspirations, field of study; school costs, resources, and financial aid; financial assistance from parents, dependent/nondependent income tax status.

Family Information: Marital history and family formation with an emphasis on the first marriage; divorce settlement, child custody and support, attitudes toward former spouse, post-divorce standard of living; current marital status, spouse's occupation, educational background, and current activities; anticipated family size; information for up to seven children.

Child Care: Arrangements for preschool and school-aged children, costs; educational expectations for children, financial planning for children's education.

Households and Parents: Past and current composition of respondent's household; household financial arrangements; social and economic networks and resource flows; parents' age, proximity to respondent, frequency of interaction, respondent involvement in planning for parents' retirement.

Background Information: Ethnicity, race, social security number; voting behavior.

Income: Sources and amounts of respondent's income.

Teaching Interest and Attitudes: Motivating and dissuading factors in teaching career decisions; opinions about teach · quality.

1.1.3 Teaching Supplement

A Teaching Supplement questionnaire was also sponsored by NSF. The instrument, which accompanied the main NLS-72 questionnaire, was designed to explore the career-related attitudes and experiences of survey members who are teachers, who were teachers, or who had prepared to be teachers.

The sections of the Teaching Supplement for the NLS-72 fifth follow-up survey and the topics covered are as follows.

Certification: Requirements of teacher training program and certification; level and field of certification.

Actual Teaching Experience: Periods of teaching, subject areas and grade levels; college courses taken related to areas and levels taught; respondent's self-assessment of preparation to teach; ability of students; professional development; retraining for another teaching field.

Allocation of Time: Classroom teaching, non-classroom duties, classroom activities.

Satisfaction with Teaching: General satisfaction; expectations about duration of teaching career.

School: Size of teaching and professional staff; assessment of student economic stratum; school location; respondent perception of changes in school activities, relationships, environment, and expectations; measures to improve student achievement; requirements for graduation (high school); reasons not employed as a teacher; collective bargaining.

1.2 Sample Design

1.2.1 High School and Beyond

The sample, drawn for the base year field test, has been reused for each follow-up field test. It was augmented (at the time of the second follow-up field test) to ensure that it represented the variability in the main sample and in order to meet various field test objectives. The original structure and current status of the field test sample are described in this section. The original sample was designed to be representative of the population of U.S. high school students. It was a purposive sample, drawn in stages. During the first stage, six states were chosen to represent the four census regions. At the second stage, a total of 42 schools was chosen from a stratification of schools within the states. Finally, 36 students within schools were

selected from rosters of the 1978-79 sophomore and senior classes using systemmatic sampling procedures. Approximately, 1,500 students from each class were selected. Data were collected from 1,291 sophomores and 1,245 seniors during the base year field test.

Although the first follow-up field test was not fully implemented, address update forms were sent to the 2,536 base year participants in 1981 and returned by approximately 510 respondents (265 sophomores and 245 seniors).

The second follow-up field test sample consisted of the 510 individuals for whom address updates were obtained in 1981. An analysis of the sample indicated a higher proportion of students with grades in the A-B range than in the base year field test sample. To reduce possible bias toward high ability respondents, the sample was augmented with 104 individuals selected from the base year field test sample who had reported grade averages of 69 (D) or below. A second criterion for the selection of the augmentation cases was nonresponse to the address update request in 1981. The purpose of adding this group was to approximate locating difficulties that were anticipated for the main study. After sending out a locating letter, addresses were eventually verified or updated for 408 members of the 614-member sample.

The current field test sample is composed of the 408 survey members for whom address updates were obtained during the second follow-up field test. There were 207 members of the sophomore cohort and 201 members of the senior cohort.

1.2.1.1 Implications of Sample Characteristics for Interpreting Field Test Responses

In order to assess the comparability of the field test sample to the main sample, field test data from the education, employment, family, and background sections of the questionnaire were compared with data from the second follow-up survey (senior cohort). Comparison of behavioral and attitudinal measures reveals very little difference in the characteristics of the samples. It should be noted that field test data are unweighted, and therefore caution should be exercised in comparing the two groups in ways other than on general questionnaire performance.

Education: On a measure of educational attainment (graduation from high school) the two samples were very similar. The percentage of the main sample that reported graduating from high school was 97.5 percent compared to 94 percent for the field test.

The educational aspirations of the two groups were also similar. Of the field test respondents, 39 percent planned to finish two to four years of college compared to 41 percent of the main sample. Twenty-three percent of the field test respondents aspired to master's degrees or doctorates compared to 18 percent of the main sample; and 15 percent of the field test sample planned to attend 2 to 4 years of vocational school compared to 18 percent of the main sample.

Employment: Members of the field test sample were only slightly more likely than the main sample to have experienced unemployment. Thirty-three percent of field test respondents

reported being unemployed at some time during the previous 21 months compared to 30 percent of the main sample.

The long-range employment expectations of both groups were similar. More respondents in both groups expected to be in professional occupations at age 30 than in any other employment category. Those expecting to have managerial positions were just over 10 percent in both groups and those expecting to have clerical jobs were also just over 10 percent in both groups. Approximately 8 percent of both samples expected to be teachers.

Family Information: Survey data indicated that the household compositions of the two groups were comparable. (Household composition is defined as the people with whom the respondent was living at the time specified.) The main sample was slightly more likely to be living with a parent, grandparent, and/or siblings. The field test sample was more likely to be living with a spouse and/or children. A comparison of the marital status indicated that eight percent more field test than main sample participants were married. The two groups also expected about the same number of children. The differences in expectations in family size did not exceed four percentage points.

The small differences in household compositions and percent married are likely to be due to the small difference in the ages of the samples and in life experiences such as leaving parents' home, marriage, and beginning families. Members of the field test sample were high school sophomores and seniors in 1979; the main sample was selected one year later and was therefore one year younger.

Background Information: Forty-seven percent of the main sample respondents reported living in the same place as they did when they were in high school, whereas thirty-nine percent of the field test respondents reported living in the same area. However, the proportion of the main sample who lived within a 100-mile radius of their high schools (27 percent) was less than that of the field test sample (39 percent).

This rudimentary comparison of field test and main survey samples suggests that the field test sample is similar enough to the main sample to permit reasonable assessment of questionnaires and survey procedures.

1.2.2 NLS-72

The existing NLS-72 field test sample was not suitable for the fifth follow-up field test. It had been drawn in 1971, and contact with sample members had not been maintained over the intervening years. Locating and gaining the cooperation of sample members after an extended period of survey inactivity posed major problems. Furthermore, costs to locate members of this sample after a long period without contact would have been prohibitive. Based on these considerations, a new field test sample was drawn. It was taken from the main sample selected for the fifth follow-up and will be retained as part of the main sample for the full-scale survey. A brief description of the main sample and the current field test sample are presented below. The fifth follow-up sample is a subsample of the active NLS-72 population of 22,652 students. The active population consists of those persons who participated in at least one of the previous waves of NLS-72.

The sample for the fifth follow-up retains the basic design of the base year, which was a stratified two-stage probability sample. During the first stage, schools were selected from strata based on type of control (public or private), geographic region, enrollment size, geographic proximity to institutions of higher education, proportion of minority group enrollment, community income level and degree of urbanization. During the second stage, students were selected on a probabilistic basis within schools.

The fifth follow-up sample was designed so that several policy-relevant groups would be retained with certainty. These groups were Hispanics, teachers and potential teachers, persons with college or advanced degrees, persons who had experienced marital disruptions (divorced, widowed, separated), and never-married parents. The strategy for selecting the rest of the sample was based on tradeoffs between cost and sample efficiency. The remaining cases (those not selected with certainty) were cross-classified into groups according to whether they had participated in the 1979 fourth follow-up survey (participants and nonparticipants) and by college experience (those who reported two years of college or less, and all others). The selection rate from these groups differed and was influenced primarily by analysis objectives. A total of 14,486 cases was selected.

To select the field test sample, the fifth follow-up sample of 14,486 was partitioned into five strata, which are shown in Table 1 2.2-1. Strata were determined by a combination of the policy relevance of certain groups and by field test objectives (such as analysis of cost and effectiveness of survey procedures). A total of 697 cases were drawn from the main sample.

Table 1.2.2-1

NLS-72 Fifth Follow-Up Survey Field Test Sample

Stratum	Stratum Size	Stratum Characteristics
A	200	Teachers who were fourth follow-up participants*
B	125	NICHD cases who were fourth follow-up participants but not teachers**
C	275	Other fourth follow-up participants
D	25	Fourth follow-up nonparticipants who were not NICHD cases
E	72	NICHD cases who were fourth follow-up nonparticipants
Total sample:	697	

*A "teacher" is a survey member who, according to information from the third and fourth follow-up surveys: (1) worked as a teacher at any level (except college or university); or (2) worked as an elementary or secondary school administrator; or (3) received a 2- or 3-year vocational degree, a 2-year academic degree, a 4- or 5-year college degree, or a master's degree in education; or (4) received a 2- or 3-year vocational degree, a 2-year academic degree, a 4- or 5-year college degree, or a master's degree and indicated that they intended to be a teacher or thought that they would be a teacher by the time they were 30 years old; or (5) received a 2- or 3-year vocational degree, a 2-year academic degree, a 4- or 5-year college degree, or a master's degree in science, mathematics, or engineering.

**An "NICHD case" is a divorced, widowed or separated spouse (or former spouse) or a person who was ever a never-married parent.

1.2.2.1 Implications of Sample Characteristics for Interpreting Field Test Results

In order to assess locating procedures and costs, the field test was purposely loaded with NLS-72 survey members who did not

participate in the fourth follow-up. In the field test, this group comprised approximately 14 percent of the sample, compared to about 3 percent in the main sample. It was expected that it would be more difficult and expensive to locate fourth follow-up nonparticipants than those who had participated in the 1979 survey. Ample representation of this group provided an opportunity to consider the effectiveness of various locating procedures and to estimate the level of effort and cost that will be required for locating nonparticipants during the full-scale survey in 1986.

Results of the prefield locating activities supported assumptions about the difficulty in locating nonparticipants. Nonparticipants were located at less than half the rate of participants (see the section on "Repondent Locating"). Since locating problems ultimately affect survey completion rates, the over-representation of nonparticipants in the sample resulted had an adverse effect on the final overall completion rate (see Data Collection).

In interpreting field test data, the overrepresentation of nonparticipants may have increased item nonresponse. The participation histories of these survey members demonstrates they are less inclined to cooperate in survey activities. They might also be less likely to fill out questionnaires in a careful, thorough manner.

One of the field test objectives for NLS-72 was to evaluate new questionnaire items about the teaching profession and to estimate the proportion of the main sample to target as

respondents for these items. During the field test, teachers and "potential" teachers were asked to answer these questions. Teachers were defined as those who had indicated, during previous follow-up surveys, that they had worked as teachers or administrators at any level other than in higher education, and those who had obtained education degrees. The definition of "potential" teachers was purposely broad in order to include as many individuals as possible who might at any time have had an interest in teaching. The goal was to include not only those who might consider teaching in the future, but also those who had considered teaching in the past and rejected the field. Potential teachers were defined as those who had received vocational degrees; those who had received two-year, four-year, or five-year college degrees; or those who had master's degrees and also had indicated interest in a teaching career during a previous follow-up survey. Potential teachers also included survey members who had studied science, mathematics, or engineering in a postsecondary school.

Teachers (as defined above) were oversampled for the field test to provide an optimal size group for evaluating the Teaching Supplement questionnaire items and for estimating the proportion of the sample who would be appropriate respondents to answer them. Teachers constituted almost 30 percent of the field test sample but less than 17 percent of the main sample. Because the principal criterion for selecting teachers was level of education, the overrepresentation of teachers in the field test sample might have resulted in better respondent performance on the more difficult sections of questionnaires (e.g., those with complex

skip instructions). Such a bias, however, might have been balanced by the possible nonresponse effect of fourth follow-up nonparticipants discussed above.

1.3 Data Collection and Preparation

Data collection consisted of a prefield and a field period. The major activity during the prefield phase was locating survey members and updating name and address information. Prefield locating activities were conducted from September to December 1984. Please refer to "Respondent Locating" for a review of prefield procedures and an analysis of outcomes.

The field period, which began in February and continued through May of 1985, was devoted to the simultaneous collection of survey data from the HS&B and NLS-72 samples. Obtaining completed questionnaires from at least 80 percent of each sample was the goal during the field period.

In the first week of February, questionnaire packages were mailed to survey members whose addresses had been updated during the fall locating period. Packages contained questionnaire(s), a cover letter, a newsletter, a general information sheet, a $5 incentive check, a pencil and a return envelope. All survey material was mailed first class with Address Correction Requested specified on the envelopes. A Teaching Supplement questionnaire was included in the packages sent to a subsample of 200 NLS-72 cases identified as teachers or "potential" teachers. (See the "Sample Design" section of this report for a description of the sampling procedures.)

Follow-up postcards were sent to survey members three weeks after questionnaires were mailed. The purpose of the postcard was to thank those who had completed and returned their questionnaires and to encourage those who had not yet returned their questionnaires to do so promptly.

Telephone prompting began for those who had not responded after four weeks. Telephone interviewers calling from NORC's central office in Chicago contacted survey members to urge them to complete and return questionnaires. Offers to remail survey material were made to those who reported they had not received, had lost, or had misplaced questionnaires. Several rounds of reminder calls were made. Calls were staggered, so that contacts with respondents were approximately two weeks apart.

The remainder of this section is a review of data collection results for the two samples.

1.3.1 HS&B Data Collection Results

In February 1985, questionnaire packages were mailed to 389 of the 408 members of the HS&B field test sample. These were individuals whose addresses had been updated during the prefield period or for whom some mailing address was available. At the end of a 15-week data collection period, an overall response rate of 81.9 percent had been achieved for the two cohorts.

As Table 1.3.1-1 shows, almost half of the questionnaires (49.3 percent) were returned by the end of the third week of data collection. There was a substantial decrease in the rate of return after the third week. The rate continued to decline with

Table 1.3.1-1

HS&B
Weekly Completion Rate
by
Cohort

	SOPHOMORES (N=207)		SENIORS (N=201)				
	Main Field Test Sample (N=190)	Augment (N=17)	Main Field Test Sample (N=178)	Augment (N=23)	Weekly Total	Cum Total	% of Total (N=408)
Week 1	16		25	1	42	42	10.3
Week 2	47	3	48	1	99	141	34.6
Week 3	31		28	1	60	201	49.3
Week 4	15		13		28	229	56.1
Week 5	16	1	7	2	26	255	62.5
Week 6	7	2	12	2	23	278	68.1
Week 7	2		1	2	5	283	69.4
Week 8	6	1	7	1	15	298	73.0
Week 9	3		5	1	9	307	75.2
Week 10	3		5		8	315	77.2
Week 11	6	1	5		12	327	80.1
Week 12	1		1	1	3	330	80.9
Week 13							80.9
Week 14				1	1	331	81.1
Week 15	3				3	334	81.9
Column Totals:	156 (81.7%)	8 (47.1%)	157 (88.2%)	13 (56.5%)	334 (81.9%)		
Column Totals:	164 (79.2%)		170 (84.6%)				

the exception of small upturns in Week 8 and Week 11, attributed to telephone prompting.

The first round of telephone prompts began in early March, Week 5. The benefit of this telephone contact with survey members was realized approximately three weeks later during Week 8. The second round of prompting calls began in late March, during Week 7. An increase in questionnaire receipt occurred about four weeks after these calls began. For the second set of telephone prompts, there was a greater time lag between prompt calls and questionnaire receipt, and the rate of questionnaire return was not as significant as the rate that resulted from the first prompt. This is not surprising since the more difficult cases generally are dealt with at the end. Approximately 6 percent of all questionnaires that were eventually returned could be attributed to the initial telephone prompt; only 3.7 percent came in as the result of the second prompt.

There was a relatively small difference in the completion rates for the sophomore and senior cohorts (79.2 percent and 84.6 percent, respectively). There were, however, significant differences between the completion rates of the main field test sample respondents and the augmentation cases. Survey members added to augment the sample were individuals who did not respond during the locating effort in 1981. Their nonresponse in 1981 and low response rate during this field test demonstrate the reluctance of this group to participate. Gaining participation of main sample survey members with similar characteristics will require substantial resources.

Table 1.3.1-2 compares the current field test results with the previous field test, and suggests possible trends that have implications for the data collection schedule and completion rate during the full-scale survey in 1986. Fifteen weeks rather than 11 weeks were required for this field test to achieve a completion rate comparable to that of the 1983 field test. During the full-scale survey, it may be wise to involve the field staff at an earlier point in order to achieve the desired completion. Although the NORC field staff is not involved in data collection during field tests, they are in place for the full-scale survey. They undertake intensive locating efforts for survey members not reached from the central office. Field staff also have responsibilty for telephone prompting and telephone and personal interviews.

The completion rate of the two cohorts, which was almost the same in 1983, differed by almost 6 percentage points during this field test (see Table 1.3.1-1). The completion rate (84.6 percent) for the elder cohort was an improvement over the last field test (82.1 percent); the completion rate for the younger cohort (79 percent) was slightly lower than the last field test (81 percent). Although these are small differences, they suggest the possibility of a trend among the sophomores that warrants attentive monitoring during the full-scale survey.

Table 1.3.1-2

HS&B
Comparison of Second and Third Follow-up Field Test
Weekly Mail Receipt of Completed Questionnaires

	SOPHOMORE COHORT		SENIOR COHORT		TOTAL	
	Second Follow-Up Field test	Third Follow-up Field test	Second Follow-Up Field test	Third Follow-Up Field test	2nd FU FT	3rd FU FT
Week 1	11.1	7.7	16.4	12.9	13.7	10.3
Week 2	35.8	31.9	39.3	37.3	37.5	34.6
Week 3	48.8	46.9	51.7	51.7	50.2	49.3
Week 4	55.6	54.1	57.7	57.7	56.4	56.1
Week 5	63.8	62.3	65.7	62.7	64.7	62.5
Week 6	66.7	66.7	70.6	69.7	68.6	68.1
Week 7	70.5	67.6	72.1	71.1	71.3	69.4
Week 8	78.3	71.0	76.6	76.6	77.5	73.0
Week 9	78.7	77.5	78.1	78.1	78.4	75.2
Week 10	80.2	73.9	79.6	80.6	79.9	77.2
Week 11	81.2	77.2	82.1	83.1	81.6	80.1
Week 12	----	77.8	----	84.1	----	80.9
Week 13	----	77.8	----	84.1	----	80.9
Week 14	----	77.8	----	84.6	----	81.1
Week 15	----	79.2	----	84.6	----	81.9

1.3.2 NLS-72 Data Collection Results

Although the overall response rate for the NLS-72 sample cohorts was 74.6 percent, there were considerable differences in the completion rates of the five subsamples (Stratum A through E). As Table 1.3.2-1 shows, the response rates of Stratum A and C were 87.5 percent and 83.5 percent, but the rates for Stratum B, D, and E were much less favorable (65.6 percent, 47.7 percent, and 28.0 percent, respectively). These low response rates are not surprising given the characteristics of the subsamples. Stratum B members were selected because they had had marital disruptions or were never-married parents. It is likely that a group chosen on the basis of such criteria would be more difficult to find and less inclined (as a group) to cooperate with the completion of a questionnaire than a group with more conventional patterns of family formation. Those in Stratum D and E were nonparticipants during the fourth follow-up survey. The low completion rates for these groups were attributable to considerable difficulty in locating them. Only 37 percent of the survey members in these strata were found during the fall locating period.

If the NLS-72 mail receipt pattern is compared to that for HS&B, different curves in response rates are apparent. In general, NLS-72 survey members returned questionnaires at a slower rate than the HS&B cohorts. This was true even for the two high completion rate strata (A and C). Approximately half of the HS&B questionnaires were returned after three weeks, but it was not until Week 5 that the Stratum A and C subsamples had achieved similar results, and it was not until Week 8 that a comparable rate had been reached by Stratum B. The completion rates for

Table 1.3.2-1

NLS-72
Weekly Completion Rate
by
Stratum Type*

	% of Stratum A	% of Stratum B	% of Stratum C	% of Stratum D	% of Stratum E	% of Total Sample
Week 1	---	---	---	---	---	---
Week 2	6.0	4.0	5.8	8.7	---	5.1
Week 3	30.0	23.2	30.6	26.1	5.6	26.5
Week 4	45.0	30.4	45.2	26.1	7.0	38.0
Week 5	51.0	36.0	56.5	26.1	9.8	45.5
Week 6	60.5	39.2	62.7	39.1	12.6	52.0
Week 7	65.0	44.8	67.4	39.1	12.6	56.2
Week 8	74.5	49.6	71.0	43.4	16.8	61.8
Week 9	76.5	53.6	73.6	47.7	18.2	64.4
Week 10	80.5	56.0	76.2	47.7	19.6	67.0
Week 11	81.0	60.0	78.8	47.7	25.2	69.6
Week 12	86.0	63.2	80.6	47.7	25.2	72.4
Week 13	86.5	63.2	80.6	47.7	25.2	72.5
Week 14	87.5	64.8	83.5	47.7	25.2	74.2
Week 15	87.5	65.6	83.5	47.7	28.0	74.6

*Stratum A: Teachers who were fourth follow-up participants
Stratum B: NICHD cases who were fourth follow-up participants but not teachers
Stratum C: Other fourth follow-up participants
Stratum D: Fourth follow-up participants who were not NICHD cases
Stratum E: NICHD cases who were fourth follow-up nonparticipants

Stratum D and E never reached 50 percent. All of this suggests that the NLS-72 sample will require a greater level of effort in order to attain desired response rates.

It is important to recognize that the response rate for the field test was heavily influenced by the NICHD supplemental sample. The response rate for the NICHD cases was 50.5 percent, while the response rate for the NCES sample was 81.9 percent. Since 197 of the 697 cases were NICHD sample members, their lower response rate had a strong impact on the overall field test response rate.

Field test results have implications for completion rate goals and allocation of data collection resources during the main study in 1986. The very different response rates of the strata, given approximately the same level of effort, suggest that it will be necessary to establish some priorities in the effort expended on each of the strata during the full-scale survey. For instance, although some improvement of the poor completion rate of Stratum E (28.0 percent) is possible, achieving a rate comparable to the other strata is not likely. The Stratum E response rate is the result in large measure of locating difficulty -a characteristic of the stratum because of sample selection criteria (i.e., Stratum E cases are nonparticipants as well as NICHD cases). Therefore, data collection efforts and costs past a certain point are not likely to be productive. The recommended alternative to directing extra effort to increasing the Stratum E response rate is giving priority to Stratum B (also NICHD cases but offering less locating difficulty because they were fourth

follow-up participants). Such prioritization would maximize data collection resources. Of course, if unanticipated trends become apparent during the full-scale survey, priorities can be readjusted.

Follow-up calls were made by NORC telephone interviewers during the data collection period to encourage survey members to return questionnaires. Some of those contacted indicated they would return questionnaires but ultimately failed to do so. When the field period had ended, these individuals were recontacted and asked why they had not returned questionnaires. They were also asked if anything might have been done differently to secure their cooperation.

The reason survey members most frequently gave for not returning questionnaires was that they lacked the time to fill them out. An extension of calendar time would not have been a solution. Responders felt their personal daily schedules were already too full to add what appeared to be a time-consuming task. Most other reasons were also related to burden: the questionnaire was too long, or questionnaire items required more effort than respondents were willing to give. For example, one respondent referred to the series of income questions as "a mini tax return."

Those interviewed were asked if they would have been more inclined to participate if they had had more information about the study. Most were not interested in additional information.

Asked if they would have been willing to participate in a telephone or in-person interview, about two thirds of the HS&B "nonrespondents" indicated they would have been willing to cooperate in one of the alternative methods. About half of the

NLS-72 survey members said they would. Of course, these responses have to be considered with appropriate reservations since those contacted were asked about a hypothetical situation--they were not asked to actually complete the questionnaire.

Survey members were asked if a larger incentive would have encouraged them to participate, and almost all indicated it would not have made a difference.

These postfield interviews offer additional evidence that there is a significant respondent burden imposed by the current length of the questionnaires. That burden must be reduced if desired completion rates are to be reached during the full-scale survey.

1.3.3 Data Preparation

Questionnaires returned by respondents were reviewed by the NORC coding staff and edited for readability and completeness. Coders supplied codes to indicate if respondents made errors (such as failing to follow instructions) or if questions were skipped inappropriately. Coding specifications were written to preserve respondent error and missing data. There was no validation or retrieval of data from respondents.

Comments that respondents had written in questionnaires were noted during the coding/editing process. Respondent comments together with coder evaluations provide the bases for the qualitative assessments of questionnaire items throughout this report.

All questionnaire data were entered using a conventional key-to-disk method with 100 percent verification of data entry. Raw,

unweighted data were used for the system files created for analysis of field test data. Machine editing programs were not used.

2. NONRESPONSE AND RESPONDENT BURDEN

2.1 NLS-72

The NLS-72 fifth follow-up questionnaire was reviewed for item nonresponse. Since nonresponse may signal problems of clarity in question wording or instructions, it can serve as a diagnostic tool for determining revisions that need to be made for the full-scale survey. All items for which there was 4 percent or more missing data were examined. While many non-critical items in the full-scale survey have this much or more missing data, it was felt that setting the threshold relatively low would permit a closer examination of possible sources of confusion. The reader should note that missing data in this section will refer to illegitimate skips, that is, to questions that apply to all respondents or to a subgoup of respondents but which are not answered.

All items with 4 percent or more missing data are listed below along with a description of any problems and the proposed changes for the full-scale survey instrument.

Item 4: Did the respondent own a house, apartment, co-op, condominium or mobile home?

Seven percent of the field test sample members did not answer this item. The item appeared at the bottom of page 1, and therefore some respondents may have missed it. Simply placing the item in a more prominent spot may be enough to boost the response level.

Items 6F, 7F, 8F, 9F: Whether job was seasonal

This item has not been part of the work history sections of the ELS questionnaires before. The missing data level was 4 percent to 6 percent. Comments on some questionnaires indicated respondents were unclear about the definitions of "seasonal." A couple of examples will be added to the main survey instrument.

Items 6G, 6H, 7G, 7H, 8G, 8H, 9G, and 9H: Job salaries

These are items within the job history sections that ask respondents to indicate their starting and ending or current salaries for each job they indicate. The level of missing data ranged from 4 percent to 7 percent, and this is somewhat lower than the levels of missing data that occurred for these same items in the second follow-up survey. The experience of the ELS surveys has been that respondents have difficulty providing complete and accurate information on dollar amounts, and this is just another example of the problem. Since the level of missing data is lower than that of the HS&B second follow-up survey, no further changes are recommended in question wording.

Item 11 and subparts A, B, and C: Employer-provided training, number of hours per week and number of weeks

Missing data on this item and the subparts ranged from 10 percent to 20 percent. Many respondents answered the initial filter item here but then failed to complete parts A, B and C. Also, those respondents who had received some training benefits often indicated the number of hours per week and the number of weeks they had spent in various kinds of training without indicating they had received such training. For a full

discussion, see "New Questionnaire Items--NLS-72 Core Questionnaire."

Item 12: Was training aimed at retraining respondent because job was phased out?

This item was not answered by 19 percent of the respondents. Again, see the section on "New Questionnaire Items--NLS-72 Core Questionnaire" for a full description.

Items 13A and 13B: Whether the respondent has had any training since 1979 to improve skills within current job and/or to prepare for a new job?

These two items were not answered by 7 percent and 9 percent respectively of the respondents. See "New Questionnaire Items NLS--72 Core Questionnaire."

Items 23 through 26: Education costs and forms of financial aid received for schools attended since 1979

This section begins with an item asking respondents to indicate the two most recent time periods they were in school. A sequence of questions then follows about the cost of tuition and fees, room and board at these schools, and loans and grants and scholarships received during those time periods. Before each subpart, the respondent must repeat the two time periods he or she is describing. This was done in order to ensure that the respondent kept the same time periods in mind as he or she answered the sequence of questions. According to Q.23, 151 of the 506 respondents had obtained schooling since 1979.

Table 2.1-1 shows the high level of item nonresponse for this section. For instance, in Question 23 respondents are asked first to label two columns according to the time period(s) they had

attended school. Then they are instructed to enter separate dollar amounts for tuition, room and board, and total costs in the columnns that correspond to the two time periods. They must not only remember the information called for but also enter it in the right place.

Editors noted that errors were made frequently on these items--amounting in some cases to 4 percent of the respondents. The extent of nonresponse and error for these items suggest that respondents found it difficult to keep time periods and corresponding costs (and resources) clearly in mind, and/or had difficulty entering them in the appropriate places.

Table 2.1-1
Percent of Item Nonresponse for Sc ol Finances Q tions

Question	1st Period		2nd Period	
	Eligible Respondents	All Respondents	Eligible Respondents	All Respondents
Question 23				
Years	23	11	41	18
Tuition & Fees	25	12	42	19
Room & Board	30	14	45	20
Total Annual Costs	29	14	45	23
Question 24				
Years	65	11	65	10
Years (A)	72	11	75	11
Years (B)	61	9	65	10
Question 25				
Years	50	12	58	12
Years (A)	57	14	59	12

An additional problem of this section was that very few respondents could identify specific kinds of loans or financial assistance. For instance in Question 24, only 26 persons in the first period and 28 persons in the second period indicated they had received a loan. About 45 to 50 persons did not provide answers. Going on to the types of loans received, Table 2.1-2 displays the frequencies and missing data (legitimate skips) for specific types of loans for each time period.

Table 2.1-2
Frequencies and Missing Data for NLS-72 Question 24A

Type of Loan	First Period		Second Period	
	N	Missing	N	Missing
Nat'l Dir Stud	4	43	3	51
Fed GSL	15	43	9	51
Nursing Loan	0	43	2	51
State Loan	8	43	5	51
Coll-Univ Loan	1	43	2	51
Bank Loan	1	43	1	51
Loan-Parents	6	43	6	51
Loan Unknown	2	43	0	51
Fed Insured Loan	2	43	2	51
Other Loan	4	43	7	51

Two points are evident from this table. First, missing data continues at a very high rate. About one-third of the 151

respondents who were eligible to answer did not supply information. Second, there is a very strong funnelling process going on: because most respondents had received their schooling by 1979, these questions applied only to a minority. Within this group a much smaller subset, 26 to 28 persons, received any loans, and within this subgroup only a handful could identify a specific kind of loan for each period. All of this demonstrates that the school finance section applies to a minority of cases and in the end yields only very small frequencies. For the NLS-72 cases, receipt of school loans is a relatively rare event and therefore should not occupy much space in the questionnaire.

Item 24B asks respondents to enter the total dollar value for the loans received. Similar to Item 24A, only 39 and 35 individuals provided answers, and answers for 44 and 46 cases were missing.

The next question (Q.25) asked respondents to indicate whether they had received resources other than loans, such as grants, scholarships, or parental assistance, for any schooling they had received since 1979. For the sake of brevity, we have not included a table. However, the pattern was similar to that for the loan section. Sixty-three persons in the first period and 44 persons in the second period indicated receiving aid, and the number of illegitimate skips ranged from 50 to 60. Again, very few respondents could identify specific kinds of assistance. The highest frequency for any particular type of assistance was 30, for use of savings or earnings during the first period of schooling.

Item 26 asked respondents about whether repayment had begun for any education loans received since leaving high school. Data was missing for about 45 cases, or 9 percent of the total group.

The relatively high level of missing data in this section suggests that respondents had some problems following the sequence or that this information is difficult for respondents to remember. For the field test, they were asked to review six years of activities, and for the full-scale survey, they will have to recall events over a 7-year period. Furthermore, even if respondents can recall the dollar amounts, types of loans and assistance, relatively few of them reported receiving loans and assistance from government programs or other sources.

In order to obtain more information and reduce the amount of missing data, we would suggest that the section on postsecondary education costs be consolidated. Instead of asking respondents to identify ahead of time two time periods they were in school and then target their answers to the two time periods, we recommend asking them to provide information on loans and assistance received since 1979. Simply stated, the question sequence might read as follows:

Did you attend school between 1979 and 1986? Yes No (skip)

Did you receive any loans? Yes No (skip)

Types of loans.....	Number of Years.....	Dollar Amount

Did you receive any other kinds of assistance, such as scholarships, grants, parental assistance, etc.?

Yes No (skip)

Kinds of Assistance.....	Number of Years.....	Dollar Amount

Such an approach would simplify the sequence, reduce the onerous instructions to the respondent, and eliminate the need for him or her to constantly record the same periods of time. Also, since the respondent would not be limited to two time periods, he or she might have more to report, thus increasing the chances that the use of various types of assistance would be captured more completely.

Items 27, 28, 29: Days spent with parents, financial assistance from parents, and whether respondent is claimed as a deduction

The level of missing data for these items was 7 to 10 percent. This compares to 3 to 6 percent for comparable items in the the senior cohort questionnaire used in the HS&B second follow-up survey. Since these respondents are supplying information for six rather than two years, this question may appear burdensome and discourage people from answering. Results showed that from 375 to 414 respondents that indicated for the years given they had not lived a single day with their parents. Therefore, we recommend that a response alternative be added that allows the respondent to check that he or she spent 0 days living with his or her parents during the years listed. The addition of an alternative covering the entire time period should reduce the burden for participants.

The same type of alternative should be created for the question on financial assistance (Q.28). Respondents should be able to check that no financial aid was received during any of the years listed.

Item 89: Number of children respondent has ever had

Thirteen percent of the respondents did not supply an answer to this question. This item is embedded in a skip pattern beginning at item 87, which asks the number of children respondents expect to have. The coding staff noticed that the skip instruction, which allows respondents to skip items on children if they do not anticipte having children, was placed in an ambiguous position. Forty-three respondents indicated they expected to have a certain number of children but then failed to answer the item on children.

We recommend that item 87 be revised to ask respondents to write in the number of children they expect. A more complete instruction should be given for "0": "If you expect '0' children, skip to Q. 106." Making the skip instruction more explicit should reduce confusion and the level of missing data.

Item 119: Social Security Number

The missing data on this item was 5 percent. At this time, we have no recommendations to make regarding any wording or format changes. Telephone retrieval may represent the best way to boost response rate.

Item 122: Income

Respondents were asked to supply information on fourteen different sources of income they may have received over the past two years. Income sources are listed in two columns, one for each year, and the respondent is supposed to add them up and enter the total for each column. If the respondent has no income from a particular source he or she is instructed to enter "0". When the

respondent did not enter anything, the item was classified as illegitimate skip. For 1984, the missing data ranged from 67 to 113 cases or 13 percent to 22 percent. For 1985, it was somewhat higher: 100-136 or 20-27 percent. This compares to about 3 percent for the HS&B second follow-up senior cohort.

There are two explanations for the differences in missing data. First, there was an error in the years listed on the field test. Instead of 1984 and 1985, the years should have been 1983 and 1984. Since it was impossible to provide complete information on 1985, respondents may have been unclear about what they were supposed to do. The second and more important explanation for differences between the NLS-72 field test and HS&B income items is that income was a critical item on HS&B. When the item was left blank, respondents were telephoned and asked to supply missing information. Should income be declared a critical item for the fifth follow-up survey, it appears that considerable effort will be needed to obtain complete information.

The fact that the income item is located near the end of a very lengthy questionnaire suggests that respondents become too tired and unwilling to provide complete answers. One respondent wrote in a comment that said this was too tedious and likened it to a "mini income tax form." Shortening the overall questionnaire may reduce fatigue enough to increase the response rate to this item.

2.1.2 Implications of Nonresponse for Retrieval

While mailed questionnaires are much less costly than personal interviews, they are more susceptible to missing data,

since an interviewer is not present to see that each question is answered. In order to alleviate this problem, "critical" items will be identified which will be subject to retrieval by telephone. These items are so designated if they are deemed crucial to the methodological or analytical objectives of the study. Most of the key items are of self-evident policy relevance; others are usually chosen as a means of checking whether survey respondents properly followed routing instructions, or whether they inadvertently skipped portions of the questionnaires.

During the main survey, when a questionnaire arrives, it passes through a Critical Item Edit process which flags any critical item that has not been answered. The questionnaire is then routed to a data retrieval station where respondents are called by telephone to obtain missing information and clear up any ambiguities in their responses. During the HS&B second follow-up survey, about 29 percent of the sophomore questionnaires and 33 percent of the senior questionnaires required retrieval.

As we prepare for the full-scale survey, it is important to assess the level of nonresponse for items which are prime candidates for retrieval. This assessment helps us judge the magnitude of the task, the number of persons needed to carry out retrieval, and the costs involved. Table 2.1.1-1 below lists possible retrieval items and the percent of missing data that occurred in the field test. The items selected represent items that have been designated critical in past HS&B surveys and items which are filter questions.

Table 2.1.1-1
Nonresponse Rates for Potential Critical Items
NLS-72

Item	Content	Percent Illegitimate Skip
3	What were you doing the first week of Feb 1985	1
1Ø7	With whom did you live the first week of Feb 1985	3
21	How far in school do you think you will get	6
15	Between Oct 1979 & Feb 1985, did you attend any school...	1
17	First postsecondary school	1
17B	When did you attend (calendar)	2
18	Second postsecondary school	1
18B	When did you attend (calendar)	1
23-1	Total tuition and fees	12-19
23-3	Total cost of schools	14-2Ø
24B	Total value of loans	9
26	Have you begun repayment of of education loans	9
5	Between Oct 1979 & Feb 1985 did you hold full-time or part-time job	1
6	First job--what kind of job	1
6E	When were you working at this job	2
7	Second job--what kind of job	2
7E	When were you working at this job	2
8	Third job--what kind of job	3
8E	When were you working at this job	3
14	Between Nov 1979 & Feb 1985, were you unemployed	3
14B	Did you receive unemployment insurance	2
82	Marital status as of Feb 1985	6
36	How many times were you married	2
89	How many children have you ever had	13
98A	What were childcare arrangements for preschoolers	17
98B	What were childcare arrangements for school-age children	19
1Ø6	During spring 1972, with whom were you living	4
117	What is your origin	2
118	What is your race	1
122	Income	13-27
123	Have you ever considered elementary, secondary teaching	2
124	If conditions were right, would you consider going into elementary or secondary teaching	4
TS2	Which of these groups defines you	7
TS3	In which fields were you certified	2
TS5	Did you teach during the 1984-85 school year?	Ø

Note: Percentages represent the number of illegitimate skips divided by 5Ø6. For the three Teaching Supplement items, the number missing is divided by 126.

Most of these items have relatively low nonresponse rates. However, these percentages may underestimate the actual level of missing data to expect in the main survey. It should be remembered that the field test has a response rate about 10 percentage points below the main survey, and this last 10 percent often represents the respondents who have to be prompted more often and generally are less cooperative with survey participation. Their questionnaires may very well be less complete.

By far the highest level of nonresponse occurs for the school financing questions, the number of children, childcare arrangements, and income. All of these items have been discussed earlier in this section along with recommended actions for instrument modification. Some reduction in nonresponse should result from questionnaire revisions. Yet we can probably still expect moderate levels of nonresponse for these items, perhaps as much as 10 to 12 percent.

2.1.2 Respondent Burden

The final question answered by the NLS-72 field test sample members was, "Altogether about how many minutes did it take you to complete this questionnaire?" The results are displayed in Table 2.1.2-1.

Table 2.1.2-1
Minutes Required to Complete the NLS-72 Fifth Follow-Up
Field Test Questionnaire

Minutes	N	Percent	Cum Percent
15-30	63	13	13
31-45	98	20	33
46-60	122	25	58
61-75	56	12	70
76-90	77	16	86
91-105	5	1	87
106-120	40	8	94
over 120	28	6	100

The survey design called for a questionnaire which could be completed in about 45 minutes by most respondents, but the mean number of minutes required was 69. Table 2.1.2-1 shows that only twenty percent of the respondents could complete the questionnaire in 45 minutes or less. A little over half the respondents were able to complete the survey in an hour or less time. However, 42 percent required more than an hour, and 6 percent required more than two hours.

Clearly, with two-thirds of the sample requiring more than 45 minutes to complete the survey, the questionnaire is longer than was intended. This is not surprising because the field test usually is longer than the full survey in order to permit the evaluation of a longer set of questions. Field test results are then used to determine what items will be kept and which items will be eliminated in the final document.

Because supplementary studies that add more items to the questionnaire have been approved since the field test began, it will be especially important to look for items to eliminate. The

Spencer Foundation supplement alone will add approximately four pages of attitude questions to the existing NLS-72 core questionnaire. Also, a few more questions will be added to the core questionnaire and the Teaching Supplement as part of the additional National Science Foundation grant. Furthermore, the 2,400 persons who were drawn into the sample to complete the Teaching Supplement must complete both the core questionnaire and the supplement. These persons will receive a higher incentive payment, but we cannot be sure that it will offset the fairly heavy burden of completing both questionnaires. We know from past experience that as burden increases, willingness to participate in the study decreases. This point was reinforced by the telephone interviews we conducted with a group of field test nonrespondents. Most of them cited the length of the questionnaire and lack of time as the main reasons for nonparticipation. Hence, a burdensome questionnaire could threaten the goal of attaining a completion rate of 90 percent. In addition, it would elevate the cost of data collection and preparation.

3.2 High School and Beyond

The High School and Beyond field test questionnaire was examined using the same criteria as the NLS-72. Each item with 4 percent or more illegitimate skips was examined to determine if some improvement in instructions, question wording or sequence could be made.

Items 8G, 8H, 9G, 9H, 10G, 10H, 11G, 11H: Starting salaries and wage types and ending salaries and wage types

These items ask the beginning salary and wage type for the four jobs that respondents can report. Illegitimate skips ranged from 2 to 6 percent. This level of missing data is comparable to that obtained in the second follow-up of High School and Beyond. No recommendations for change are indicated.

Item 12: Did respondent have full-time job between March 1983 and February 1985

This question, which was not answered by 5 percent of the respondents, is a filter item for the sequence of questions having to do with on-the-job training. The items are identical to the NLS-72 series beginning with Q.11. The suggestion for that item applies here as well. The question and its subparts should be laid out to make the second skip opportunity more explicit. See the NLS-72 section on new questionnaire items for a full explanation.

Item 13: Received formal training outside the job

Five percent of the respondents did not answer this question. This compares to about 4 percent during the second follow-up survey for the same item. Editors noted that under 13A where respondents could write in the place where training was received, they often wrote in "on-the-job." This indicates that respondents are somewhat confused about what is desired in this answer. We recommend that the instruction be revised to emphasize that they should include only formal training programs and not on-the-job training. Further clarifying the question may improve the response rate.

Items 13E1, 13E2, 13E3, 13E4: Availability of equipment used in training, whether it was in good repair, up-to-date, and provided preparation for job

About 4 percent of all respondents and about 10 percent of those eligible to answer this series of questions did not do so. This level of missing data is still below that encountered in the second follow-up survey for this same set of questions, and therefore no changes are recommended at this time.

Items 35A through 35J: How many years of coursework taken in ten different subjects

The missing data ranged from 3 to 7 percent on this set of items. On the comparable items for the second follow-up 3 to 4 percent of the senior cohort and 3 to 7 percent of the sophomore cohort did not answer. Hence the level of missing data is the same, and no recommendations for change are made at this time.

Item 36: Did the respondent attend school during 1983-84 and during 1984-85

Four and 5 percent of the field test participants respectively did not indicate whether they had attended school during these years. Missing data for this series in the second follow-up was less than 1 percent, and this is explained by the fact that it was a critical item. The level of missing data in the field test suggests that the item should remain on the critical item list.

Items 36A, 36B, and 36C: Tuition, room and board, and total cost of schooling for 1983-84 and 1984-85

Respondents were to enter dollar amounts for tuition, room and board, and the total cost of schooling for each year. Missing

data ranged from 4 to 6 percent for these items. During the second follow-up survey, questions on tuition and fees and total costs were critical items, and missing data were held to 1 percent. Missing data for room and board values, which was not a critical item, was about 5 percent. Therefore, the level of missing data for the cost of schooling appears to be comparable to that for the second follow-up survey, and the response rate will need to be improved through telephone retrieval.

Item 37, 37A and 37B: Whether the respondent received scholarships and grants, kinds of scholarships and grants, and dollar amounts for 1983-84 and 1984-85

From 4 to 5 percent of respondents did not provide information in this section. This compares to .5 to 1 percent for the second follow-up survey (both cohorts). Considering the size of the sampling error for the field test, which is a little over 2 percent for these items, nonresponse does not appear to differ appreciably from the second follow-up. No changes are recommended at this time for these items.

Item 39: Whether respondent received financial assistance from parents, spouse, other relatives; amount of aid from parents; and amount of aid from spouse, other relatives

On the first part of this item, the level of missing data was 5 percent. For the dollar amounts, parental aid was not indicated by 5 percent for 1983-84 and 7 percent for 1984-85. About 15 percent of respondents failed to specify the amount of assistance received from spouse, friends, relatives. Missing data on comparable items from the second follow-up was 4 to 5 percent.

A close inspection of this item revealed that one instruction that had been part of the question in the second follow-up questionnaire was inadvertently omitted from the section on dollar amounts. This instruction asks respondents to enter a "0" if they received no financial assistance. Without entering the "0", a response that is left blank remains ambiguous. It is impossible to know whether no assistance was received or whether the response is an illegitimate skip. For the full-scale survey, the instruction will be added.

Item 40A and 40B: Sources of money paid by the respondent for his or her schooling and dollar amounts

Missing data amounted to 5 percent of these two items and subsections. This compares to 3 to 5 percent on the comparable item in the second follow-up survey (both cohorts). Since the level of missing data is similar to that for the second follow-up, no changes are recommended for this item.

Item 43C: Whether respondent was claimed as a tax exemption in 1985

Respondents may have beer unsure of this item because the missing data jumped from 3 percent for 1983 and 1984 to 4 percent for 1985. Since the questionnaire was mailed out in early 1985, respondents may not have known yet whether their parents would claim them as an exemption. For the second follow-up, which occurred in 1984, respondents were asked only about prior years (up to 1983), and the missing data level was comparable to this field test. We recommend that the present year, which will be 1986 for the main survey, be eliminated for this question.

Item 45: Whether five different needs were provided to the respondent by his or her parents during 1983 and 1984

Participants were asked to indicate whether room, board, the use of a car or truck, medical expenses, and clothing were provided by their parents in the years listed above. About 6 percent of the respondents skipped this item illegitimately. This is comparable to the second follow-up survey where the missing data was 4 to 6 percent. No changes are recommended for this item.

Item 49: Whether the respondent has participated in non credit courses, correspondence courses, courses given by community group, and so on

Six percent of the respondents skipped these questions. During the second follow-up survey this was a critical item, and therefore the missing data was less than 1 percent. No changes are recommended for the item. To achieve a comparable response rate in the third follow-up survey, it will be necessary to keep this item on the critical item list.

Item 66: Income

For this item respondents were asked to indicate for 1983 and 1984 how much income they had received from 13 sources as well as the total amounts of income from all sources. They were instructed to write in "Ø" for all sources from which they did not receive income. Regardless of the instruction to enter a value or a "Ø" in each space, 34 to 54 individuals, or 10-16 percent, left items blank on this question. During the second follow-up survey, this was a critical item, and the missing data only amounted to about 3 percent. No change in format is recommended. However,

these results suggest that, to achieve high item response, the question should remain on the critical item list.

Item 77: Whether respondent has any specified disabilities or handicaps

Respondents were to indicate whether they have a learning disability, visual handicap, difficulty hearing, deafness, orthopedic handicap, or other physical disbility. The nonresponse rate for this item was 9 percent. It is worth noting that the question applied to relatively few persons, with frequencies ranging from 0 on deafness to 10 for "hard of hearing." Given the high nonresponse rate and the fact that these conditions are rare events, we recommend that this question be considered for elimination.

2.2.1 Implications of Nonresponse for Retrieval

Table 2.2.1-1 lists the items which are likely to be critical and require telephone retrieval.

Table 2.2.1-1
Nonresponse Rates for Potential Critical Items
High School and Beyond

Item	Content	Percent Illegitimate Skip
3	What were you doing the first week of Feb 1985	0
4	With whom did you live the first week of Feb 1985	2
7	Between March 1983 and Feb 1985 did you have a full time or part time job	3
8A	First job--what kind	2
8E	When were you working at this job	3
9A	Second job--what kind	2
9E	When were you working at this job	2
10A	Third job--what kind	4
10E	When were you working at this job	3
21	Job you expect to have at age 30	1
22	Between March 1983 and Feb 1985 were you unemployed	1
23	Did you complete high school	.3
23A	When did you earn the high school diploma	.3
24	How far in school do you think you will get	.
25	Since high school did you take classes for credit	.6
30	Between March 1983 and Feb 1985 did you attend or take classes at a college or university	1
31	First PSE school	2
31C	When did you attend this school	3
32	Second PSE school	3
32C	When did you attend this school	3
36A	Total annual charges for tuition for each year attended	5
36C	Total annual cost of attending school each year	6
37B	Total dollar value or scholarship or grant for each year	5
38B	Total dollar value of loans for each year	4
42	Since leaving high school have you received educational loans	2
42A	Any student loans deferred or forgiven	3
42B	Has repayment of education loans begun	2
43	Were you claimed by parents as an exemption in 1983 and 1984	3
47	Since March 1983, have you applied for graduate or professional school	2
47B	Did you apply for financial aid	2
48	Between March 1983 and Feb 1985, have you participated in an apprenticeship or manpower training program	1
49	Between March 1983 and Feb 1985, have you taken non-credit courses, correspondence courses, etc.	5
50	Marital status as of Feb 1985	.5
55	How many times haved you been married	.5
58	As of Feb 1985, how many children	.5
66	Income	15

Note: Percentages represent the number of illegitimate skips divided by 334.

Unlike the NLS-72 survey, there is only one item with relatively high missing data, and this is income. The other potential critical items range from 0 to 5 percent in the level of missing data. Considering these estimates as well as the similarity of the third follow-up survey to the second follow-up, we expect that the amount of telephone retrieval will also be comparable. As mentioned earlier, during the second follow-up survey, 29 to 33 percent of the questionnaires required some telephone retrieval.

2.2.2 Respondent Burden

At the end of the High School and Beyond questionnaire, respondents were asked to indicate the number of minutes required to complete the questionnaire. The mean number of minutes was 68, and Table 2.2.2-1 displays the distribution of participants across time segments. Sixty-six percent of the respondents were able to complete the questionnaire in an hour or less, and 44 percent required more than an hour. Two hours was required by 6 percent.

Table 2.2.2-1
Minutes Required to Complete the HS&B Third Follow-Up Field Test Questionnaire

Minutes	N	Percent	Cum Percent
15-30	46	14	14
31-45	62	19	33
46-60	107	33	66
61-75	25	8	74
76-90	37	11	85
91-105	7	2	87
106-120	20	7	94
over 120	19	6	100

While these results appear encouraging, they are somewhat biased towards those individuals who take less time. As explained for the NLS-72 sample, these results reflect an overall response rate of about 80 percent. For the main survey, we will be pursuing another 10 percent to reach the 90 percent response rate. Past experience indicates that this latter group often needs assistance with the completion of the instrument through a telephone or personal interview. In many cases, their reading skills are not as good, and therefore they are likely to require more time to complete the questionnaire.

It should be remembered that the field test instruments were purposely designed to be longer than the instruments for the full-scale survey. They are allowed to become more lengthy in order to fully test new items to determine which should remain in the survey and which should be eliminated. In order to keep the questionnaire at a reasonable length, it is recommended that no further items be added, and that consideration be given to eliminating any items that do not add appreciably to the results. In order to maximize the chances of reaching the desired response rate while staying within budgeted costs, it is important to keep the respondent burden to no more than one hour.

3. LOGICAL CONSISTENCY OF RESPONSES TO FILTER AND DEPENDENT QUESTIONS

Among the most effective methods of minimizing survey response burden is the use of "skip" or "routing" instructions to direct subjects to answer only those items relevant to their experiences. "Filter" questions are used to ascertain whether or not respondents have had specified experiences (e.g., postsecondary schooling, work outside the home, marriage, having children). If the response is positive, subjects are directed to a set of follow-up or "dependent" questions that ask for details about the experiences. If the response to the filter item is negative, the subject is directed to skip over the dependent items focusing on that experience, and to resume the questionnaire at a designated "target" question. For example, in the case of postsecondary schooling, respondents who report having attended during a specified time period are asked a series of follow-up items about the type of school attended, their level of involvement in course work, their field of study, and so on. Those who report no schooling beyond high school are directed to skip to a target item dealing with a new topic.

The use of skip patterns in questionnaires improves the efficiency of the data collection experience by eliminating the need for respondents to indicate that specific survey items are "Not Applicable" to them. At the same time, this device imposes some risk that respondents will fail to observe properly the routing instructions, introducing various types of response error.

First, respondents may fail to mark an answer to the filter item so that it is uncertain whether or not the subject has had the experience in question. This is potentially the most serious error, because it clouds the specification of the population who should be answering the sometimes lengthy series of follow-up questions. Second, respondents may fail to understand the instructions accompanying the filter item, and may omit the dependent items when they should have answered them. Third, respondents may answer the filter negatively, but still attempt to answer some or all of the follow-up items when they should have skipped them. Finally, respondents answering the filter negatively may properly omit the dependent items, but fail to skip to the designated target question, inadvertently missing one or more items.

These response errors decrease the potential efficiency of the routing patterns because they require either callbacks to respondents who fail critical items edits (most major filter questions are designated critical items), or extensive programming to computer-edit the responses into consistent patterns. Both of these activities are costly and should be minimized. Fail-edit callbacks require brief but properly supervised reinterviews and thus increase response burden. Machine (computer) editing requires extensive planning and checking, and extends the time for delivery of public release tapes.

Thus, one of the most important activities in questionnaire design and revision is the development of skip patterns that will minimize the several types of response error. If the risk of

response error is excessive, for example in surveys of younger children or poor readers, or if the costs of correcting the errors are unacceptable, skip patterns can be eliminated. For example, because of cost constraints on the amount of editing possible for the very large base year samples, skip patterns were almost completely eliminated from the HS&B base year questionnaires. Respondents were expected to answer every item in the questionnaire, even if the response was "Not Applicable." To reduce the time required to complete the survey, skip patterns were employed in the first and second follow-up questionnaires, with excellent results.

The HS&B third follow-up and NLS-72 fifth follow-up field test questionnaires include a large number of skip patterns, in order to maximize the amount of detailed data obtained from respondents who have had experiences of direct relevance to educational policy (especially postsecondary schooling and financial aid). In several instances, minor skip patterns are nested within larger skip patterns, increasing the complexity and the possibility of response error. For example, HS&B Q.50 asks the respondent's marital status as of the first week of February 1985. Those not currently married (or living in a marriage-like relationship) are directed to skip to Q.57, while those who are married or living with someone of the opposite sex are directed to answer the immediately following items. Within the follow-up series, question 52 asks whether the respondent's "spouse" held a job during the first week of February 1985. If the answer is "yes," the respondent is asked a series of 7 items in Q.53 about the spouse's job. If the answer is "no," the respondent is told

to skip to Q.54--still within the original set of dependent questions related to Q.50.

In a very few instances, skip patterns are nested twice. That is, tertiary skip patterns are placed within secondary skip patterns that occur within primary skip patterns. Usually these patterns involve only one potential dependent item.

The remainder of this section reviews the empirical results with respect to response errors to skip patterns in the field test questionnaires. The appendix to this section contains tables showing the numbers of respondents answering each filter item and the numbers commiting each type of error. Since the numbers of response errors are generally too small to merit attention, the discussion here will be limited to an overview of the results for major skip patterns and an analysis of special problems requiring revision.

HS&B Third Follow-Up Field Test Questionnaire

The HS&B third follow-up questionnaire included over 20 major skip patterns:

Filter	Target	Topic
* Q.7	Q.20	Work experience
Q.8-1	Q.12	Second job held
Q.9-1	Q.12	Third job held
Q.10-1	Q.12	Fourth job held
Q.12	Q.13	Employer provided training
Q.13	Q.14	Formal training for job
* Q.22	Q.23	Periods unemployed
* Q.25	Q.48	Postsecondary schooling since high school
Q.30	Q.48	Postsecondary schooling during last 2 years
Q.31-j	Q.33	Second postsec. school
Q.37	Q.38	Non-repayable financial aid
Q.38	Q.39	Repayable financial aid
Q.39	Q.40	Financial aid from parents, spouse, other relatives
Q.40	Q.41	Use of own savings or earnings for educational costs
Q.42	Q.43	Student loan repayment
Q.47	Q.48	Application to graduate or professional school
* Q.48	Q.49	"Other" training
* Q.50	Q.55 or Q.57	Marital partner if ever married
Q.52	Q.54	"Spouse's" job
Q.55	Q.57	Marital history
* Q.58	Q.66	Parenting history

Items marked with an asterisk (*) are filter items asked of all 334 field test respondents. Others are major secondary skip patterns placed within the primary patterns. Some minor skip patterns are omitted from the list above.

In general, the field test encountered very few instances of respondent failure to answer the major filter questions. For the items listed above, on average fewer than 8 cases (2 percent of the field test sample of 334) failed to answer the filter item. Thus for an average of 98 percent of the respondents, it was clear

from their answer to the primary or secondary filter question whether they should be attempting to answer the specific dependent items for a topic area. The variability in error percentage around this average level was also low. In the most extreme case, 20 respondents (6 percent) omitted a secondary filter item (Q.36-b) on the periods of postsecondary school attendance. This very low level of response error is in keeping with that found for the full-scale HS&B first (1982) and second (1984) follow-up surveys.

The observed error rate for following "SKIP TO" directions to the designated target item was also very low. Only 2 or 3 respondents, on average, or about 1 percent of the HS&B field test sample failed to answer the target item associated with each filter question.

Once the filter item was answered, respondents generally followed the instructions at the filter very accurately A sample of over 80 dependent questions related to the filters listed above were examined for response errors (see the appendix for a specific list of dependent items checked). On average, fewer than 7 respondents (2 percent of the sample) failed to follow the filter item instructions and omitted responses to the related dependent questions. Also, on average, fewer than 2 respondents supplied responses to the dependent items when their response to the filter indicated that they should have skipped these items. Thus, the average overall level of response inconsistency between filter and dependent items is so low that few revisions to the routing patterns in the questionnaire seem warranted.

A few specific cases deserve mention, however. These will be discussed by topic area below. In most cases, we believe that routing pattern problems in field test data may be corrected either by the addition of a filter question to clarify the meaning of the question and the associated instructions, or by improvements in the formatting and layout of the problematic pages.

Employment Histories (HS&B)

The routing patterns beginning with Q.7 and continuing through Q.12 posed almost no problems for respondents. Worth noting, however, is that 23 respondents omitted Q.8-h, and 11 respondents omitted Q.9-h (ending or current salaries for first and second jobs reported). Although the level of nonresponse is relatively high, we do not believe that this type of nonresponse is related to question wording or unclear instructions. Rather, it is typical of the slight elevation in nonresponse that invariably attends detailed questions about income and earnings. Often respondents cannot remember well the salaries they earned at previous jobs. Moreover, some respondents exercise their right to withhold a response to this voluntary survey. We therefore recommend no changes to this series of items.

The questions on employer provided training (Q.s 12 through 12-d), however, require clarification and some reformatting. Very few respondents omit the secondary filter Q. 12. We believe that respondents become confused about how to answer parts 12-a through 12-c in part because the instructions are not sufficiently clear and in part because the response codes

adjacent to the 6 options comprising part 12-a are too difficult to see. As a result, there are more responses to parts 12-b and 12-c than the number of respondents who report an experience in part 12-a. Furthermore, we believe that a substantial percentage of respondents who have had no employer provided training failed to circle the code "8" next to the first option under part 12-a. It thus appears that the amount of missing information for this series of items is very high at between 10 and 20 percent.

We recommend revising this item to include a second filter question positioned directly after Q.12 (and prior to the existing part 12-a) that would ask whether or not respondents have had any type of employer-provided training. The wording of the new item should include explicit references to the types of training that are relevant, and should match the wording used in the existing Q.12-a. Respondents who indicate they have had no training will be instructed to "SKIP TO Q.13," and those who report some type of employer-provided training will be directed to answer parts 12-a through 12-d. The option "No Training benefits or programs ... 8" would be removed from the list under part 12-a. Finally, the instructions for answering parts 12-a through 12-c would be clarified and the response option codes for part 12-a would be made more visible.

One other revision is worth considering for the section on labor force participation. In the field test questionnaire, the designated target item for the primary filter question (Q.7) is Q.20, which asks about the importance of 10 factors for determining the type of work the respondent is likely to do during the rest of his or her life. The following item (Q.21) then asks

what type of job the respondent expects to have at age thirty. We believe that it would improve the logical flow of the questionnaire to switch the position of Q.s 20 and 21, so that the item on job expectations at age thirty is asked first and is the designated target item for Q.7, the employment filter.

Periods of Unemployment (HS&B)

Approximately one third of the respondents reported in answering Q.22 that they had experienced a period of unemployment between March 1983 and February 1985. Only 4 cases omitted the filter item. Very few (5 to 7) respondents were coded as missing on any of the dependent items.

High School Completion (a minor skip pattern)

The intention of Q.23 ("Did you complete high school?") is to obtain data on respondents who may have earned high school equivalency certificates since the last follow-up. Apparently, the routing instructions associated with the response options are not sufficiently clear for respondents. Only 7 respondents indicated that they had not graduated on schedule, but had later earned a GED diploma. Only these respondents were directed to answer a follow-up item on the date they received the GED. However, 55 respondents filled in a date at Q.23-a.

Furthermore, only the 12 respondents who reported that they "Left without graduating" were directed to answer Q.23-b. Over twice that many provided an answer. These excessive responses may be reduced or eliminated by adding such phrases as "IF YOU EARNED

A GED DIPLOMA:" or "IF YOU LEFT WITHOUT GRADUATING:" to Q.s 23-a and 23-b.

Postsecondary Education (HS&B)

The first skip pattern within the section on postsecondary education begins at Q.25, which asks whether or not respondents have attended any school since leaving high school. Items between Q.25 and Q.30 have almost no response errors. Virtually all respondents who have had no schooling skip properly to Q.48.

Question 30 begins a second major skip pattern. Dependent items in this series are to be answered only by respondents who have attended school during the last two years. About half of the HS&B field test sample reported attending at least one school between 1983 and 1985. Only 44 respondents (about 13 percent) attended more than one school during that period. With exceptions noted below, the rate of response error is also very low in this section.

Modest levels of response inconsistency emerged for the series of items on financing postsecondary education. In general, between 3 percent and 5 percent of the field test sample (and between 6 percent and 10 percent of those who attended some school since March 1983) failed to answer dependent items between Q.36 and Q.39 on school costs and various forms of financial aid. Missing data levels for Q.40 on use of respondents' savings or earnings for school costs were about half those for Q.36 - 39. Considering the results to similar survey items that have been asked since the first follow-up of NLS-72 in 1973, we conclude that the field test results are not due to problems peculiar to

the field test questionnaire. Historically, financial aid items have presented respondents with special difficulties in each of the full-scale surveys. The problems appear to be primarily those of lacking information on school costs and aid awards, or of recall of specific dates and amounts of aid received, not question wording or format. We do not feel that any revisions to these items offer much promise of improvement in response consistency, but instead would be more likely to harm the comparability of responses over several survey waves.

Very few respondents omitted the items on parental borrowing, loan repayment, or the series of items related to dependent/independent student status. The largest amount of missing data (about 4 percent) was observed on Q.43-c, on whether the respondent would be claimed as dependents by parents on their 1985 Federal income tax return. The reason for nonresponse in this case is clearly that respondents were not able to predict the answer.

Family Formation (HS&B)

The series on family formation behavior begins with Q.50 on marital status as of February 1985. Only three respondents omitted this filter question. A total of 123 were directed to answer Q.s 51 through 54 as a result of their responses to Q.50. In general, respondents correctly followed the routing instructions in this section, properly answering all items on spouses and children.

NLS-72 Fifth Follow-up Field Test Questionnaire

The NLS-72 field test questionnaire includes many of the same routing patterns discussed above for the HS&B questionnaire, and several more. The main questionnaire contains over 30 major skip patterns (see table below). The appendix to this section contains a list of the major skip patterns and data on various types of response errors found in the field test data files.

Filter	Target	Topic
* Q.5	Q.14	Work experience
Q.6-k	Q.10	Second job held
Q.7-k	Q.10	Third job held
Q.8-k	Q.10	Fourth job held
Q.11	Q.13	Employer provided training
* Q.14	Q.15	Periods unemployed
* Q.15	Q.20	Postsecondary schooling during last 6 years
Q.17-j	Q.20	Second postsec. school
Q.18-j	Q.20	Third postsec. school
* Q.23	Q.27	School costs
Q.24	Q.25	Repayable financial aid
Q.25	Q.26	Other sources of financial aid
Q.26	Q.27	Student loan repayment
Q.30-f	Q.35	Second living partner
Q.31-f	Q.35	Third living partner
* Q.36	Q.87	Number of marriages
Q.46	Q.8[illegible]	Divorced/separated from first spouse
Q.50	Q.82	Legally divorced from first spouse
Q.62	Q.64	Nature of alimony agreement
Q.65	Q.81	Children with first spouse
Q.66	Q.71	Nature of custody agreement
Q.71	Q.78	Nature of child support agreement
Q.82	Q.87	Marital partner if ever married
Q.84	Q.86	"Spouse's" job
* Q.87	Q.106	Expected number of children
Q.89	Q.106	Parenting history
Q.98-a	Q.99	Care of pre-school children
Q.99-a	Q.102	Care of school age children
Q.112	Q.117	Respondents' parents
Q.123	Q.125	Teaching as a career
Q.125-b	Q.126	Attitudes on teaching shortages

Items marked with an asterisk (*) were asked of all 506 NLS-72 field test respondents.

On average, the percentage of various errors is comparable to the levels found in the HS&B data. (Since the NLS-72 field test sample is significantly larger than the HS&B field test sample, the actual number of cases committing errors seems larger.) As noted below, the patterns of error are also similar to those described above. For certain patterns, the apparent amount of error is larger than for the HS&B field test. We believe that this is a function of the confounding influences of the routing patterns with the exceptionally long follow-up recall period for the NLS-72 sample (six years) compared to the HS&B sample (two years). Although revisions and clarifications to routing instructions should help to reduce inconsistencies, the much greater recall period for NLS-72 sample members is likely to produce a generally higher proportion of missing responses, some of which will create inconsistencies between filter and dependent questions.

Employment Histories (NLS-72)

Ninety-six percent of the NLS-72 field test sample reported having at least one part-time or full-time job between October 1979 and February 1985. Only 1 percent of the respondents failed to answer this important filter question. An additional 1 percent of the respondents failed to report the type of job they held in Q.7 (the follow-up items on the first job held during the period). Only 2 percent of the respondents failed to report the months they had held their first job in response to Q.7-e. Approximately 8 percent of the sample failed to report their current (or ending) salary for their first job in response to Q.7-h. As we suggested in the prior section on the HS&B questionnaire, missing data on

this item are more likely to result from recall problems or hidden refusals than from lack of clarity in the question format or wording.

Fifty-eight percent of the sample reported holding a second job. The proportions missing responses in the parts of Q.8 were even smaller than for the questions on the previous job (if calculated as a percent giving inconsistent responses of the whole sample). The same results obtained for the 31 percent who reported three jobs and the 18 percent who reported holding four jobs during the period from 1979 to 1985. Levels of response inconsistency were generally around 2 to 3 percent of the field test sample.

The series on employer-provided training (Q.11 through Q.12) exhibited the same problems as described for the HS&B questionnaire. In substantial numbers, respondents failed to mark the types of training benefits or programs they had experienced, even though they did provide the numbers of hours and the numbers of weeks that the benefits were received. We recommend reformatting this item along the lines suggested for HS&B above.

Periods of Unemployment (NLS-72)

Respondents who reported having held no jobs during the period in question were instructed to skip to Q.14 on periods of unemployment. A total of 26 individuals (5 percent of the sample) failed to correctly follow the skip instruction at Q.5 and omitted their response to Q.14. Of these, 7 individuals responded to the follow-up item the specific months unemployed. We believe that

in such instances an affirmative response to the filter item Q.14 may be imputed.

Postsecondary Education (NLS-72)

In response to filter item Q.15, 193 NLS-72 respondents reported attending at least one postsecondary school since October 1979. (Only 66 respondents attended more than one school and only 12 attended more than two schools.) About 1 percent of the cases failed to report the name of the first school attended; about 2 percent failed to mark the calendar in Q.17-b to indicate the months attended. Response inconsistency on the schooling items hovered at about 1 to 2 percent across all dependent items.

Respondents were asked a second question on the periods of postsecondary school attendance since 1979 in Q.23. In general, responses to Q.15 were consistent with those of Q.23. About 5 percent gave inconsistent responses (about half gave a positive response to Q.5 and omitted Q.23; about half indicated a period of attendance in Q.23 after having reported no school attendance at Q.5). Given the low levels of inconsistency, we do not recommend revisions to either item.

After indicating at least one period of attendance in Q.23, about 35 sample members (7 percent of the whole sample, 18 percent of those reporting attendance) did not report total costs of attending their first school. We believe that the problem here is merely one of recall of cost data over a six-year period rather than a problem of questionnaire design. A similar conclusion seems reasonable concerning the 7 percent of cases who failed to respond to Q.27, concerning the years the respondents' parents

claimed them as exemptions on Federal tax returns. We believe that this response error results from the difficulty of recalling the events in question, not from ineffective routing instructions.

Family Formation (NLS-72)

Although most of the items in this section are supported by the NIH supplement to the NLS-72 Fifth Follow-up, we believe them to be of sufficient interest to include a brief overview of response consistency in this report.

The series of items on family formation behaviors begins with Q.30. This item asks for the date when the respondent began living with their first partner in a marriage or marriage-like relationship. Because the wording and format of this item failed to provide a means for respondents to indicate that they never had lived in such a relationship, it is impossible to determine the precise number of cases who should skip over this series of items on living arrangements. Field test editors kept track of marginal notes written by respondents to the effect that the items were "not applicable," or that the respondent had "no such relationship." Thirty respondents added such handwritten notes. An additional 44 respondents omitted all the items in this series. Although these appear as missing responses in the field test data files, it remains possible that they would have chosen a negative response to a filter item (preceding Q.30-a) on whether they had ever lived in such a relationship. We propose to include such a filter item in the revised questionnaire for the full-scale study in order to properly classify all respondents and route them to

appropriate follow-up questions. In this case, respondents who answer the new filter item negatively will be routed to Q.87.

About 436 cases (86 percent of the sample) indicated participation in at least one marriage or marriage-like relationship. Eighty-seven respondents (17 percent) reported two or more such relationships, and 15 respondents (3 percent) reported three or more.

Fifty cases failed to respond to the item on whether the first relationship ended (Q.30-f). However, a small number of these cases provided data on the dates the relationship ended, and the type of separation (item Q.30-g). We believe that missing data to Q.30-f could be reduced by reformatting to allow the response choices for "Yes" and "No" to stand out more clearly.

Q.36 begins a series of items for those respondents who have been legally married at least once. Four hundred and seven (80 percent) of the sample members indicated at least one marriage. Only about 16 respondents failed to respond to the items on the religious preference, ethnic background and prior marriages of their first spouse. We believe that missing data on these items results from either problems in recalling the relevant information, or of refusal to answer, and not from question wording or format.

About 5 percent of the sample failed to respond to Q.45 on perceived happiness at the end of each year of marriage. The level of missing data is too small to indicate a major difficulty with the instructions. In the absence of a more persuasive explanation for the missing responses, we will attempt to format this item to increase the clarity of the directions.

Family Disruption

Q.46 asks respondents to indicate whether their first marriage is still intact or has ended in separation or divorce. One hundred eleven respondents reported a disruption, virtually identical to the number who reported disruption of their first marriage-like living arrangement in Q.30-f. There is almost no missing data in the items from Q.47 through Q.49. In item Q.50, respondents are asked to confirm that they are legally divorced, and new routing instructions are issued. Although 100 respondents had indicated that they were legally divorced in Q.46, only 85 explicitly did so again in Q.50. Another 6 cases failed to respond to the check box in Q.50, but answered the dependent items Q.51 through Q.88, allowing an imputation of their divorced status. Nine respondents failed to check the box in Q.50 and skipped the subsequent items. Although the reason is not fully clear, these few respondents may have skipped the box in Q.50 in order to justify taking a shorter route through the remainder of the questionnaire.

There is virtually no missing data for most of the items between Q.50 and Q.81, covering divorce and child support issues. One exception is Q.71 concerning the child support agreement. In Q.65, 47 divorced respondents reported having had children with their first spouse. All of these described a custody agreement in Q.66 (including the "no agreement" response). Only 21 of these respondents indicated in Q.71 the type of child support aggreement reached during the divorce, and only 37 reported the amount of the payment or its regularity (Q.72).

Current marital status is ascertained by Q.82. for those who had experienced some form of marital disruption. It is also used to direct respondents through a series of items on the employment of their current spouse. However, as this section is currently arranged, the information on current spouse's job is not collected for respondents who are still married to their first spouse. This omission results from a mistake in the skip instructions in Q.46, which directs respondents to Q.87, but should direct them to Q.83. Because of this error, 355 respondents were inadvertently routed around Q.s 83 through Q.86.

Parenting (NLS-72)

In response to Q.89, 282 respondents indicated having one or more children. Some 66 respondents failed to fill in a numeric response, leaving the response boxes blank. These respondents uniformly omitted all remaining items on children, strongly suggesting that the blank response implies no children. For the full-scale survey, we propose that a limited number of fail edit call-backs be made to respondents who leave blank the item on number of children. If the results indicate that nearly all (at least 85 percent) of the omissions mean that the respondent has no children, we will recommend abandoning further retrieval calls and instructing coders to enter zeroes to replace blanks.

The amount of missing data in the series of follow-up items on children (Q.s 91-97) is very small. Only 1 percent of field test respondents reported having more than 4 children, suggesting that Q.s 95 through 97 might be dropped from the questionnaire.

About 5 percent of the sample failed to answer Q.99-a on the presence of school-age children. Although the number is not excessive, we believe that it can be reduced further by reformatting this item (and the prior item on preschool-age children) along the lines described for the questions on employer-provided training. That is, we believe that the filter item determining the presence of preschool- or school-age children should be made more prominent in the item format.

Only 4 respondents who reported having children failed to answer the item (Q.104) about educational aspirations for those children. In addition, respondents with two or more children did not appear to have much difficulty giving a single response to this item, which asks about "all or most of your children." Only 7 cases gave multiple answers to Q.104.

Respondents who indicated at Q.87 that they expected no children, and those who reported at Q.89 that they had no children were instructed to skip to Q.106 on the composition of their families when they were seniors in high school. Eighteen respondents (4 percent) failed to answer Q.106. However, 11 of these respondents had also failed to answer Q.89 as well. Furthermore, there appears to be a minimum of 11 cases who failed to answer all items from Q.106 to the end of the questionnaire. These inconsistencies do not result from problems with question wording or format, but simply from nonresponse to the latter sections of a comparatively long questionnaire. The fact that only 3 to 4 percent of respondents failed to answer these items testifies to the overall soundness of the questionnaire as a self-administered survey form.

Attitudes towards Teaching as a Profession

In the final section of the NLS-72 field test questionnaire, respondents were asked a series of items on their interest in teaching as a career, and the issues influencing their views of the teaching profession. The first filter item in this series asks whether respondents ever considered teaching as a career. Twelve respondents omitted this filter item. A total of 194 respondents (about equal to the number selected from the NLS-72 sample for this field test as actual or potential teachers) gave a positive response and were directed to Q.123-a. The 49 respondents who reported that they were currently working as teachers were directed to answer Q.123-a, and then to proceed to Q.123 -- skipping over Q.123-b and Q.124, items intended for non-teachers only. Altogether, 29 of the respondents who said that they had considered teaching as a career failed to answer Q.123-a on the importance of various factors to their considerations. Nearly all (24) of the inconsistent respondents indicated at Q.123 that they were currently working as teachers. Thus, half of the current teachers apparently did not detect that the routing direction included two instructions: "ANSWER A AND SKIP TO Q.125." This problem can be alleviated by elaborating the skip instruction more fully using such wording as "FIRST ANSWER Q.123-A BELOW, THEN SKIP TO Q.125 ON PAGE __." As an added precaution, an extra line might be inserted below last item of Q.123-a that reads: "IF YOU ARE CURRENTLY WORKING AS A TEACHER, SKIP TO Q.125 ON PAGE __."

Items comprising Q.123-b were omitted by between 33 and 45 respondents. Nearly all of those who failed to answer had

indicated at Q.123 that they had never considered teaching as a profession. As above, we believe that clarifying the routing instruction might reduce substantially the number of missing responses. The instruction for this response option will be altered to read: "SKIP TO Q.123-B ON PAGE __." Furthermore, we believe that confusion can be reduced if each of the groups of the items in the Teaching Section of the questionnaire is given a separate item number. (For example, Q.123-a would become Q.124; Q.123-b would become Q.125, and so on.) We note, however, that there are 18 to 20 respondents who omit all items after Q.123 in the questionnaire. It thus remains unclear whether the missing data is caused by unclear routing instructions or respondent fatigue. Nevertheless, we propose to make the changes described.

In response to Q.124, 136 respondents indicated that they would consider going into elementary or secondary school teaching "if the conditions were right." Twenty-one cases omitted this filter item. In the follow-up series, there was virtually no missing data for the 136 potential teachers. About one third of those who omitted the filter (Q.124) gave responses to the follow-up items.

No response inconsistencies were observed between Q.125-a and Q.125-b. However, 34 respondents who said they felt that teacher quality was a problem in elementary and secondary schools at Q.125-a failed to respond to the set of follow-up items under Q.125-c. This problem clearly stems from the potentially inconsistent instructions some respondents receive who answer "Yes" to Q.125-a, but who answer "No" or "Don't Know" to Q.125-b.

The latter group are instructed to "SKIP TO Q.126," contradicting the prior instruction to "ANSWER B AND C" associated with their "Yes" answer at Q.125-a. To eliminate this confusion, NORC recommends removing the individual routing instructions from the response options to Q.s 125-a and 125-b and replacing them with an instruction box that reads: IF YOU ANSWERED "YES" TO EITHER Q.125-A OR Q.125-B, GO TO Q.125-C ON THE NEXT PAGE. OTHERWISE, SKIP TO Q.126 ON PAGE __." (In the final version, the item numbers will be changed to simpler numbers, without the sub-part designations.)

Teaching Supplement

There are relatively few routing patterns employed in the Teaching Supplement, and those that are used are comparatively minor in scope. These will be discussed in a separate section devoted to a general analysis of the Teaching Supplement Questionnaire.

APPENDIX

COUNTS OF ROUTING PATTERN ERRORS

HS&B FIELD TEST QUESTIONNAIRE

Filter	N1 N2	Omitted Filter	Dep't	Errors Omiss'n	 Commiss'n	Impute Filter	Target	Miss Target
HS07	334	10	HS08A	6	0	9	HS20	2
	305		HS08E					
			HS08H	23	0	9		
			HS17	6	1	9		
			HS18	4	1	10		
			HS19	5	1	10		
HS08L	305	8	HS09A	5	2	5		
	188		HS09E					
			HS09H	11	2	2		
			HS09L	4	3	2		
HS09L	188	10	HS10A	3	0	0		
	95		HS10E					
			HS10H	3	0	1		
			HS10L	4	0	1		
HS10L	95	13	HS11A	0	0	6		
	39		HS11E					
			HS11H	3	0	5		
			HS11L	0	1	6		
HS12	300	14	HS12A1	58	0	0		
	229		HS12A1B	32	0	26		
			HS12A1C	35	0	23		
HS22	329	4	HS22A				HS23	2
	109		HS22B	4	4	0		
HS25	331	3	HS26	1	3	2	HS48	4
	248		HS27	0	3	2		
			HS28	0	3	2		
			HS29	4	2	2		
			HS30	3	3	2	HS48	4

Filter	N1 N2	Omitted Filter	Dep't	Errors Omiss'n	 Commiss'n	Impute Filter	 Target	Miss Target
HS30	250	4	HS31	3	0	0		
	174		HS31C					
			HS31J	9	0	0		
			HS34	4	1	1		
			HS36A	11	0			
			HS36B	17	0	0		
			HS36C	11	1	1		
			HS37A	13	0	0		
			HS37B	14	0	0		
			HS37C	11	0	0		
			HS38A	10	0	0		
			HS38B	11	0	0		
			HS38C	9	0	0		
			HS39A	14	0	0		
			HS39B	15	0	0		
			HS39C	13	0	0		
			HS40A	7	0	0		
			HS40B	9	0	0		
			HS40C	7	0	0		
			HS41	7	0	0		
			HS42	6	2	0		
			HS43A	5	2	0		
			HS43B	8	2	0		
			HS43C	12	2	0		
			HS44A	6	2	0		
			HS44B	8	2	0		
			HS47	5	2	0		
HS31J	166	11	HS32	0	1	1		
	41		HS32C					
			HS32J	0	1	1		
HS36A	174	14	HS36D1C	12	0	6		
	123							
HS36B	174	20	HS36D2C	12	4	4		
	96							
HS36C	174	10	HS36D1C	0	0	0		
	22		HS36D2C	0	0	0		
HS37A	212	16	HS37A1A	0	1	0		
	54		HS37BB3	3	0	0		
HS37B	210	17	HS37A2A	3	1	3		
	39		HS37B83	4	1	5		

Filter	N1 N2	Omitted Filter	Dep't	Errors Omiss'n	 Commiss'n	Impute Filter	Target	Miss Target
HS38B	213	14	HS38A2B	1	0	1		
	36		HS38B84	1	0	2		
HS39A	212	17	HS39B83P	3	2	3		
	57							
HS39B	211	18	HS39D84P	6	4	4		
	44							
HS40A	218	10	HS40A1B	1	0	0		
	68		HS40B83	5	7	0		
HS40B	215	12	HS40A2B	9	1	2		
	70		HS40B84	9	14	2		
HS47	174	7	HS47A	0	5	0		
	24		HS47B	0	5	0		
			HS47C	0	3	0		
HS50	331	3	HS51A	0	1	1	HS57	2
	123							
HS52	128	2	HS53A	0	0	0		
	104		HS53B	3	1	0	HS54	3
HS55	137	2	HS56B1	4	0	0		
	107							
HS56B1	100	6	HS56D1M	2	0	0		
	10		HS56D1Y	2	0	0		
HS59	331	5	HS59M	0	0	1		
	68		HS59Y	0	0	2		
			HS59L	1	0	2		
HS60	331	5	HS60L	0	0	1		
	23							
HS61	331	5	HS61L	1	0	1		
	12							
MEAN ERRORS		9.63		6.68	1.20	2.23		2.83
PERCENT OF 334		2.88%		2.00%	0.36%	0.67%		0.85%

NLS-72 FIELD TEST QUESTIONNAIRE

Filter	N1 N2	Omitted Filt r	Depndt	Errors Omissn	Commissn	Impute Filter	Target	Miss Target
NL05	505	6	NL06A	7	0	3	NL14	26
	483		NL06E	12	0	3		
			NL06H	42	0	2		
			NL06K	11	0	2		
NL06K	487	10	NL07A	10	4	2		
	293		NL07E	11	9	3		
			NL07H	38	7	3		
			NL07K	10	3	0		
NL07K	305	16	NL08A	3	1	3		
	157		NL08E	3	2	5		
			NL08H	13	5	3		
			NL08K	4	3	3		
NL08K	178	17	NL09A	0	1	1		
	93		NL09E	1	4	6		
			NL09H	10	4	6		
			NL09K	5	1	6		
NL11	490	13	NL11A1	12	2	0		
	456		NL11A4					
NL14	506	28	NL14A	1	0	9	NL15	6
	146							
NL15	506	6	NL17	6	0	1		
	193		NL17B	13	0	1		
			NL17J	5	0	0	NL20	3
			NL23	15	13	1		
			NL24Y1A	13	1	1		
			NL24Y2A	12	0	1		
			NL24Y3	8	0	0		
			NL25Y1A	17	10	0		
			NL25Y2A	17	9	0		
			NL25Y3	18	16	0		
NL17J	196		NL18	1	0	0		
	67		NL18B	12	0	0		
			NL18J	2	0	0		
NL23	506	87	NL23YA3	35	2	40	NL27	36
	193							
NL30	506	44	NL30B	1	0	2		
	462							
NL30B	476	43	NL30C	4	27	3		
	124							
NL30F	476	53	NL30G	14	0	17		
	112		NL30F1M	4	0	9		
			NL30F1Y	3	0	9		
			NL30H	1	7	11		
NL30H	187	37	NL31S	0	1	3		
	87							

Filter	N1 / N2	Omitted Filter	Depndt	Errors Omissn	Errors Commissn	Impute Filter	Impute Target	Miss Target
NL36	476	10	NL41	17	5	0	NL87	26
	409		NL42	16	5	0		
			NL43	18	5	0		
			NL45A	29	5	0		
			NL49F	36	3	0		
			NL46	17	4	1		
NL46	419	28	NL47A	2	1	1		
	111		NL47B	2	1	2		
			NL50	6	0	0		
NL50	138	31	NL50A	1	10	6		
	85		NL53	0	9	6		
			NL58	0	8	7		
			NL64	1	9	7		
			NL65	0	9	7		
NL52	141	31	NL63	1	20	0		
	10							
NL65	132	31	NL66	0	1	0	NL81	31
	47		NL67	3	1	0		
			NL69	3	1	0		
			NL71	26	0	24		
			NL72	1	1	0		
			NL73	1	1	0		
			NL78	1	1	0		
NL82	151	28	NL84	0	5	0		
	74		NL8E	0	5	2		
NL84	106	28	NL85F	2	2	0		
	69							
NL87	506	39	NL89	45	1	0		
	482							
NL89	462	66	NL	10	1	0	NL106	18
	282		[illegible]D	3	1	0		
			[illegible]8A	8	1	0		
			NL99A	24	0	0		
			NL104	4	1	0		
NL98A	351	70	NL98B	27	0	0		
	201		NL98M	3	0	0		
NL99A	351	88	NL99B	16	0	0	NL102	18
	158		NL99M	2	1	3		

Filter	N1 N2	Omitted Filter	Depndt	Errors Omissn	Errors Commissn	Impute Filter	Miss Target	Miss Target
NL112E	506 5	10	NL113	8	0	0		
NL123	506 193	12	NL123A1	29	6	0		
			NL123A4	30	6	0		
			NL123A9	29	6	0		
			NL123A10	29	6	0		
			NL123A12	29	6	0		
			NL123B1	33	1	0		
			NL123B4	43	1	0		
			NL123B9	41	1	0		
			NL123B10	41	1	0		
			NL123B12	45	1	0		
NL124	457 136	21	NL124A1	1	16	0		
			NL124A11	1	16	0		
			NL124A17	1	16	0		
NL125A	506 486	20	NL125B	20	0	0		
			NL125C1	34	0	0		
			NL125C8	34	0	0		
			NL125C13	33	0	0		
			NL125C17	34	0	0		
MEAN ERRORS		31		13	4	2		21
PERCENT OF 506		6.16%		2.62%	0.71%	0.48%		4.05%

NOTES: N1 is the total number of respondents who should have answered each filter item. N2 is the number whose response to the filter item makes them eligible to answer the dependent items associated with the specified filter question.
"Omitted Filter" indicates the number of cases coded as "illegitimate skips" on the filter item. If these respondents answer the dependent questions in specific ways, it is sometimes possible to impute what their responses to the filter item would have been.
The column labelled "Depndt" contains the question number of a sample of the dependent items associated with the specified filter question.
Two types of errors are counted in the next two columns: errors of omission ("Omissn") occur when a respondent should answer the dependent item but does not; errors of commission ("Commissn") occur when the respondent provides an answer to a dependendent question after having been instructed to skip over it.
The next column ("Impute Filter") counts the number of cases whose response to the dependent items would allow imputation of missing data for the associated filter.
The next two columns contain the question number for the "Target" item for each filter, and the number of cases who fail to answer the designated target item.

4. EVENT HISTORY ITEM FORMATTING (CALENDARS)

The field test provided an opportunity to test a new format for questionnaire items about periods of employment, unemployment, and postsecondary school attendance. Respondents were asked to circle codes printed in a calendar-style layout that corresponded to months and years during which they may have been employed, unemployed, and/or enrolled in school. In past surveys, respondents were usually asked only for the beginning and ending dates for those events. The calendar format was developed to aid respondent recall of time periods, to better capture interrupted spells of schooling and work, and to simplify the method of reporting this information.

Recall and reporting burden were of particular concern for the NLS-72 respondents because they were asked about employment, educational experiences, and family formation and dissolution for a six-year period. During previous follow-ups, NLS-72 respondents reported periods of employment and school attendance by writing in the beginning and ending dates of each episode. Entering dates for the number of employment and educational situations called for in the field test questionnaire would have been a considerably larger task than it had been during prior follow-ups, however, because of the longer period of time covered.

Previous HS&B questionnaires had included some items with formats that were similar to the calendar layout. Answer grids had been used because questionnaires were optically scanned during the data preparation process. Respondent performance on the gridded items had indicated that the format did not pose any

significant difficulty, and therefore calendar format items were not expected to create any special problems.

The following evaluation of calendar items is based on frequency distributions of field test data and on a qualitative evaluation by an NORC coding staff who edited field test questionnaires prior to data entry. Frequency distributions indicated the overall level of item nonresponse for these new format items, and the qualitative assessment provided a sense of the types of difficulties respondents had in using the calendar items. Coders were asked to note the ability of respondents to follow instructions for completing the calendars and patterns of inconsistency between information given in calendars and data supplied in other items. Coders were able to note problems obvious only by visual inspection, such as whether circles were drawn clearly, and also to note comments that respondents had written in questionnaires.

Table 4-1 provides a summary of item nonresponse for the calendar items. The overall level of item nonresponse, which does not exceed 4.0 percent, is within an acceptable range so that statistical analysis would not be hampered. The table also shows nonresponse rates that were calculated for just those respondents who were eligible to complete the calendar items based on answers to filter questions. This nonresponse rate is much greater. The rate indicates that nonresponse tends to increase with the number of jobs and schools that respondents report. For example, the proportion of HS&B respondents who were eligible to complete the fourth job calendar but failed to do so (14.0 percent) was over three times the proportion of eligible respondents who did not

Table 4-1
Respondent Performance on Calendar Format Items

	Number of eligible respordents not responding	Item nonresponse rates for eligible respondents*	Overall item nonresponse rates**
HS&B job calendars			
1st job	12	3.8%	3.6%
2nd job	7	3.6%	2.1%
3rd job	11	10.7%	3.3%
4th job	7	14.0%	2 1%
HS&B school attendance calendars			
1st school	7	3.9%	2.1%
2nd school	10	18.5%	3.0%
HS&B unemployment calendar	4	3.5%	1.2%
NLS-72 job calendars			
1st job	8	1.6%	1.6%
2nd job	12	4.0%	2.4%
3rd job	15	8.5%	2.9%
4th job	12	10.5%	2.4%
NLS-72 unemployment calendar	18	11.0%	3.6%
NLS-72 school attendance calendars			
1st school	11	5.6%	2.2%
2nd school	7	9.5%	1.4%
3rd school	7	35.0%	1.8%

*Percent based on respondents eligible to answer on the basis of responses to filter questions.
**HS&B rates based on 334; NLS-72 rates based on 506.

complete the first job calendar (3.8 percent). A comparison of NLS-72 nonresponse for the same items indicates a similar increase in nonresponse rates from the first job calendar (1.6 percent) to the fourth (10.5 percent). A fourth job would have been held more recently than the first, and presumably, the months during which it was held would be at least as easily remembered. The pattern

of nonresponse suggests that survey members may become less diligent and thorough in completing items toward the end of long or complex series.

The coder evaluation of questionnaire items with calendar formats tended to support the idea of respondents' decreasing diligence. Coders reported that circling individual months seemed to be a tedious task that some respondents attempted to shorten in a variety of ways. For instance, they circled first and last months, blocks of months, names of months and years, or added the notation "all" indicating all months. Some respondents also commented in questionnaires that circling months was tiresome.

A possible remedy for high nonresponse rates due to question format is an alternative format. The format that was used during previous follow-ups for event history information is one that requires respondents to write in beginning and ending dates. It is possible, however, that such a format (which does not provide the visual cues offered by the calendar layout) would result in an even higher nonresponse rate--particularly for the NLS-72 participants who have to give information about a six-year period of time. Therefore, using an alternative format that might be more familiar to respondents does not offer a risk-free solution to the nonresponse problem.

The nonresponse rates for the calendar format items do not appear to have serious implications for the costs of collecting data during the full-scale survey. Questions about periods of employment, unemployment, and school attendance are expected to be critical items as they have been during previous follow-ups. If respondents do not complete calendar items or fail to do so

correctly, they will be contacted to supply or clarify information. It should be noted that although there were high nonresponse rates for some of the calendar items, the rates were attributable to relatively small numbers of respondents. As the table indicates, for example, there were only 10 HS&B respondents responsible for the highest nonresponse rate on any of the HS&B calendars (i.e., 18.5 percent for the second school calendar). There were only 7 NLS-72 respondents responsible for the 35.0 percent nonresponse rate for the third school calendar in the NLS-72 questionnaire.

The impact of nonresponse on data retrieval costs during the main survey for these items should not be great since the number of survey members involved will be relatively small. There are no obviously preferable alternatives to the calendar format, and it does seem to be workable for most respondents. Based on these considerations, it is recommended that the calendar format be retained. In the final preparation of the questionnaire, attention will be given to instructions or aids that will encourage respondents to be thorough in completing calendar items

Although the calendar format is not expected to seriously affect data collection costs, it will have a very significant effect on data storage costs and on the costs and ease with which data can be manipulated. The calendar format requires a separate variable for each month of each year. The seven HS&B calendars, each covering twenty-four months, require 168 variables. There are 669 variables needed for the nine NLS-72 calendars (eight of which cover 65 months each, while the ninth covers 149 months).

To record data for most individual respondents, only a portion of the total number of variables are need. For the majority of respondents, most of the data points that correspond to the calendar months are empty. The total number of variables for the NLS-72 questionnaire, which is greatly increased by the calendar items, exceeds computer software package limitations for one file. The two files that are consequently needed for questionnaire data are less convenient, less efficient and, of course, more expensive to use and maintain.

The calendar format was intended to offer an effective way of capturing periods of interrupted schooling and employment. Further qualitative assessment of field test questionnaires will be made to determine if the format was successful in doing so. If additional evaluation indicates that objectives were met, that is, that the format identifies interruptions, the analytical needs of those who will eventually use the survey data may best be served by maintaining separate variables for each month. If it is found that calendars did not fulfill their purpose, recommendations will be made for data preparation procedures that will simplify data entry and reduce data file size. For instance, coding specifications can be written so that only beginning and ending months will be data entered rather than values (or missing data codes) for all months covered by each calendar, or, if respondents indicate multiple, interrupted spells of schooling or work in the calendars, two to four sets of beginning and ending dates could be coded for each event.

On the whole, relatively few interrupted calendars were found. In more than half of a sample of 100 field test

questionnaires that were reviewed, there were none at all. Only one interrupted calendar was found in 30 percent of this sample of questionnaires, and the remaining 20 percent tended to contain only two or three interrupted calendars. Interruptions were reported most often for first job, first school attended, and living partner arrangements, and maintaining separate month variables for these calendar items might be desirable.

Although a more thorough analysis of these items will be undertaken, the evidence appears to support a decision to code the beginning and ending dates of spells reported on calendars, or at least those calendars which tend to be uninterrupted." This would serve to reduce the size of the main survey data file without compromising data quality.

5. NEW QUESTIONNAIRE ITEMS--HS&B CORE QUESTIONNAIRE

One of the principal values of a longitudinal research design is the ability to compare responses to common survey measures of data from wave to wave. This requires using identical or nearly identical questionnaire items for each survey. There have been few changes in the HS&B instrument since the last follow-up. The scope and structure of the questionnaire have remained largely unchanged. Several questions, such as those about military experience, have been removed. With the exception of the four questions that were added and are reviewed in this section, and several for which formats were modified (discussed in "Event History Item Formatting"), changes have been limited to minor rewording or revisions of dates.

The following evaluation of new HS&B questions was based on analyses of frequency distributions and on the observations made by the NORC coding staff who edited all questionnaires prior to data entry.

Question 15 (New)

Respondents were asked to think about their present or most recent job and to indicate whether a list of statements describing job characteristics were true or false in terms of that job. Statements for this question were taken from the Monitoring the Future survey base year and follow-up questionnaires (Form 4, Part A), conducted by the Institute for Social Research at the University of Michigan.

The nonresponse rates for these items were low, and participants seemed to have had no difficulty responding to any

statements. Frequency distributions (shown below) reflect a satisfactory amount of variability in respondents' answers. No changes are recommended.

Question 15. Thinking about your present or most recent job, indicate whether the following statements are true or false. (CIRCLE ONE FOR EACH LINE)

	True	False
a. It is (was) an interesting job to do.....	87%	13%
b. It is (was) a job I could be happy doing for most of my life.....	40	60
c. It is (was) the type of work I expect to do for most of my life.....	32	58
d. It is (was) a good stepping stone toward the kind of work I want in the long run.....	59	41
e. It is (was) the kind of work people do just for the money.....	34	65
f. It causes (caused) me stress and tension.....	45	55
g. It interferes (interfered) with my education.....	19	81
h. It interferes (interfered) with my social life.....	27	73
i. It interferes (interfered) with my family life.....	24	76
j. It lets (let) me get to know people with social backgrounds very different from mine.....	73	27

Question 17, 18, and 19 (New)

These questions ask about how prepared respondents were to handle the daily work activities, and about employment absenteeism and tardiness. The frequency distributions for these items are shown below.

Responses to these items seem to be in keeping with the general level of satisfaction reflected by other questions about current (or most recent) employment situations. For

instance, most respondents (82 percent) indicated they were either satisfied or very satisfied with their jobs as a whole (Question 14j). Responses to Question 17 indicate that only 7 percent of the HS&B respondents were usually or fairly often unprepared to handle activities at work. Question 18 responses suggest that absenteeism was low (90 percent were absent four days or less during the last six months). Based on the answers to Question 19, most were prompt (85 percent were late four days or less).

The nonresponse for these items was low (less than 1 percent); and based on the coders' review of questionnaires, respondents did not seem to have any difficulty answering the questions. No changes are necessary. However, given the very low incidence of extreme absenteeism and tardiness, we would recommend reducing the number of categories in Questions 18 and 19 by combining the last three into a single option that reads, "11 or more days" or "more than 10 days."

Question 17. Thinking about your present or most recent job, how often do you find yourself coming to work unprepared to handle the day's activities?

Usually	1%
Fairly often	6
Seldom	60
Never	34

Question 18. During the LAST 6 MONTHS (or, if not currently working the last 6 months that you worked), about how many days were you absent from work for any reason. Do not include vacations or jury duty.

None	35%
1 or 2 days	39
3 or 4 days	16
5 to 10 days	5
11 to 15 days	2
16 to 20 days	1
21 or more	2

Question 19. During the LAST 6 MONTHS (or, if not currently working, the last 6 months that you worked), about how many days were you late to work?

None	41%
1 or 2 days	29
3 or 4 days	15
5 to 10 days	8
11 to 15 days	2
16 to 20 days	1
21 or more	3

6. NEW QUESTIONNAIRE ITEMS--NLS-72 CORE QUESTIONNAIRE

Many of the NLS-72 questions in the field test instrument were repeated from previous questionnaires. Changes that were made in the questionnaire for this follow-up were primarily additions of new questions and minor modifications of previously used items. New questions were added so that NLS-72 data could be used to address additional education policy issues and social research interests. Most modifications were made so that questionnaire items (including wording, instructions, format, and answer categories) would correspond exactly to items in other survey instruments, primarily previous NLS-72 survey forms and the HS&B questionnaire, thus enhancing the comparability of similar items from separate studies.

The evaluation of new and revised items is the focus of this section. These items have been examined in several ways. Frequency distributions were used to evaluate their effectiveness. Distributions of participants' responses helped determine if instructions were clear, if the intent of questions was met, and if response categories were comprehensive. A qualitative assessment of new and revised items was also made. NOPC coders reviewed all questionnaires and noted patterns of errors made by respondents in filling out questionnaires. The comments that respondents had written in questionnaires were also noted. Participants had been encouraged to identify questionnaire items they found problematic and to explain why these were difficult to answer (e.g., instructions were not clear, questions were not applicable because of respondents' circumstances).

The questionnaire items that are reviewed in this section are in numeric order; numbers correspond to the field test questionnaire. Each item has been identified as new or modified.

Question 12 (New)

Respondents were asked if training they had received as part of their most recent full-time job had been specifically aimed at retraining them because their current job was phased out or discontinued.

There was a high nonresponse rate for this item (13.8 percent) which is likely to be attributable to its position on the questionnaire page and to its placement in relation to a series of questions asking for detailed information. This item appeared at the bottom of a page and after a series of questions asking for estimates of time (in weeks and hours per week) spent in various job training situations. It is likely that the comparative demand of the preceding series of questions eclipsed this item, and that response would be improved by more prominent placement. An alternative would be to incorporate it as part of preceeding series. Refer to sections on "Nonresponse and Respondent Burden" and "Logical Consistency between Filter and Dependent Items" for additional discussion of this item.

Question 13A-B (New)

Part A of Question 13 asked if respondents had received training or education to improve skills or to advance within the job they had held. Part B asked if they had received training to prepare for a new job or career.

The nonresponse for both parts of this question was comparatively high (7 percent and 9 percent) though not as high as for Question 12. It is likely that placement of these questions (they appear at the top of a page rather than at the bottom as Question 12 did) accounts for the somewhat better performance. Response capture might be further improved if these items were moved to precede the detailed job training series that they followed in the field test questionnaire. Because the nature of inquiry is broader than the job training series, document flow might also benefit from placing the more general questions before those that require specific, quantitative information. This item is also discussed in the "Nonresponse and Respondent Burden" section.

Question 14B (Modified)

The format of this question, asking about periods of unemployment, has been modified. In previous questionnaires respondents were asked to give beginning and ending dates to report when they had been unemployed. The revised format was a calendar-style layout that enabled respondents to circle codes that corresponded to months and years rather than write in information. The nonresponse rate for this item was comparatively high: 11 percent of respondents who had experienced unemployment failed to complete the calendar. It is likely that nonresponse is attributable to recall difficulty rather than to the new format. NLS-72 survey members are asked to give unemployment information for a six-year period of time. It is not expected that the rate of nonresponse for this item will have a significantly negative

effect on data retrieval costs since the number of survey members who contribute to the rate is small. No changes are recommended. See the "Event History Item Formatting (Calendars)" section for a full discussion of the calendar format items.

Question 23, 23A, 23B; Question 24, 24A, 24B; and Question 25, 25A (New)

This series of questions gathers data about postsecondary school finances. Although NLS-72 respondents had been asked about their school finances during previous follow-ups, these specific questions had not been used before. Survey members were asked to supply information about the two most recent time periods between October 1979 and February 1985 during which they attended school.

There was a high level of nonresponse for these questions which suggested that respondents found it difficult to keep time periods and corresponding financial information clearly in mind. Nonresponse rates indicated that identifying specific types of financial assistance was also difficult.

Please refer to "Nonresponse and Respondent Burden" for a full discussion of these questions and recommended modifications.

Question 98, 98A, and 98B (New)

Respondents were asked to select a response category that described the child care arrangements they made for their pre-school children. Parts A and B of this question ask for estimates of days per week and average number of hours per week during which their children were cared for in the manner they specified.

The nonresponse rates for these items ranged from about 20 percent of respondents who were eligible to answer to over 28 percent. For the most part, the high nonresponse rate results from an imprecise filtering of respondents into the series of questions about child care. The general instructions at the beginning of the section direct all parents to answer all questions regardless of applicability to their particular circumstances.

Answering these questions was clearly problematic for "full-time" parents, that is, parents not employed outside the household who themselves provided all care for their children. Several respondents commented in marginal notes that they were not certain how to differentiate between "child care" (a term that connotes care under certain circumstances, usually the absence of a parent) and the general, round-the-clock care that they provided for their children. Although one of the response categories was satisfactory in describing the care their children received ("In child's home by relative, e.g., mother, father, grandparent, aunt, sibling"), they were not able to give a meaningful estimate of child care time per week. Some who attempted to estimate entered the maximum number of hours permitted by the format of the question (i.e., 99 hours) and added the notation "+", indicating that care exceeded 99 hours. The questions seemed to be particularly awkward if children were infants.

An explicit response category should be added to this item to allow parents to indicate that they provide all care for their child(ren). The option should carry instructions to skip to the

next question without entering any further estimates of days and hours per week.

Question 98C (New)

Respondents were asked about the extent to which they made arrangements for child care for their pre-school age children (that is, did they make all, most, about half, some or none of the arrangements). This item was also awkward for full-time parents, particularly those with infants. An answer category such as "child care arrangements not necessary" should be added.

Based on marginal notes in questionnaires, the meaning of the term "arrangements" was not clear to some respondents. One possibility a respondent mentioned was the initial arrangement made for child care services as distinguished from the continuing, perhaps daily arrangements that might be necessary (such as dropping off and picking up children). One parent noted that although his wife had made all of the initial arrangements for child care, he was solely responsible for making daily arrangements to tranport children to and from the child care location.

The intention of this question is to determine if the respondent bears the burden of responsibility for child care arrangements and if such responsibility interferes with his or her education or employment obligations. The question might be reworded in the following way to shift the focus from the kinds of arrangements to the locus of responsibility:

To what extent do you have responsibility for the child care arrangements for your preschool children?

1. Childcare arrangements not necessary
2. I make all of the arrangements
3. I make most of the arrangements (more than half)
4. I make about half of the arrangements
5. I make some of the arrangements (less than half)
6. I personally make no child care arrangements

Question 99, 99A, 99B, 99C (New)

This series of questions duplicates Question 98 but asks about child care for school-age children. The questions posed the same problem for full-time parents. A similar solution, i.e., providing an opportunity for full-time parents to skip, should be implemented. Respondents noted that these questions were awkward if children were adolescents. (Although members of the NLS-72 cohort are in their early 30s, some now have partners with pre-teen or teenage children from previous relationships.) Adding a response category such as "child is able to care for self" or "child old enough to care for self" and allowing the respondent to skip to the next question would further improve this item.

Question 102 (New)

Question 102 asks respondents about the amount of time they took off from work when their youngest child was born.

It is likely that the high nonresponse rate for this item (17 percent) is attributable tc parents who were not employed at the time the child was born. This might often be the case for mothers who stopped working several weeks or months before the expected date of birth. An answer category such as "Was not working" (placed at the top of the list) should be added for this question.

Interestingly, more respondents (42 percent) selected the "No time off" answer category than any other. This distribution of responses may be due to male respondents who would be less likely to take time off from work when children were born.

Question 103 (New)

Respondents were asked how much time they had taken off from work or school during the last year to care for children. As for the previous question, there was a high nonresponse rate (19 percent), and adding an initial response option such as "Was not working or attending school" seems appropriate. The modal response category for this item was also "No time off" (43 percent of those who answered the question), again probably reflecting the responses of male parents.

Question 112 A-D (New)

Respondents were asked to give their mother's age (or if deceased, age at death) and father's age (or age at death if deceased). The frequency distributions for Parts A and C of this question indicate that respondents were able to supply the ages of their parents. Moreover, the relatively minor degree of response clusters at such "rounded numbers" as 45, 50, 55, and 60 seems to indicate that respondents are providing reasonably precise data.

Nonresponse for Parts B and D (those who indicated a parent was deceased) was very low at only 9 to 13 cases. (Only 34 cases (7 percent) indicated that their mothers were deceased. Nearly 1 in 5 cases reported that their father was deceased. These gaps may be further reduced by adding a phrase like "If you can't

remember exactly, please indicate about how old" and "about which year."

Questions 117 and 118 (Modified)

The purpose of these two related items is to collect more detailed and accurate data on the race and ethnicity of NLS-72 respondents. In earlier rounds of NLS-72, respondents were asked to describe themselves in terms of general racial categories which resulted in an undercount of Hispanics. Question 117, asking about ethnicity, and Question 118, asking about race, were developed for and are used in the HS&B questionnaire.

The rate of nonresponse for this Question 117 (3.4 percent) indicates that most respondents had no difficulty in describing themselves in terms of the ethnic categories listed. Approximately one-third of those who contributed to the rate of missing data for this question (by using response categories incorrectly) were respondents of non-Hispanic origins who attempted to use the last response category "Other Latin American, Latino, Hispanic or Spanish descent (WRITE IN)" to indicate ethnic backgrounds such as Irish, German, or Italian. A minor change in the layout of response categories is recommended. A more obvious visual separation of the two main ethnic categories (as shown below) should make it clearer that the "Other...(WRITE IN)" line is to be used only by Hispanics.

117. What is your origin or descent? (If more than one, please mark the one you consider the most important part of your background.) (CIRCLE ONE)

NON-HISPANIC.....01

HISPANIC OR SPANISH:
- Mexican, Mexican-American, Chicano.....02
- Cuban, Cubano.....03
- Puerto Rican, Puertorriqueno.....04
- Other Latin American, Latino, Hispanic or Spanish descent (WRITE IN)_____05

Item nonresponse for Question 118, which asks for the respondent's race, was only 1 percent. These two questions appear to work as intended to better identify Hispanics who belong to all racial categories.

7. RESPONDENT LOCATING

The current follow-up surveys of HS&B and NLS-72 are conducted primarily by mail. Updating the name and address information of participants so survey material will be received promptly is an essential task in preparing for data collection. This preparation, referred to as locating, involves contacting participants to verify or correct name and address information. The contact also provides an opportunity to renew respondents' interest in the study and their willingness to participate. They are reminded of the importance of their role in on-going policy research and provided with updated information about the project. Participants are informed, for instance, about survey findings that have become available since they were last contacted, uses to which data have been put, and plans for future data collection. They are also reminded of the nature and objectives of longitudinal research and how crucial their participation is to the success of the study.

The level of effort required to contact individual respondents during the locating period varies. While name and address information for many participants remains the same, extensive tracing is required for survey members who move between survey waves. The success in eventually contacting respondents varies, as does the effort needed to do so. Locating success is affected, of course, by mobility behavior of individuals. How frequently they move, how far they move, and what kind of forwarding information they leave behind will have direct effects on the ability to trace them. Locating success is also affected by the ability and willingness of participants, family members,

friends, and acquaintances to provide information about respondents' whereabouts.

Different locating methods were used for the HS&B and NLS-72 cohorts during the field test in order to meet the field test objectives for the two components. The field test objectives for the current HS&B round were essentially those of the last round--the assessment of new and revised questionnaire items. Because the primary concern was instrumentation and because the survey procedures used previously had been satisfactory, no changes were made in locating activities. As during earlier follow-ups, the initial prefield contact with the HS&B field test sample was by mail. Letters were sent to survey members informing them of the survey schedule and requesting them to mail back updated name and address information. Follow-up of those who did not respond and of those whose letters were returned as undeliverable began about two weeks after the initial mailing. In order to compare costs and effectiveness of two methods, telephone follow-up was used for half of the nonresponders and mail follow-up for the other half. The results are described later in this section.

The field test objectives for NLS-72 were somewhat broader than those for HS&B and conditioned by the history of survey events during the last six years. The evaluation of questionnaires was of major interest, but equally important was an assessment of the locating effort that would be required during the main survey. Unlike HS&B, NLS-72 has not involved data collection since 1979. Furthermore, although address updating by mail (similar to the procedure used for HS&B) was undertaken in

1981 and again in 1983, there had not been extensive tracing of survey members who failed to return updated information. It was expected that both locating and persuading NLS-72 survey members to participate would be more difficult because of this time lag. Although the primary locating method to be used during the main survey will be address updating by mail, locating for the field test was done by telephone. Telephone tracing, a more expeditious locating method than regular postal service, was used because of the time limits of the prefield period. Telephone locating also offered the advantage of personal contact with respondents after an extended period between survey waves and an opportunity to gauge informally interest and inclination to participate in the next round of survey activities.

7.1 HS&B Locating Procedures and Results

Locating letters were sent to HS&B sample members on October 19, 1984. Enclosed with the letter was a newsletter, an address update form and a return envelope. Sample members were asked to verify or correct name and address information and return the form to NORC. Almost half (48.5 percent) of the HS&B survey members returned the initial address update form. The follow-up of survey members who did not return an update form began in early November, about two weeks after locating letters had been mailed.

As an experiment, two methods of follow-up were used to contact those who did not return address update forms. Telephone follow-up of approximately half of the nonresponders began in early November. In mid-November, the other nonresponders were

sent a second locating letter and requested to return an address update form.

The two methods of follow-up were not equally effective, as Table 7-1 indicates. Of the survey members who were sent a second locating letter, 44.6 percent sent back address update forms. Of the cases for whom follow-up by telephone was attempted, contact was made and addresses updated for 81.6 percent.

Table 7-1
High School and Beyond Third Follow-up Field Test
Comparison of Locating Follow-up Methods

Type of Follow-Up	Sophomores	Seniors	Total	% of follow-up type	% of sample (N=408)
Total designated for follow-up:	91	90	181	(100.0)	(44.4)
Total designated for mail follow-up	46	37	83	(100.0)	(20.3)
2nd mailing - no response	22	24	46	(55.4)	(11.3)
2nd Address Update returned, same address	7	6	13	(15.7)	(3.2)
2nd Address Update returned, new address	17	7	24	(28.9)	(5.9)
Total located by mail follow-up	24	13	37	(44.6)	(9.1)
Total designated for phone follow-up	45	53	98	(100.0)	(24.0)
Phone follow-up of nonresponders, not located	7	11	18	(18.4)	(4.4)
Phone follow-up of nonresponders, same address	19	23	42	(42.8)	(10.3)
Phone follow-up of nonresponders, new address	19	19	38	(38.8)	(9.3)
Total located by phone follow-up	38	42	80	(81.6)	(19.6)

Follow-up efforts resulted in name and address updates for close to an additional 30 percent of the HS&B field test sample. (This is 30 percent in addition to updates made as the result of

the initial locating letter.) Mail follow-up located 9.1 percent of the sample, and 19.6 percent were located with telephone follow-up

Overall, approximately 82 percent of the HS&B field test sample was located during the fall of 1984 (see Table 7-2). There was almost no difference in the percent of each cohort located: 82.1 percent of the sophomores were located and 81.0 percent of the seniors were found. Differences in the locating outcomes for the two cohorts during the current field test were even smaller than during the last follow-up in 1982. The rates for sophomores and seniors during the second follow-up were 63.7 percent and 69.6 percent, respectively. The overall percent located during the current field test was higher because of the additional follow-up activities that were undertaken.

A comparison was made of the address information that was supplied by those who responded to the initial request for name and address information and those who responded as the result of a follow-up request. This comparison, summarized in Table 7-3 suggests a relationship between the likelihood of responding (or responding without prompting) and mobility.

Of those who sent back updated information in response to the initial letter, 61 percent lived at the address that was on record from the previous field test survey in 1983, and 39 percent lived at a new address.

There were 117 survey members who did not respond to the first request for name and address information but did provide information during the follow-up contact. Of those who responded

Table 7-2
High School and Beyond Third Follow-up Field Test
Locating Outcomes

Address Verified	Sophomores (N=207) N	Sophomores (N=207) Percent of 207	Seniors (N=201) N	Seniors (N=201) Percent of 201	Total (N=408) N	Total (N=408) Percent of 408
1st Address Update returned, same address	65	(31.4)	56	(27.9)	121	(29.7)
1st Address Update returned, new address	34	(16.4)	43	(21.4)	77	(18.9)
"Undeliverable" located by phone	9	(4.3)	9	(4.5)	18	(4.4)
2nd Address Update returned, same address	7	(3.4)	6	(3.0)	13	(3.2)
2nd Address Update returned, new address	17	(8.2)	7	(3.5)	24	(5.9)
Phone follow-up of nonresponders, same address	19	(9.2)	23	(11.4)	42	(10.3)
Phone follow-up of nonresponders, new address	19	(9.2)	19	(9.5)	38	(9.3)
Total:	170	(82.1)	163	(81.0)	333	(81.6)
Address Not Verified	37	(17.8)	38	(19.9)	75	(18.4)

Table 7-3
High School and Beyond Third Follow-up Field Test
Comparison of Address Changes for Initial and Follow-up Responders

Letter Responders	Number	Percent
Initial letter responders (N=198)		
Same address	121	(61% of 198)
New address	77	(39% of 198)
Follow-up letter responders (N=117)		
Same address		
per 2nd address update form	13	
per telephone contact	42	
Subtotal:	55	(47% of 117)
New address		
per 2nd address update form	24	
per telephone contact	38	
Subtotal:	62	(53% of 117)

to the second request, 47 percent were at the same address, and 53 percent had new addresses.

Those who responded to the initial request for address information were more likely to be living at the same address than those who were reached as the result of follow-up contact. These findings have implications for the full-scale survey locating expectations and strategies which are discussed later in this section.

7.2 NLS-72 Locating Procedures and Results

All locating for NLS-72 sample members was done by telephone from NORC's central office in Chicago. Telephone locating began in late September 1984 and continued until early December. Telephone interviewers began the locating process using name, address, and telephone information supplied by participants at the time they were last contacted. The length of time since the last contact varied by individual from 2 to 12 years depending on the last event (see list below) that a survey member participated in.

NLS-72 Survey Events

Base year test and survey	1972
First follow-up survey	1973 - 1974
Second follow-up survey	1974 - 1975
Third follow-up survey	1976 - 1977
Fourth follow-up survey	1979 - 1980
Address updating	1981
Address updating	1983

Overall, approximately 77 percent of the field test sample were located (see Table 7-4). There was a considerable difference in the success of locating those who had participated in the fourth follow-up and those who had not. As Table 7-4 shows, about

Table 7-4
NLS-72 Fifth Follow-up Field Test
Telephone Locating Outcomes

Fourth Follow-up Participant N = 600				Fourth Follow-up Nonparticipants N = 97				Total N = 697
Located				Located				
Same Phone	New Phone	Other Contact	Total	Same Phone	New Phone	Other Contact	Total	
177 (29%)	253 (42%)	70 (12%)	498 (83%)	8 (8%)	17 (18%)	11 (11%)	36 (37%)	534 (77%)
Not located				Not located				
			Total 102 (17%)				Total 61 (63%)	163 (23%)

83 percent of the fourth follow-up participants were located; less than half (37 percent) of the nonparticipants were found.

Field test results also indicate there were differences in the utility of the locating information on record from previous follow-ups for survey members with different participation histories. While close to one-third (29 percent) of the fourth follow-up participants were located at the phone number on record, less than one-tenth (8 percent) of the nonparticipants could be contacted at the number they had last supplied. The participation histories of the individuals within the fourth follow-up nonparticipant group vary and, therefore, so does the age of locating information. For example, some survey members did not participate in the fourth follow-up, but did participate in the

third follow-up survey three years earlier, in 1976-1977. Others have not participated since the base year in 1972. Therefore, name and address information for the group overall was 8 to 12 years old.

Table 7-4 also shows differences in the success with which respondents can be "traced" when names, addresses, and phone numbers on record are no longer current. Forty-two percent of the fourth follow-up participants were traced and eventually contacted at new phone numbers, but only 18 percent of the nonparticipants could be found. Not only were there fewer direct links to those in the nonparticipant group (that is, fewer were reached at the phone number on record), but acquiring information from respondents' family, friends, and acquaintances was also less successful. All information for the group of nonparticipants, including information on families, friends, and acquaintances, was, of course, older and more likely to be out-of-date. Other tracing means such as directory assistance and address/telephone number cross-reference services were also less successful because of the longer periods of nonparticipation. The longer the period of time since the last contacts with these respondents, the greater the number of moves (and name changes) that were possible, and the less likely it was to trace them successfully to their current location.

Of the NLS-72 cases that were not located by telephone interviewers during the prefield phase, a small number were selected for additional locating effort by NORC field staff. The objective was to assess the costs and effectiveness of locating

activities that were likely to be needed for the most difficult cases in the NLS-72 sample.

Twenty-four cases were chosen for additional field effort. They were chosen from Stratum E (see the subsection on sample design in Section 1, "Field Test Activities," for a full description of this stratum), which is composed of survey members who were fourth follow-up nonparticipants and who were either never-married parents or had experienced marital disruptions. Eight cases were chosen from each of three urban areas (New York, Chicago, and Los Angeles) that have consistently offered locating challenges.

All information available for the twenty-four NLS-72 survey members was sent to the field managers of the areas mentioned above to be reviewed for any possible leads that could be pursued at a regional or local level. The information included documentation of the most recent telephone tracing done at the NORC central office during the fall prefield locating period as well as survey records of various types (e.g., tracing logs from previous follow-ups, address update forms) that dated as far back as the base year of the survey.

Field managers contacted state and county agencies (such as the Department of Motor Vehicles, the Bureau of Vital Statistics, and prisons) for information about survey members' current whereabouts. They also contacted local insitutions (such as public libraries and various municipal offices). If survey members had reported postsecondary education during previous follow-ups, school administrative offices and alumni associations were contacted for address information.

The field staff also extended the central office locating effort by attempting telephone contact with family members, friends, and other acquaintances identified in old records. Field managers indicated that for some cases there were leads in old records that might be pursued by actually going to respondents' old neighborhoods, although this was not done during the field test because of cost considerations.

In all, six of the twenty-four cases were found. The activities of the field staff represented the next level of locating effort beyond telephone tracing from a central location. The twenty-four-case experiment indicated the level of effort and the associated costs required for the most difficult locating cases. It further indicated that even with considerable effort only a small proportion of these cases can be found.

7.3 Implications of field test locating results for the full-scale survey

The cost and effectiveness of different locating procedures used during the field test varied and will be reviewed in this section. Although the comparison of results provides practical information (and perhaps some methodological insights), it is necessary to remember that there were significant differences in the characteristics of the samples for which the different methods were used. Furthermore, the methods that were used were chosen because they were expected to be the most successful ways of achieving particular field test objectives. With the exception of the HS&B mail and telephone follow-up of nonresponders, the purpose of using different methods was not experimentation, and

therefore, neither conditions nor controls appropriate for conducting experiments were established. A note of caution must also be made about extrapolating from these results to research efforts that do not have longitudinal designs.

Both the costs and the effectiveness of the two follow-up methods differed. The initial mail request for name and address information resulted in responses from almost half of the HS&B survey members. With additional follow-up of nonresponders, however, 82 percent of the sample were eventually located (see Table 7-2, above).

The cost of mail follow-up was about $3.00 per completed case. (This unit cost, which is calculated by dividing total expenses by the number of cases actually located, also includes the cost of work on cases that are not located.) Costs were comparatively modest because the same procedures and materials used for the first mailing were used for the second. Therefore, minimal management and preparation was required. It should be emphasized that neither the unit cost for mail follow-up discussed here nor that for telephone follow-up have included the much larger startup costs required for a full locating effort on the main survey. The costs as they are currently calculated thus must be interpreted to be applicable solely to the field test.

The cost of telephone follow-up was approximately $10.00 per completed case. Telephone follow-up was conducted from NORC's central office in Chicago. Costs included telephone interviewer labor as well as telephone expenses, with a considerable proportion being long-distance interstate charges. The method was more effective (contact was made with about twice as many survey

members), but the unit cost of $10.00 per completed case was over three times that of mail follow-up. Again, the unit cost for telephone follow-up does not include startup costs.

NLS-72 locating, all of which was done by telephone, resulted in name and address updates for 77 percent of the NLS-72 field test sample. The cost of telephone locating was greater than mail contact without any follow-up and about the same as mail contact with follow-up.

The cost for the field staff effort that was undertaken for the twenty-four NLS-72 cases was almost $100 per completed case. This cost was in addition to the extensive telephone locating that was done from the NORC central office in Chicago. Given that six of twenty-four cases were located, the return on this additional effort was only 25 percent of the fielded cases.

Although it would be desirable to use all effective locating methods during the prefield period for the full-scale survey, to do so would require resources far beyond what has been allocated for this task. Telephone locating for the entire sample is not possible from a cost standpoint. Furthermore, telephone contact alone would not allow for the distribution of survey newsletters that are considered an important opportunity to renew survey members' interest in the study and to remind them of the importance of their participation.

The cost of either mail or telephone follow-up of nonresponders alone is prohibitive because of the large number of survey members who are not be expected to respond to the initial locating letter. Based on the HS&B second follow-up main survey,

70 percent of the sample did not respond to the locating letter. Even at the comparatively low cost of $3 per case, the cost of mail follow-up for 70 percent of the combined HS&B and NLS-72 samples (almost 27,000 survey members) would be about $81,000; the cost of telephone follow-up would be approximately $270,000. These costs would be in addition to that of an initial locating effort which is even greater because of the setup and startup costs of this major task.

The field test was useful in identifying which portions of the sample are likely to be most difficult to locate. It was also valuable in indicating which locating techniques are likely to be most successful (or necessary) for different subgroups and at what costs. This information will aid in guiding the field staff who will continue tracing efforts at regional and local levels for survey members who are not located during the prefield period.

8. TEACHING SUPPLEMENT QUESTIONNAIRE

A supplement to the NLS-72 fifth follow-up core questionnaire was sponsored by the National Science Foundation (NSF) to investigate factors that influence decisions for and against choosing teaching as a career. The Teaching Supplement questionnaire gathers information about the reasons that individuals acquire training to teach, why they do or do not pursue or continue in careers as elementary and secondary teachers, and how they feel about various aspects of the teaching field. The supplement also addresses the issue of incentives that might encourage people to become mathematics and science teachers. Additional NSF items focusing on teaching issues were included in the NLS-72 main questionnaire and are analyzed elsewhere (see the section on "Logical Consistency between Filter and Dependent Items"). This section discusses only the supplementary questionnaire.

The Teaching Supplement was sent with the NLS-72 core questionnaire to survey members who had been identified as teachers or "potential" teachers. The selection criteria for this group, referred to as Stratum A throughout the field test report, is fully discussed in the sample design subsection (1.2) of Section 1, "Field Test Activities." Briefly, Stratum A members are those who had worked as teachers, those whose educational background had prepared them for teaching, or those who had indicated an interest in teaching during a previous follow-up survey.

The same field test procedures were used for Stratum A as for the other NLS-72 strata. Telephone locating was conducted during

the fall of 1984 and resulted in address updates for over 97 percent of the stratum. Questionnaires were mailed during the first week in February 1985 to those for whom address updates had been acquired. The survey response rate for this stratum, 86 percent, was the highest achieved by any of the NLS-72 strata.

Although the response rate of Stratum A was 86 percent, only 69 percent of the sample returned the Teaching Supplement with the core questionnaire (see Table 8-1). Furthermore, not all of the Teaching Supplements that were sent back were filled out; 6 percent were returned blank. About one-third of those who returned the supplement (21 percent of the stratum) answered only the first question indicating that they had neither had teaching experience nor been trained as teachers. The remaining questions in the supplement were not applicable to these respondents and were legitimately skipped. After a series of questions on certification, a filter question reduced the number of respondents who completed the rest of the supplement to 71 persons who were currently teachers or had been teachers formerly. Therefore, analysis of most of the Teaching Supplement data is based on the responses of these 71 survey members who constitute about 36 percent of the stratum.

What appears to be a low response rate for the Teaching Supplement is attributable in large part to sample design features. The definition of teacher and "potential" teacher for sampling purposes was intentionally broad and was expected to include survey members for whom the Teaching Supplement would not be applicable. One of the field test objectives was to estimate

Table 8-1
Final Status of Stratum A
(N=200)
(Number and percent of 200)*

5 (2.5%) Unlocatable during prefield stage	
	195 (97.5%) Questionnaires mailed
20 (10%) Returned undeliverable; never located	
	175 (87.5%) Final dispositions
	4 (2.0%) Refusals
	33 (16.5%) Returned core questionnaire only
	138 (69.0%) Returned core questionnaire and Teaching Supplement
	12 (6.0%) Teaching Supplement blank; not applicable
	126 (63.0%) Usable questionnaires
	42 (21.0%) No teaching experience, no teacher training
	84 (42.0%) Teaching experience or training
	13 (6.5%) Never taught
	71 (35.5%) Current and former teachers

*The distribution of cases in the lower right box is based on Teaching Supplement questionnaire responses. All other figures are from mail and receipt control records.

the proportion of the sample who were of interest for research and policy analysis purposes (i.e., those who had taught in the past, were currently teaching, or were interested in the teaching profession). Another objective was to evaluate the ability of survey instruments to route those survey members into and through questionnaires and questionnaire sections appropriately. The selection criteria for inclusion in Stratum A supported these objectives but also resulted in what appears to be a low response rate for the Teaching Supplement. Table 8-1 shows how Stratum A cases were narrowed down to the proportion that completed Teaching Supplement questions.

The performance of Teaching Supplement questionnaire items are examined from three perspectives: inter-item consistency, nonresponse, and problems discovered during coding. Inter-item consistency refers to whether or not respondents can follow the system of filter and dependent questions. Filter questions are generally answered by everyone and are followed up by instructions for some individuals to skip certain portions of the questionnaire and for other individuals to answer the next question in sequence. If instructions are not explicit or straightforward enough, respondents may become confused and not answer the appropriate questions. Inappropriate patterns of response, or inter-item inconsistency, were detected by comparing the number of respondents who answered a filter question in a given way compared to the number of respondents who answer the subsequent dependent questions. Crosstabulations of filter by dependent questions also were used to assess consistency.

Nonresponse is a signal which may indicate circumstances within the questionnaire that discourage respondents from answering certain questions. Reasons include respondent reluctance to answer a particular question, misunderstanding or overlooking of a question, or inapplicability of answer categories to the respondent. Nonresponse may also result from inappropriate or complicated skip patterns.

During the coding process, it was possible to detect wording problems, insufficient response categories, lack of clarity about who should respond, and so on. Also, respondents were encouraged to write in comments and the coding staff recorded all such information pertinent to improving the questionnaire.

In general, most items in the Teaching Supplement appeared to function properly and will not require revision. For one series of questions, virtually no response variation was found. Question 15 asks, "Have you attended any National Science Foundation-sponsored institutes, conferences, or workshops?" Ninety-nine percent of respondents answered "no". In question 15A, respondents are asked to indicate which NSF activities they had participated in. Only one person had attended a NSF activity and was able to select among these categories. Similarly, only one person was able to respond to parts 15B and C. Since the series of questions was not applicable to 99 percent of respondents, deleting it from the main Teaching Supplement questionnaire is recommended.

Some items were found to need modification; these items are reviewed below. In each case, the nature of the problem is discussed and a recommended action is offered.

Item 1: What requirements did you have to meet for graduation from a teacher training program and for initial certification?

There is some evidence that former teachers were confused by this question; some teachers thought that it only applied to those currently in teaching jobs. To alleviate this problem, the supplement needs some general instructions which make it clear to former teachers how the various questions apply to them.

Item 3: As of the first week of February 1985, in which specific field(s) (e.g., art, music, health) were you certified? (CIRCLE ALL THAT APPLY. FOR EACH FIELD CIRCLED, ENTER MONTH AND YEAR CERTIFICATION WAS RECEIVED.)

At the bottom of the choices in question 3, there is an instruction to skip to question 5 which is intended only for someone who chooses the category "Not currently certified." The question format could imply that <u>all</u> respondents should skip to question 5. This may explain why only 69 out of 84 respondents answered question 4. This item will be examined to determine the best placement of this instruction so that only respondents "not currently certified" will skip to question 5.

Item 5: Did you teach during the 1984-85 school year?
(CIRCLE ONE)

Yes.....(GO to 5B).....1
No, but taught before (ANSWER 5A, B and C.....2
No, have never taught (STOP HERE.....3
THANK YOU FOR YOUR PARTICIPATION. PLEASE RETURN THIS QUESTIONNAIRE ALONG WITH THE MAIN QUESTIONNAIRE IN THE ENVELOPE PROVIDED)

This question is the second filter question; it eliminates individuals who did not have any teaching experience. Because of this question, the number of respondents dropped to 71 since 13 individuals replied that they had never taught. After examination of the crosstabulations, it was found that with the exception of 5 respondents who incorrectly answered 5A as well as 5B, there were no problems or ambiguities with this question.

Item 7: What subject areas or grade levels have you taught in the last two years (or the last two years that you taught)? (WRITE IN SUBJECT BELOW, THEN ENTER THE SUBJECT CODE FROM LIST ON PAGE 5.)

Some confusion was apparent among respondents answering Questions 7A-2, 3, and 7B-2 and 3. They were asked to enter "99" if the categories did not apply to them in Question 7A, but were then asked to enter "Ø" if the categories did not apply to them in 7B. Rather than use two different codes for the same response, it would be preferable to change the instructions so that respondents can enter "Ø" in both questions for simplicity and consistency.

Part A of Question 7 instructs the respondent to enter the subject or grade level of the first, second, and third most frequently taught courses, and a code for these subjects/grades. A list of these codes is found on page 5 of the questionnaire. Some respondents tried to give both subject and grade level codes for each part of the question when they were only required to give either a subject or a grade level code. The question was intended for elementary teachers to choose the appropriate grade level code and for secondary teachers to choose a subject code but both groups may have felt the need to give both types of information. The question will be revised in order to clarify the instructions.

Item 9: Are you currently required to teach any courses for which you do not feel adequately qualified?

There were some former teachers who felt awkward answering this question because it is written in the present tense; teachers indicated that the question implied that they could not answer the question based on previous teaching experience. The question could be re-worded "Have you ever been required to teach any courses for which you did not feel adequately qualified?"

Item 11: What is the ability makeup of your current (most recent) classes?

At the time that approval was granted for the field test of the Teaching Supplement, OMB expressed concern about whether respondents would be able to choose among the answer categories to describe the ability level of their current or most recent classes. The frequencies of field test data show that there was a spread of responses among answer categories: 13 percent reported classes with high-ability students, 19 percent reported low-ability classes, 20 percent reported average-ability classes, and 48 percent reported classes of students of widely differing ability levels. Based on this distribution and a high response rate (90 percent), no changes are recommended for this question.

Item 13: In some schools or school districts where there are teacher shortages in certain subject areas, especially math and science, teachers are urged to obtain retraining in another area of expertise, to help meet the shortage. In the past two years, has your school or school district urged retraining of teachers in order to meet teacher shortages?

Only 67 of 84 respondents answered this question. Use of the present tense may have confused former teachers but this

discrepancy can be rectified by rewriting the question to read "In your experience as a teacher, has your school or school district urged retraining of teachers in order to meet teacher shortages?" This present tense wording pattern found throughout the questionnaire continued to cause confusion for former teachers. Each question should be worded so that former teachers are explicitly instructed to answer the question, or are provided with a response option to indicate that they are not currently teaching.

Item 26: How would you describe the location of your school?

OMB also had concerns about whether respondents would be able to choose among answer categories to describe the location of their school. Again, there was good response variation: 22 percent said that their school was within the central city, 9 percent said outside the central city but within a metropolitan area, 20 percent said in a suburban area, 34 percent said in a small town, and 14 percent said in a rural area. Based on the variety of responses and high response rate (90 percent), no changes are recommended for this question.

Item 30: To what extent does your school provide resources to help its "effective school" project to be successful?

Seventeen people should have answered this question based on the filter question in item 28 instructing respondents who respond "yes" to skip to questions 29 and 30. The response rate to question 29 was satisfactory. However, at question 30, the correct number of respondents is problematic. For example, question 30A has a sample size of 13 and a missing value of 4, but

30C and D have a sample size of 18 and a missing value of 4. This indicates that 5 people followed an incorrect skip pattern either from question 28 or 29. Perhaps the question can be prefaced with "(FOR CURRENT TEACHERS ONLY)."

At the end of the Teaching Supplement, respondents were asked to indicate the number of minutes required to complete the questionnaire. The mean number of minutes was 27. Table 8-2 displays the distribution of participants across the time segments. The target length of time for the Teaching Supplement was 15 - 20 minutes. Less than half of the respondents completed the questionnaire within the target range. Nineteen percent took between 20 and 30 minutes, while another 26 percent took over 30 minutes.

Table 8-2
Minutes Required to Complete the Field Test
Teaching Supplement Questionnaire

Minutes	Number of Respondents	Percent	Cumulative Percent
10-20	30	45	45
21-30	19	29	74
31-40	8	12	86
41-50	7	11	97
over 51	2	3	100

Although the Teaching Supplement now exceeds the respondent burden initially proposed, there is no clear evidence that the burden level has a dramatic effect on survey members' willingness to complete the main or supplementary questionnaires.

The size of the field test supplement (including both the main questionnaire items and those in the supplementary questionnaire) poses more of a problem for editing, coding and other data processing costs than for respondent burden and data collection costs. Since there is a second supplement focusing on teaching issues currently under development that will help to bear the processing costs (and will also contribute an additional incentive payment to all respondents who are sent a supplementary questionnaire), we do not believe that major reductions in the supplement should be made prior to fielding the survey. However, continuing efforts will be made to identify items that add little descriptive or analytical power to the dataset or that obtain too little response variation to be analytically useful.