NATIONAL CENTER FOR EDUCATION STATISTICS

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NATIONAL EDUCATION
LONGITUDINAL STUDY: 1988-1994

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"The duties of the Center are to collect, analyze, and disseminate statistics and other information related to education in the United States and in other nations...." Section 404 of the National Education Statistics Act of 1994 (20 U.S.C. 9003).
Foreword

This report describes the methods and procedures used for the 1994 third follow-up of the National Education Longitudinal Study of 1988 eighth graders (NELS:88/94). NELS:88/94 collected information on postsecondary education participation, employment, earnings, family formation, and other activities and experiences relevant to individuals as they are about to enter their adult lives. NELS:88/94 contains information that represents several nationally representative samples, including 1988 eighth graders, 1990 tenth graders, and 1992 twelfth graders enrolled in public or private schools. By the time of the 1994 follow-up study most NELS:88 sample members had completed four years of high school. However, some had dropped out of high school or had attended alternative programs to complete their diploma.

We hope that the information provided in this report will be useful to a wide range of interested readers. We also hope that the results reported in the forthcoming descriptive summary report will encourage use of the NELS:88/94 data. We welcome recommendations for improving the format, content, and approach, so that future methodology reports will be more informative and useful.

Paul D. Planchon
Associate Commissioner
Acknowledgments

The authors express their sincere thanks to all those who contributed to the production of this report. First and foremost, we acknowledge the expertise of the NELS:88/94 Technical Review Panel (TRP), whose insights guided this study from its very beginning through the completion of this report. C. Dennis Carroll and Jeffery Owings at the National Center for Education Statistics (NCES) reviewed early drafts of the report and offered many useful suggestions for its improvement. Panel members from the Department of Education were Nabeel Alsalam, Cliff Adelman; David Bergeron; and Dan Goldenberg. Other panel members were Jay Noel of the Congressional Budget Office, Jomills Braddock of the University of Miami, Vincent Tinto of Syracuse University, Jerry Bachman of the University of Michigan, Nancy Karweit of Johns Hopkins University, Marta Tienda of the University of Chicago, Eric Hanushek of the University of Rochester, and consultant Laura Knapp.
# Table of Contents

## Chapter One: Overview of the NELS:88/94

1.1 Purpose .......................................................... 1-1  
1.2 Design .................................................................. 1-1  
1.3 Topics .................................................................. 1-2  
1.4 Respondent Characteristics ........................................... 1-2  
1.5 Sample Design and Selection ........................................... 1-3  
1.6 Eligibility Criteria .................................................. 1-4  
1.7 NELS:88/94 CD-ROMs and Data Analysis System ......................... 1-4

## Chapter Two: Survey Design and Preparation

2.1 Schedule ......................................................... 2-1  
2.2 Instrument Development ............................................. 2-1  
2.3 Systems Design, Development, and Testing ............................. 2-2  
   2.3.1 Integrated Monitoring System ...................................... 2-2  
   2.3.2 Instrument Development System (IDS) ....................... 2-2  
   2.3.3 Computer-assisted Telephone Interviewing (CATI) .......... 2-2  
   2.3.4 Telephone Number Management System (TNMS) .......... 2-2  
   2.3.5 Case Management System (CMS) .............................. 2-3  
   2.3.6 Field Management System (FMS) .............................. 2-4  
   2.3.7 Statistical Quality Control: Interviewing, Locating, and Gaining Cooperation ...................................... 2-5  
   2.3.8 Statistical Quality Control: Interviewer Coding ................ 2-5  
   2.3.9 Data Entry of Self-administered Questionnaires .............. 2-6  
2.4 Staff Recruitment .................................................. 2-6  
2.5 Prefield Locating ................................................... 2-6  
2.6 Advance Mailing .................................................... 2-7  
2.7 Establishing the Locator Database ...................................... 2-7  
2.8 Development of Training Materials .................................... 2-7  
2.9 Supervisor, Interviewer, and Locator Training ........................ 2-8  
   2.9.1 Telephone Supervisor Training .................................... 2-8  
   2.9.2 Field Supervisor Training ......................................... 2-8  
   2.9.3 Telephone Interviewer Training ................................... 2-9  
   2.9.4 Locator Training for Central Office Locators ................... 2-9  
   2.9.5 Field Interviewer Training ........................................ 2-10

## Chapter Three: Data Collection

3.1 Staff ................................................................... 3-1  
   3.1.1 Telephone Center Staff ........................................... 3-1  
   3.1.2 Field Staff ..................................................... 3-1  
3.2 Work Flow Control ................................................. 3-2  
   3.2.1 Sample Release Strategy: Case Metering ....................... 3-2  
   3.2.2 Case Management and Quality Control ....................... 3-4  
   3.2.3 Case Delivery Management ....................................... 3-4
Table of Contents (Cont'd)

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.3</td>
<td>Refusal Conversion</td>
<td>3-5</td>
</tr>
<tr>
<td>3.4</td>
<td>CMS Locating</td>
<td>3-5</td>
</tr>
<tr>
<td>3.4.1</td>
<td>Telephone Center and Field Interaction</td>
<td>3-7</td>
</tr>
<tr>
<td>3.4.2</td>
<td>Telephone Center and Field Locating Results</td>
<td>3-7</td>
</tr>
<tr>
<td></td>
<td><strong>Chapter Four: Production Statistics, Quality Assurance,</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>and Statistical Quality Control</strong></td>
<td>4-1</td>
</tr>
<tr>
<td>4.1</td>
<td>Response Rates</td>
<td>4-1</td>
</tr>
<tr>
<td>4.2</td>
<td>System Measures</td>
<td>4-1</td>
</tr>
<tr>
<td>4.3</td>
<td>Questionnaire Frequency Review</td>
<td>4-4</td>
</tr>
<tr>
<td>4.4</td>
<td>SQC Monitoring</td>
<td>4-4</td>
</tr>
<tr>
<td>4.4.1</td>
<td>Monitoring Schedule Generation</td>
<td>4-4</td>
</tr>
<tr>
<td>4.4.2</td>
<td>Monitoring Session Data Capture</td>
<td>4-6</td>
</tr>
<tr>
<td>4.4.3</td>
<td>Monitor Training</td>
<td>4-10</td>
</tr>
<tr>
<td>4.4.4</td>
<td>Monitoring Data Analysis</td>
<td>4-10</td>
</tr>
<tr>
<td>4.4.5</td>
<td>Additional Monitoring Problems</td>
<td>4-10</td>
</tr>
<tr>
<td>4.4.6</td>
<td>Monitoring Results</td>
<td>4-10</td>
</tr>
<tr>
<td>4.5</td>
<td>SQC Coding</td>
<td>4-10</td>
</tr>
<tr>
<td></td>
<td><strong>Chapter Five: Weights, Standard Errors, Design Effects,</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Nonresponse Rates</strong></td>
<td>5-1</td>
</tr>
<tr>
<td>5.1</td>
<td>Purpose of Weighting</td>
<td>5-1</td>
</tr>
<tr>
<td>5.2</td>
<td>Calculation of Third Follow-up Weights</td>
<td>5-1</td>
</tr>
<tr>
<td>5.3</td>
<td>Standard Errors and Design Effects</td>
<td>5-8</td>
</tr>
<tr>
<td>5.3.1</td>
<td>Third Follow-up Standard Errors and Design Effects</td>
<td>5-8</td>
</tr>
<tr>
<td>5.3.2</td>
<td>Use of Design Effects and Approximate Standard Errors</td>
<td>5-25</td>
</tr>
<tr>
<td>5.4</td>
<td>Unit Nonresponse</td>
<td>5-26</td>
</tr>
<tr>
<td>5.5</td>
<td>Item Nonresponse</td>
<td>5-28</td>
</tr>
<tr>
<td>5.6</td>
<td>Non-Response Bias Analysis</td>
<td>5-39</td>
</tr>
<tr>
<td></td>
<td><strong>Chapter Six: Data Quality</strong></td>
<td>6-1</td>
</tr>
<tr>
<td>6.1</td>
<td>Computer-Assisted Telephone Interview (CATI) Contingency Checks and Data Quality</td>
<td>6-1</td>
</tr>
<tr>
<td>6.2</td>
<td>Decision Rules for Computer-Assisted Data Entry (CADE)</td>
<td>6-1</td>
</tr>
<tr>
<td>6.3</td>
<td>Internal Consistency of Responses to Related Items</td>
<td>6-3</td>
</tr>
<tr>
<td>6.4</td>
<td>Comparison of Third Follow-up Design Effects to Previous Rounds</td>
<td>6-5</td>
</tr>
<tr>
<td></td>
<td><strong>Chapter Seven: Composite Variables</strong></td>
<td>7-1</td>
</tr>
<tr>
<td>7.1</td>
<td>Demographic Composites</td>
<td>7-1</td>
</tr>
<tr>
<td>7.2</td>
<td>High School Status</td>
<td>7-2</td>
</tr>
<tr>
<td>7.3</td>
<td>Labor Force Experience</td>
<td>7-2</td>
</tr>
<tr>
<td>7.4</td>
<td>Postsecondary Education</td>
<td>7-3</td>
</tr>
<tr>
<td>7.5</td>
<td>Family Formation and Values</td>
<td>7-4</td>
</tr>
</tbody>
</table>
Table of Contents (Cont'd)

<table>
<thead>
<tr>
<th>Appendix A</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATI Instrument Code</td>
<td>A-3</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Appendix B</td>
<td>B-1</td>
</tr>
<tr>
<td>Interviewer Training--Trainer's Agenda</td>
<td>B-3</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Appendix C</td>
<td>C-1</td>
</tr>
<tr>
<td>Locator Training--Trainer's Agenda</td>
<td>C-3</td>
</tr>
</tbody>
</table>
Chapter One: Overview of the NELS:88/94

1.1 Purpose

With the award of the base year contract in February 1986, NELS:88 joined the National Longitudinal Study of the High School Class of 1972 (NLS-72) and High School and Beyond (HS&B) as the third in a series of longitudinal studies sponsored by the U.S. Department of Education's National Center for Education Statistics (NCES). These studies provide trend data about critical transitions experienced by young people as they develop, attend school, and embark on their careers.

Given the challenges facing America's schools--to educate all our young people for the next decade--NELS:88 complements and has the potential to strengthen state and local efforts by furnishing new information on school policies, teacher practices, and family involvement, all of which affect student educational outcomes (academic achievement, persistence in school, and participation in postsecondary education). NLS-72 and HS&B surveyed high school seniors (HS&B also surveyed sophomores) through their high school, postsecondary education, and work and family formation experiences. Taken together, these three longitudinal studies not only measure educational attainment but also provide rich explanations of the reasons for and consequences of academic success and failure. Both NLS-72 and HS&B have influenced the school reform movement, and NELS:88 will provide comprehensive data for gauging the degree of the reform movement's success.

1.2 Design

Conducted in the spring of 1988, the base year survey was a clustered, stratified national probability sample of 1,052 public and private eighth grade schools. Almost 25,000 students across the United States participated in the base year survey. Questionnaires and cognitive tests were administered to each student in the sample, which covered school experiences, activities, attitudes, plans, selected background characteristics, and language proficiency. The school administrator completed a questionnaire about the school; two of each student's teachers were asked to answer questions about the student, themselves, and the school; and one parent of each student was surveyed regarding family characteristics and the student's activities.

Conducted in the spring of 1990 (when most sample members were in the 10th grade), the first follow-up of NELS:88 consisted of the same components as the base year study, with the exception of the parent survey. In order to meet budgetary constraints, approximately 21,000 students were sampled from the 1988 eighth grade sample. The subsampling was carried out proportional to the number of base year sampled students within a school, which greatly reduced the number of schools involved with the study. In 1990, a freshened sample was added to the first follow-up student component to achieve a representative sample of the nation's sophomores. Of the final first follow-up sample, some 18,000 students and over 1,000 dropouts participated; also, nearly 1,300 school administrators and 10,000 teachers participated.

The second follow-up to NELS:88 began early in 1992 when most sample members were second term seniors. As in the prior waves, multiple respondent populations were surveyed:
students (including dropouts), their teachers, their parents, and their school administrators. A freshened sample was again included to achieve a representative sample of the nation's seniors. Additionally, a school records component (i.e., transcripts) was also included in the design.

The third follow-up to NELS:88 (NELS:88/94) began on September 30, 1992, and culminates with the submission of this report. In 1994, most sample members had already graduated from high school; therefore, it was no longer possible to use the data collection mode that prevailed in the first three rounds of the study, self-administered questionnaires in group settings. Instead, the dominant form of data collection was one-on-one administration in the form of computer-assisted telephone interviews (CATI). Additionally, in-person interviews were conducted with respondents that required intensive in-person locating and in-person refusal conversion.

The project was carried out in six phases: instrument development; systems and procedures development; field test of the instrument, systems, and procedures; redesign of the instrument, systems, and procedures; data collection; and data delivery. Throughout the winter and spring of 1993, project staff engaged in instrument, systems, and procedures development. In the summer of 1993 (June 5 through September 23), the field test was conducted. The field test results and recommendations for the main survey can be found in the NELS:88/94 Field Test Report published by NCES in December, 1993.

Between October 1993 and February 1994, the instrument, systems, and procedures for collecting the NELS:88/94 data were developed. Data collection for NELS:88/94 began on February 4 and ended on August 13, 1994. The data files, the descriptive summary report, and this methodology report were prepared in 1994 and 1995.

1.3 Topics

The 1994 study primarily aims to continue following the progress of the NELS:88 cohort as sample members move to a wide array of postsecondary activities. In addition, the 1994 study addresses issues of employment and postsecondary access, and sustains continuing trend comparisons with NLS-72 and HS&B. Specific content areas included academic achievement, perceptions, and feelings about respondent's school and/or job, detailed work experience, work-related training, and family structure and environment.

1.4 Respondent Characteristics

At the time the data were collected, most of the respondents were two years out of high school. Table 1.5.1 shows the various subgroups and their relative representation in the sample.
1.5 Sample Design and Selection

The sample for NELS:88/94 was created by dividing the NELS:88/92 sample into 18 groups based on their response history, dropout status, eligibility status, school sector type, race, test scores, socioeconomic status, and freshened status. Each sampling group was assigned an overall selection probability. Cases within a group were selected such that the overall group probability was met, but the probability of selection within the group was proportional to each sample member's second follow-up design weight. Assigning selection probabilities proportional to the second follow-up design weight, reduced the variability of the NELS:88/94 raw weights and consequently increased the efficiency of the resulting sample from 40.1 percent to 44.0 percent. The groups were:

0. Excluded from NELS:88/94
   The NELS:88/94 sample is a spring defined sample, therefore, students who had been brought in through the freshening process but who had dropped out by the time of data collection in the year they were freshened as well as the base year dropouts were assigned to this group with a sampling probability of zero. In addition, sample members who were ineligible or out of scope (dead or out of country) for NELS:88/92 were also assigned to this group.
1. Nonresponders
   These sample members had never completed a NELS:88 questionnaire in any round prior to 1994
2. Poor responders
   These are sample members who did not complete either a second follow-up questionnaire or a questionnaire in their first eligible round.
3. Ever dropped out
   Sample members for whom we have evidence that they ever dropped out of school (including those who were in school during periods of data collection) were included in this group.
4. Ineligible to participate (due to language barriers or mental or physical impairment) prior to 1992
5. Attended a private school in 1988
6. Attended a private school in either 1990 or 1992
7. Hispanic
8. Asian or Pacific Islander (API)
9. Native American
10. Black, top quartile in cognitive tests
11. Black, other test scores
12. White, lowest socioeconomic quartile
13. White, highest socioeconomic quartile
14. White, middle socioeconomic quartiles
15. Freshened in 1990
16. Freshened in 1992
17. Other
Table 1.5.1 lists the groups, their selection probabilities and their second and third follow-up distributions.

While some sample members qualified for more than one of the sample groups, each member was assigned to only one group. The groups were created in order of priority, so that each sample member was assigned to the first group for which they qualified. For example, if someone was both a dropout (group 3) and was in a private school in 1988 (group 5), he or she was assigned to group 3.

The data used to assign the students to groups was drawn from a variety of possible sources, including questionnaire data for variables such as race and school sector type. If status at time of data collection was relevant and was not determined at the time of data collection, the imputed status developed during the NELS:88/92 weighting process was used.

1.6 Eligibility Criteria

All sample members selected for inclusion in the sample were eligible to participate except for those who had died and those who were confirmed to be foreign exchange students at the time of NELS:88/92 interview and had returned to their country of origin by the time of the NELS:88/94 survey.

1.7 NELS:88/94 CD-ROMs and Data Analysis System

The NELS:88/94 public release CD-ROM contains data from the NELS:88 base year (1988) through third follow-up (1994) surveys and an Electronic Codebook System (ECB). Two data sets and ECBs are contained on the CD. The first data set and ECB integrate data from the base year through second follow-up surveys. The second data set and ECB contain integrated base year through third follow-up records for third follow-up respondents. The NELS:88/94 data are also available in the form of a public release Data Analysis System (DAS). Contact Aurora D’Amico at (202) 219-1365 for more information on the public release ECB/CD-ROM or DAS.

A restricted use version of the public release ECB/CD-ROM is available only with an NCES license. Contact Cynthia Barton at (202) 219-2199 for more information.
Table 1.5.1 - NELS:88/94 sampling results

<table>
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<th>Group</th>
<th>Selection probability</th>
<th>Mean 2FU raw weight</th>
<th>Std. dev. 2FU raw weight</th>
<th>Mean 3FU raw weight</th>
<th>Std. dev. 3FU raw weight</th>
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<td><strong>2FU SAMPLE</strong></td>
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<tr>
<td>Total</td>
<td>0.00</td>
<td>21,635</td>
<td>3,335,156</td>
<td>154</td>
<td>188</td>
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<tr>
<td>Excluded</td>
<td>0.25</td>
<td>134,781</td>
<td>184</td>
<td>184</td>
<td>0</td>
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<td>Poor responders</td>
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<td>Inelig prior '92</td>
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<td>197</td>
<td>137</td>
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<td>Private schl '88</td>
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<td>White low SES</td>
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<td>White mid SES</td>
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<td>1FU freshened</td>
<td>0.30</td>
<td>4</td>
<td>370</td>
<td>3</td>
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<td>2FU freshened</td>
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<td>6</td>
<td>690</td>
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<td>Other</td>
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<td>1,271</td>
<td>84</td>
<td>1,271</td>
<td>424</td>
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* Target total weight for 3FU was the total of 2FU sample weights minus group 0.  3,335,156 - 134,781 - 3,200,375
Chapter Two: Survey Design and Preparation

2.1 Schedule

The NELS:88/94 contract was awarded on September 30, 1992 and scheduled to be completed at the end of February of 1996. During the three and one half years of the contract, NORC has been engaged in numerous tasks to develop the questionnaire, design data collection systems and protocols, collect data, and deliver data and final reports.

Within the first year of the contract's award, NORC developed and pretested the questionnaire to refine the question wording and the order in which questions were presented to respondents. This process began with a meeting with members of the Technical Review Panel (TRP) immediately after the contract was awarded to identify items to be included in the questionnaire. In addition, NORC field tested the questionnaire and data collection systems and protocols to further test the instrument, the efficacy of the training materials, the systems designed to support data collection, and the data collection protocols and procedures. For further information on these tests, please see the *NELS:88/94 Field Test Report*, published by NCES in December, 1993.

In the second year of the NELS:88/94 contract, staff analyzed the field test data to inform modifications to systems and protocols for main survey data collection. A second TRP meeting was convened to report the results of the field test and to solicit suggestions for improving and reducing the questionnaire's size. During this year, the key activities were telephone and in-person data collection, accompanied by statistical quality control measures and questionnaire frequency review to ensure high quality data. We also began to create the derived variables and develop the data cleaning programs.

Between October 1994 and February 1995, a final TRP meeting was held to discuss the preliminary findings of the NELS:88/94 data and to request guidance on data to be included in the descriptive summary report. The key tasks during this phase were preparing and delivering the data and writing both the descriptive summary report and the methodology report.

2.2 Instrument Development

In October 1992, NORC began developing the NELS:88/94 CATI instrument (the questionnaire development process is detailed in the *NELS:88/94 Field Test Report*). Instrument changes agreed upon at the 1993 November TRP meeting were made in December 1993. Final questionnaire testing took place during January 1994 and was completed two weeks before data collection began. See Appendix A for the CATI instrument code, which contains question text and interviewer instructions and information about preloaded data and flow. The NELS:88/94 Electronic Codebook (ECB) also contains question text for the Third Follow-up instrument.
2.3 Systems Design, Development, and Testing

The sections below describe the several systems that supported the data collection work on NELS:88/94.

2.3.1 Integrated Monitoring System

The Integrated Monitoring System (IMS) is a centralized executive information system that NORC used to develop many of the electronic systems, and as the entry point for monitoring ongoing work (e.g., monitoring CATI operations), and as the repository for collecting all important information about the project. Through the IMS, users including the contracting officers can determine the current status of the project in its ongoing development, as well as its production and costs. In addition, they can read all major documents and electronic mail describing and associated with the instrument, the data collection software and procedures, and the monitoring systems and procedures. They can also test the data collection instrument and the case management system. The NELS:88/94 Field Test Report describes the IMS in detail.

2.3.2 Instrument Development System (IDS)

The Instrument Development Systems (IDS) is a tool used to assist the instrument development process. Basically the IDS is a systematized and structured manner for describing a questionnaire's appearance, technical parameters, and flow. This systematization has two primary benefits: first, it is important as a residuum of questions from which future iterations or projects might draw, and second, it aids in the smooth transition from questionnaire writing to instrument programming, the IDS itself is part of a system that translates one to the other. There were no changes to the IDS between the field test and the main survey. A complete description of the IDS can be found in the NELS:88/94 Field Test Report.

2.3.3 Computer-assisted Telephone Interviewing (CATI)

Main survey data collection began using CATI. The NELS:88/94 Field Test Report includes a description of the CATI software.

2.3.4 Telephone Number Management System (TNMS)

The software used to manage the sample during telephone data collection is the Telephone Number Management System or TNMS. The TNMS:

- Schedules appointments and automatically delivers information to interviewers at the appointed time;
- Mechanically reschedules "no contact" cases, where an interviewer recorded an outcome of "ring no answer" or "busy," according to a predetermined algorithm that forces retries at optimal times;
Separates cases receiving different treatments, that is, interviewing, locating (tracing), and refusal conversion; and

Mechanically tracks and reports, upon request, about sample status and number of transactions recorded in any specified time period.

**TNMS Specifications for NELS:88/94**

The TNMS specifications for the NELS:88/94 field test were used with minor modifications. The TNMS specifications' main components are the retry algorithms and the number of calls permitted for telephone interviewing.

**Retry algorithm.** The retry algorithm defined the times of the day when a case record, containing respondent information, was delivered to an interviewer. Unless a respondent or household member requested that we call back at a certain time, the case record was delivered according to the retry algorithm.

On NELS:88/94, the retry algorithm systematically scheduled each case to be tried once on each weekday between 8:00 a.m. and 5:00 p.m., once on each weekday evening between 5:00 p.m. and 7:00 p.m., once on each weekday evening between 7:00 p.m. and 9:00 p.m., and twice on Saturday and Sunday. This retry algorithm was consistent with the belief that NELS:88/94 respondents were somewhat more likely to be reached at home in the evening than during the day.

**Number of calls permitted.** In order to control the telephone interviewing level of effort, NORC programmed the TNMS to refer each case record for supervisory review after 20 attempts were made to contact the respondent. Some of these respondents were contacted by highly skilled refusal convertors, interviewers who exhibit above-average skill in gaining respondents' cooperation. Otherwise, depending on the circumstances, cases were referred for locating or in-person interviewing.

**2.3.5 Case Management System (CMS)**

For NELS:88/94, NORC developed a new computer-assisted management and locating system, the Case Management System (CMS). The CMS had a dual purpose: to provide the current status of each case in the sample and to aid the locating process. The CMS database generated many of the reports used to inform and manage data collection. This electronic system replaced the traditional hard-copy locating protocol followed on previous surveys. Additionally, the CMS allowed later analysis of the efficiency of the various locating steps included in the locating protocol.

As a management tool, the CMS was the primary source of information about the status of cases being worked both in CATI and the field. Overnight processes transferred information from the TNMS and the Field Management System (FMS) to the CMS so that project staff would only need to look in one place to know the overall status of the sample. These updates of CMS
reports provided timely information to project staff.

As a locating tool, the CMS consisted of three primary sets of information tables: locating appointments, locating call notes for each case, and locating resources for each case. The system was designed to provide, in a structured manner, all relevant information about a locating case and to allow new information to be entered easily as it was discovered.

Each case was assigned to a locating team based on their geographic location at the beginning of data collection. In order to give each case consistent and concentrated attention, not all of a team's cases were released at the same time. As cases were located, they were passed to the TNMS for interviewing and new locating cases would be added to the team's CMS case load.

Each active case available to general locators had an appointment listed in the appointment table; sorted in date-time order with a visible flag indicating which were hard appointments (made for a specific time with a specific individual) and which were soft appointments. Rather than having cases automatically assigned to them by the computer system, locators used the list to select the next appropriate step, thus permitting them to use their experience and judgment.

2.3.6 Field Management System (FMS)

Interviewing costs are the largest single component of the typical field data collection project's budget. Because data collection progresses rapidly, managing the task requires almost immediate access to cost and production data for accurate decision-making. To improve its ability to meet this requirement, NORC designed its Field Management System (FMS). The FMS is a computer-based application that (1) permits collection of production data on a case-by-case basis; (2) permits electronic transfer of cases within and between regions; (3) allows entry of labor and expense information on an interviewer-by-interviewer basis; (4) interfaces with the NORC Survey Management System, updating current field dispositions of each case while receiving information on in-house case receipt; (5) generates timely, detailed cost and production reports on interviewer, regional, and national levels; and (6) allows Field Managers (FMs) to make assignments with the data on the assignment uploaded directly into the Survey Management System (SMS). The fully automated FMS decreases the time spent manually compiling (and correcting) cost and production reports. Because it allows electronic transfer of information between office and field, it minimizes the traditional high volume of paperwork involved in case transfers and the paper flow between office and field.

NORC Field Managers use the FMS to collect and enter weekly field report data communicated during calls between interviewers and field managers. During these calls, interviewers report case by case production (pending or final disposition of each case as well as anecdotal information), labor hours, and expenses for the week. The FMs who take the calls enter weekly cost and production data into the FMS software residing on their NORC-provided personal computer. Having collected a week's worth of field cost and production data for their
administrative staff, the FMs then transmit the cost and production data to NORC's central office modem pool data receipt system, located at NORC's Lake Park Data Collection and Preparation Center.

Once FMS data arrive in Chicago, they are post-processed and extracted to create formal, weekly field cost and production reports that calculate regional, area, and national cost and production figures. Subsequently, FMS data are linked to NORC's Survey Management System (SMS), where project information pertaining to in-house case receipt will become part of the reports. Formal FMS reports are also distributed in electronic format to field management staff. The NELS:88/94 reports included production-level data such as current weekly and cumulative data on interview completion rates, pending interview statistics, and reasons for noninterview statistics. The reports include such cost-level data as cost per complete interview, both weekly and cumulatively, cost of labor and other direct costs, and the cost of respondent fees or other special outlays.

2.3.7 Statistical Quality Control: Interviewing, Locating, and Gaining Cooperation

NELS:88/94 used a Statistical Quality Control (SQC) approach to monitoring interviewers' and locators' work to ensure consistent high-quality data throughout the field period. This approach consisted of real-time on-line aural and visual monitoring and capturing evaluation data on all data collection activity throughout the telephone data collection period. A description of the monitoring process can be found in the NELS:88/94 Field Test Report.

2.3.8 Statistical Quality Control: Interviewer Coding

For NELS:88/94, NORC developed a SQC system to review interviewer coding for accuracy throughout the course of the main survey. There were two goals for this effort: ensuring that the coding process was in control (i.e., the number of errors did not exceed normal random error) and providing ongoing feedback and supplemental training to the interviewers.

Additional review was performed on the items coded by the interviewers. Verbatim text collected during the interview and the Industry, Occupation, Major Field of Study, and IPEDS codes selected by the interviewers were exported from the questionnaire and loaded into a short review instrument. Expert coders used this instrument to review the codes assigned and recode the verbatim strings, providing an independent check on the work of the interviewers.

The instrument asked the expert coder a series of three questions:

1. Is the verbatim text adequate to assign a good code? If the verbatim is not codable, the verifier indicates so and goes on to the next item.

2. Code the verbatim. The verification program compares the original (interviewer assigned) code and the expert code. If the codes are the same, the verifier moves on to the next case.
3. Is the original code reasonable? In some cases, more than one code could be assigned to the same verbatim string. If the original code is different, but reasonable, the recode is considered to be a match. If the original code is not reasonable it is a mismatch error, and the original interviewer gets feedback about the code assigned.

Control charts on coding were produced and reviewed regularly by the telephone supervisors.

2.3.9 Data Entry of Self-administered Questionnaires

For those cases where the respondent was unable or unwilling to complete an interview over the telephone, a paper questionnaire was either self- or field-administered and returned to NORC. Rather than develop a new data entry program for the self-administered questionnaires (SAQ), a modified version of the CATI program was used for the electronic capture of SAQ data.

2.4 Staff Recruitment

Three telephone center coordinators, twelve supervisors, three assistant supervisors, and three monitors were assigned to the NELS:88/94 telephone data collection effort. Each of these staff had worked on several NORC surveys. The structure of the field staff consisted of a District Manager, a Division Field Manager, and seven Field Managers, all of whom were experienced NORC staff.

Almost all of the telephone center interviewing staff assigned to the telephone data collection effort were experienced: 111 of the 125 interviewers and locators had worked on at least one prior NORC survey. When recruiting for NELS:88/94 telephone interviewers, preference was given to interviewers who had worked on NELS:88/92 and the NELS:88/94 field test and to those interviewers who were available for the entire field period, had good attendance records, and had demonstrated excellent gaining cooperation skills.

In addition to prior experience working on NELS:88/92 and the field test, field interviewers (FIs) were selected for their skills in locating hard-to-find respondents and converting those respondents who were reluctant to participate. It is important to recognize that the challenges of this project would easily overwhelm a new interviewer, and for that reason, only experienced NORC interviewers were considered for NELS:88/94. NORC gave strong consideration to experienced field staff who demonstrated tenacity in completing their cases. NORC also considered their location relative to case assignments, as well as their availability to work within the scheduled field period.

2.5 Prefield Locating

In the field test, better than 60 percent of all cases were found by using information collected in the second follow-up field test. However, certain subgroups, notably nonresponders
and poor responders on previous rounds, dropouts, and Native Americans, required additional resources. Therefore, cases in these subgroups were sent to the CMS for initial locating prior to being sent to the TNMS for interviewing.

2.6  Advance Mailing

NORC mailed an advance letter to all respondents explaining the study’s purpose and notifying respondents that NORC would be calling. To be sure that we could reach the respondent at the address collected during NELS:88/92, NORC matched the most recent address for the respondent against a commercial (Metromail) electronic database. The Metromail comparison returned the following information:

- A match on last name and address.
- A match on address only.
- No match; new address provided.
- No match; no new address.

If Metromail matched on address or provided no new address, NORC mailed the advance letter to the address obtained during NELS:88/92. If Metromail did not match the NELS:88/94 address and provided a new address, NORC used the new address.

2.7  Establishing the Locator Database

The following data from the locator pages of the NELS:88/92 student, parent, and dropout questionnaires were loaded into the CMS for easy access by locators:

- Student address and telephone number,
- Mother’s residential address and telephone number (or business telephone number if one was available and the home telephone number was missing) and social security number, and
- Father’s residential address and telephone number (or business telephone number if one was available and the home telephone number was missing) and social security number.

2.8  Development of Training Materials

Developed primarily by telephone center staff, the materials used in the field test were slightly edited and augmented for the main survey. The most significant changes were made to
the section on coding: our coding department developed and wrote additional training exercises and a comprehensive job aid to assist the interviewers in more accurately coding industry and occupations.

2.9 Supervisor, Interviewer, and Locator Training

2.9.1 Telephone Supervisor Training

Telephone supervisors received substantive training two weeks prior to the start of data collection. The training consisted of the following:

- Overview of the NELS project
- Practice with the CATI questionnaire including the same coding training that was prepared for the interviewers
- Review of gaining cooperation strategies
- Explanation of conversational interviewing techniques
- Importance of confidentiality and NCES's affidavit of nondisclosure
- Walk-through of the interviewer training materials
- SQC Monitoring theory and procedures
- SQC procedures for coding
- TNMS structure and algorithms

One week prior to interviewer training, supervisors practiced the training modules they would be responsible for leading at the interviewer training. Supervisors were given feedback on style and delivery so that they could fine tune their approach.

2.9.2 Field Supervisor Training

Prior to beginning field work, the Field Managers travelled to Chicago to observe the Lake Park Telephone Center's activities and the first locator training. As a result of this visit, the Field Managers increased their understanding of how the Telephone Center operates. The Field Managers also learned how the supervisors monitor their locators as well as the principles of the TNMS.

The Field Managers were provided with the NORC Locator Training manual, the Case
Management System (CMS) Training Guide, and the Field Interviewer Manuals, as well as an electronic version the Field Manager manual.

The Field Manager manual covered the field structure including the different regions displayed by zip code and Field Manager and all procedures and systems for the project including Field Management System (FMS) entry and transmission, project-specific, and administrative procedures. One of the key elements presented in the Field Manager manual was the new concept of the field and Telephone Center staff working together to review and monitor cases. This innovative concept brought with it rapidly changing procedures especially in the area of processing cases to get them into the field as quickly as possible. As the project progressed, the Field Manager manual was revised by issuing memos that served as addenda to the original manual.

2.9.3 Telephone Interviewer Training

Telephone interviewer training was conducted between February 7 and 9, 1994, and was held in a hotel in downtown Chicago. The training was conducted off-site in order to train all 110 interviewers concurrently. The training site met four key criteria: reasonably accessible to NORC; easily accessible by public transportation; adequate power to support 110 computers and a LAN; and adequate space--six rooms for training and one room for breaks.

The interviewers were divided into six training groups of roughly equal size and each group was assigned one lead and three assistant trainers. With the exception of two assistant trainers, all the trainers had worked on the NELS:88/92 Parent, Student, and School Administrator Components. Some had also worked on the NELS:88/94 Field Test.

Training consisted of a mixture of lecture, demonstration, and hands-on practice, with emphasis placed on the latter. Specific modules included: project overview; gaining cooperation; conversational interviewing techniques; on-line coding of industry and occupation, schools (IPEDS), and major field of study; confidentiality procedures; quality control; and the TNMS. Each interviewer sat at a table equipped with a PC on which they used specially designed exercises to practice CATI, on-line coding, and using the TNMS. Some of the exercises were completed alone, others were completed with a partner, while still others were completed by the group. Each interviewer was given additional time to practice at the PC before the second and third day of training. See Appendix B for the training agenda.

Following completion of the project-specific training, interviewers were required to complete a one-on-one check-out module with a supervisor to demonstrate their command of CATI, gaining cooperation, TNMS, and the four types of on-line coding required for the interview. Interviewers were evaluated on these elements and, when necessary, given additional training prior to commencing data collection.

2.9.4 Locator Training for Central Office Locators
Locator training was conducted in two groups of 25 locators, both conducted at the Lake Park facility. The first group was trained from March 23 to 25 and the second from April 6 to 8. Seven FMs and a DFM also participated in the first session. The training was broken into two sessions due to the complexity of the software; smaller groups of trainees allowed the trainers to give adequate one-on-one guidance throughout the training. This was particularly beneficial when locators needed additional help with the CMS.

Like interviewer training, the approach was a mixture of lecture and hands-on practice, with emphasis placed on the latter. Each locator sat at a table equipped with a PC on which they practiced what they were taught by following specially designed exercises. Exercises were completed either alone, with a partner, or by the group. See Appendix C for the training agenda.

2.9.5 Field Interviewer Training

The Field Interviewers were trained as they were staffed on the project, that is, on a flow basis. As each interviewer was hired, the respective Field Manager requested training materials for him or her from the project administrative assistant at the Central Office. Materials were initially sent via first class mail—subsequently via Federal Express to enable the Field Interviewers to begin work immediately. Extra sets of training materials were sent to the Field Managers for site blitzes and to handle emergency requests.

Prior to participating in the telephone training with their Field Manager, all Field Interviewers completed Self-Study Exercises, read the Field Interviewer and NORC Locating manuals, and looked over the allied forms. At this point, they were prepared to discuss the exercises and how they intended to work their assignment, particularly with reference to their availability. Before beginning training, the Field Managers asked each FI if he or she had returned the two copies of the Affidavits of Nondisclosure to the project administrative assistant and then indicated the date the form was returned on their records. Field Managers and Interviewers then proceeded to review the exercises. While doing so, the Field Managers made references to the NORC Locating Manual, regarding when and how to use it. Portions of the Field Interview Manual were reviewed, including the Self-Administered Questionnaire overview, confidentiality guidelines, disposition codes, and how to gain the respondent's cooperation.

As mentioned above, Field Interviewers were trained over the telephone by their Field Manager after they had read and studied their materials and completed the Self-Study Exercises. The number of participants on these training conference calls depended on the number of Field Interviewers staffed at any one time in a given region. Obviously, more participants made it difficult for the Field Manager to give each interviewer the requisite personal attention. In general, conducting training over the telephone compounds any complications that arise from interviewers progressing at different rates. The extent of coverage varied. If Field Interviewers had worked on the NELS:88/94 Field Test then they required less training because they were familiar with the study. Others, especially those completely new to NELS, required the more training and review.
As changes in procedures occurred during the field period (for example, changes due to discovery of an error in the Self-Administered Questionnaire), the respective Field Managers informed their interviewers. These changes were explained during the weekly conference call or, if the immediacy of the new procedure warranted such action, even a mid-week call from either the Field Manager or Associate Field Manager. On the whole, however, the training materials, which included the Field Interviewer Manual, NORC Locating Manual, Question-by-Question Specifications, and the Self-Study Exercises, were effective and served their purpose of stipulating the project procedures for the Field Interviewers.
Chapter Three: Data Collection

3.1 Staff

The following sections describe the administrative, telephone, and field staff assigned to NELS:88/94.

3.1.1 Telephone Center Staff

For NELS:88/94, the Telephone Center staff consisted of three coordinators, twelve supervisors, three assistant supervisors, three monitors, seventy-five interviewers, twenty-five interviewer/locators, and twenty-five locators. One supervisor and two data entry clerks were responsible for the SQC coding process; and one supervisor and two clerks were responsible for the receipt and flow of cases from the field.

Each of the three coordinators managed a key function in the Telephone Center: one coordinator was responsible for scheduling staff, keeping production and attendance statistics, SQC monitoring and coding, and managing interviewer meetings and individual feedback sessions between supervisors and interviewers; another focused on the locating effort; while the third managed the flow of cases to interviewers and dealt with other sample management tasks. Each coordinator was responsible for overseeing the work of four supervisors.

The twelve supervisors were responsible for monitoring interviewers, reviewing cases, producing reports, chairing group meetings, documenting policy decision requests, and reviewing and resolving problem cases. Additionally, each supervisor was responsible for ten to twelve interviewers; this responsibility included meeting individually with each interviewer to provide feedback on attendance and quality of work.

Assistant supervisors provided some clerical assistance; they had primary responsibility for compiling production statistics from the TNMS and cost information from the financial reports. The assistants produced weekly cost and production reports, and also monitored interviewers and assisted with case review.

When it became apparent that we did not have enough supervisors to handle all the monitoring sessions, three interviewers were selected to be interviewer monitors. The three interviewers selected had excellent interviewing, near perfect attendance, and good leadership qualities.

3.1.2 Field Staff

The field staff for NELS:88/94 consisted of a District Manager, a Division Field Manager, 7 Field Managers, and 185 Field Interviewers. The District Manager served as a liaison between the field and central office staff. The Division Field Manager served as the Field
Project Manager and reported directly to the Central Office Survey Director in charge of field data collection.

The Field Managers supervised the Field Interviewers and reported directly to the Field Project Manager. There were seven Field Managers assigned to NELS:88/94 who were directly responsible for the Field Interviewers’ performance. Field Managers mainly focused on propelling the Field Interviewers toward the cost and production goals of the data collection effort while maintaining the defined quality standards. The Field Managers also served as advisors, troubleshooters, and motivators for the interviewers assigned to their regions. The country was divided into seven geographical regions, each managed by a Field Manager:

Region 1: Alaska, Colorado, Idaho, Montana, New Mexico, Oklahoma, Oregon, Texas, Utah, Washington, and Wyoming
Region 2: Arizona, California, Guam, Hawaii, and Nevada
Region 3: Illinois, Indiana (Gary only), Iowa, Minnesota, Nebraska, North Dakota, South Dakota, and Wisconsin
Region 4: Indiana (except Gary), Kentucky, Michigan, Ohio, and West Virginia
Region 5: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont
Region 6: Delaware, Washington D.C., Georgia, Maryland, North Carolina, Pennsylvania, Puerto Rico, South Carolina, Virginia, and the Virgin Islands
Region 7: Alabama, Arkansas, Florida, Kansas, Louisiana, Mississippi, and Tennessee

The Field Interviewers conducted the actual interviews with respondents and were responsible for completing their assignments within project guidelines. These 185 Field Interviewers and 7 Field Managers resulted in an interviewer to supervisor ratio of 26 to 1: this ratio was much higher than is usual on NORC studies because every available field personnel resource was used to ensure the requisite completion rate within the allotted schedule. Associate Field Managers were employed in four of the seven regions to support the Field Managers.

### 3.2 Work Flow Control

The plan used to control the flow of cases to interviewers played an important part in the success of the project. This plan had three features: a sample release strategy, quality control, and case delivery management.

#### 3.2.1 Sample Release Strategy: Case Metering

The sample release strategy, known as case metering, released cases to interviewers in a way that ensured that they had "a day's worth of work" available. Prior to NELS:88/94 main survey data collection, case metering had been used on four surveys, one of which was the NELS:88/94 field test.
The traditional sample release strategy of making all cases available at once has several disadvantages. In interviewing, the outcomes reached most frequently when contact is made on the first call are: interview completed, appointment to call a respondent, and respondent no longer lives at the number given for the case. When all cases are released simultaneously, and interviewers have made one or two calls to most of the cases in the sample, many cases are simultaneously sent to the appointment queue for locating. This in turn causes Interviewers to miss appointments to call respondents because so many appointments have been made. Also, the locating process begins with a "bottleneck" already in place. Case metering addresses these problems and has proved to have additional advantages:

- NORC could predict level of effort, outcome distribution, and production rate for all cases based on the level of effort expended in working the initial batch of cases (a randomly selected subset of the NELS:88/94 sample).
- Case metering helped prevent "bottlenecks" from occurring because all cases in the sample were not at the same step simultaneously.
- Because unworked cases were not released to interviewers until the number of cases left was insufficient to sustain productive interviewing, cases were worked very thoroughly and evenly. Analysis of 517 active cases on May 25 showed that 53 percent of the cases had been called 10 times or less, and 22 percent had received between 11 and 20 calls. The last unworked case was released in early May.

Table 3.2.1.1 shows the effect that case metering had on data collection:

<table>
<thead>
<tr>
<th>Date</th>
<th>Completed in week</th>
<th>Cumulative completes</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-Feb-94</td>
<td>1,399</td>
<td>1,399</td>
<td></td>
</tr>
<tr>
<td>26-Feb-94</td>
<td>1,347</td>
<td>2,746</td>
<td></td>
</tr>
<tr>
<td>05-Mar-94</td>
<td>1,343</td>
<td>4,089</td>
<td></td>
</tr>
<tr>
<td>12-Mar-94</td>
<td>1,419</td>
<td>5,508</td>
<td></td>
</tr>
<tr>
<td>19-Mar-94</td>
<td>1,556</td>
<td>7,064</td>
<td></td>
</tr>
<tr>
<td>26-Mar-94</td>
<td>1,114</td>
<td>8,178</td>
<td>Locating training</td>
</tr>
<tr>
<td>02-Apr-94</td>
<td>887</td>
<td>9,065</td>
<td>Last unworked cases from regular sample released</td>
</tr>
<tr>
<td>09-Apr-94</td>
<td>695</td>
<td>9,760</td>
<td></td>
</tr>
<tr>
<td>16-Apr-94</td>
<td>521</td>
<td>10,281</td>
<td></td>
</tr>
<tr>
<td>23-Apr-94</td>
<td>356</td>
<td>10,637</td>
<td></td>
</tr>
<tr>
<td>30-Apr-94</td>
<td>312</td>
<td>10,949</td>
<td></td>
</tr>
<tr>
<td>07-May-94</td>
<td>290</td>
<td>11,239</td>
<td></td>
</tr>
<tr>
<td>14-May-94</td>
<td>264</td>
<td>11,503</td>
<td>Washington supplement released 13 May</td>
</tr>
<tr>
<td>21-May-94</td>
<td>107</td>
<td>11,610</td>
<td></td>
</tr>
<tr>
<td>28-May-94</td>
<td>263</td>
<td>11,873</td>
<td></td>
</tr>
<tr>
<td>04-Jun-94</td>
<td>60</td>
<td>11,933</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.2.1.1 shows that until locating training began and the interviewer staff was reduced in size, the number of complete cases per week ranged from 1,343 to 1,556.

### 3.2.2 Case Management and Quality Control

On NELS:88/94, NORC Telephone Center supervisors reviewed individual case record to ensure that the case delivery system, the TNMS, was performing as specified, and that interviewers were following the outcome code selection protocol. At all times during NELS:88/94, the TNMS performed according to specifications. Additional training was given to individual interviewers when they used outcome codes incorrectly. The following types of cases were reviewed:

- 5 percent of all "ring no answer" and "answering machine" cases to ensure that the TNMS was routing cases to be retried according to specifications;
- 100 percent of appointments to call respondents to ensure that the appointment outcome code was being used properly;
- 100 percent of respondent and contact refusals to determine which refusal conversion letter should be sent to the household, as well as to discover hostile refusals and refusals to be referred for field interviewing;
- 100 percent of missed appointments to call respondents; this specification was put in place to enable NORC to know how many appointments had been missed in a given hour of a given day; this also allowed supervisors to update the case history to reflect the missed appointment and to apologize to respondents and contacts;
- 5 percent of all cases referred for locating to ensure that interviewers were calling all numbers provided from data collected during NELS:88/92 before referring cases for locating;
- 100 percent of all cases referred for supervisor review to discover possible policy decisions, such as international calls needing approval, cases receiving a certain number of calls without completing an interview, and other unusual situations like computer failure.

### 3.2.3 Case Delivery Management

On NELS:88/94, before the cases were referred for field interviewing, case delivery management was programmed to allow cases to be tried by telephone interviewers up to 21 times on each day of the week at different times of the day. Cases were begun on one of two "schedules." Each schedule routed "no contact" cases from early evening to late evening the next day from Monday through Thursday, and permitted three retries on Saturday or Sunday.

If a case was tried in each of the designated time slots without completing an interview, the case was referred for supervisor review. The supervisor was required to determine the next appropriate course of action. Usually, cases that have been tried more than 12 times by telephone require another approach, so most of these cases were referred for field interviewing.
Another feature of case delivery management on NELS:88/94 was programming the TNMS not to deliver cases to interviewers when NORC was more than 20 minutes late in keeping an appointment to call a respondent or contact. A supervisor was required to review the case and determine the most appropriate course of action. Usually, the supervisor would recirculate the case to interviewers with instructions to apologize for the missed appointment. Cases were also referred for refusal conversion, locating, or field interviewing if the supervisor reviewed the case history and determined that another treatment would be more likely to result in a completed interview.

### 3.3 Refusal Conversion

During the interviewer training, interviewers practiced averting refusals and preventing respondents from becoming hard refusals by reviewing the questions raised most often by respondents during the field test and earlier rounds of NELS, as well as the recommended answers to these questions. After this review, each trainee had an opportunity to convince the recalcitrant trainer to participate in the survey. This exposure helped prepare the interviewers to respond in a calm and convincing manner when confronted with a reluctant or hostile respondent.

However, as in any study, some respondents do raise objections and present resistance stronger than an interviewer's power to persuade. In these situations, interviewers were instructed to withdraw from the situation with courtesy and provide in the call notes a detailed description of the respondent's reasons for not participating. Supervisors were instructed to review the call notes and determine whether follow-up measures were warranted. Most cases were then sent a personalized letter from the project director that addressed the respondents' specific objections. A telephone follow-up call was made within 10 days by a refusal conversion specialist.

### 3.4 CMS Locating

The CMS was structured as a two-tiered system built to accommodate general and specialized locating. General locating included telephone calls to Directory Assistance and next-of-kin and other contacts nominated by the respondents in prior rounds of data collection. Specialized locating included potential sources of information obtained from commercial locating databases and specialized locating. The locating steps are the same as those presented in the *NELS:88/94 Field Test Report*.

The CMS enabled the FMs to participate in the centralized telephone locating in a number of ways. During the first weeks of locating, the FMs reviewed their respective region's locating effort by real-time, on-line monitoring of about 10 percent of the initial cases worked by Telephone Center locators. The FMs made helpful comments to the supervisors responsible for the locating effort, and the supervisors incorporated these comments into the weekly individual and group meeting with the interviewers. The CMS also allowed the FMs to review cases nominated for field work; before the materials were prepared for shipment to the field, the FMs could accept or reject each nominated case. Rejected cases were annotated by the FMs with suggestions for additional locating steps.

The system design required locators to enter informant names, sources of resource information,
and the informant's relationship to the respondent. Once a case was located, the respondent's most recent address and phone number was automatically transferred nightly to the TNMS, eliminating the need for additional manual processing on located cases.

There were several problems encountered during locating:

- Because of the complexity of the CMS, the first weeks of locating focused on manipulating the software correctly rather than on the finer points of finding respondents.
- The system could not keep pace with the locators; processes that normally take less than a minute took five to ten minutes, which caused delays of up to two weeks in specialized locating processing.
- As the history associated with each case grew, the speed of the system decreased.
- Locators were limited to two lines (120 characters) to record information for each call placed.
- Locators were forced to spend some time reworking cases because of difficulties in interpreting call history notes from fellow locators.

The protocol was modified at the end of the telephone center field period when it became apparent that the Telephone Center would not have an opportunity to work cases through all of the specified steps in the allotted time frame. For almost all cases that required locating, the Telephone Center was able to perform high yield locating steps. However, for many cases the high intensity, low yield steps were performed by field staff.

On the whole, the protocol was effective, but it is difficult to determine how much more successful the Telephone Center locating could have been if time had allowed the completion all of the steps listed in the initial protocol. At the close of NELS, telephone center locators found 3,062 of the 5,634 cases requiring locating, and telephone interviewers completed 2,137 of those cases.
3.4.1 Telephone Center and Field Interaction

In an effort to enhance the locating effort, Telephone Center staff and the field staff worked as a team. At the start of locating and prior to cases being sent to the field, field managers:

- Participated in the initial locator training;
- Provided support and feedback to in-house locators through remote monitoring;
- Located respondents; and
- Reviewed cases nominated for field work.

Each Field Manager and phone center supervisor was assigned to a specific geographic region, and weekly conference calls were scheduled between supervisors and FMs. These meetings initially focused on cases in progress in the phone center and topics such as the locators' level of proficiency using the CMS and their overall locating skills. As in-house locating progressed, the focus of the meetings shifted to an active review of cases nominated for the field. Cases were sent to the field only if both the regional FM and phone center supervisor agreed that the case had been fully worked by the phone center. Feedback from these conference calls was shared with locators at weekly group and individual meetings.

As a result of this interaction and in spite of the ever-changing protocol and uneven flow of cases to the field, the FMs knew what kinds of cases to expect in their locating case load and were better able to prepare the field interviewers. The phone center supervisors and locators also received the benefit of assistance from the field.

3.4.2 Telephone Center and Field Locating Results

Table 3.4.2.1 shows the number of cases requiring locating in the various subgroups and the outcome of the locating effort for both the telephone center and field.
## Table 3.4.2.1—Number and percent of cases requiring locating, by subgroup, and the outcome of locating by telephone and field staff

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Percent</th>
<th>Needed locating</th>
<th>Percent</th>
<th>Found by telephone</th>
<th>Percent</th>
<th>Telephone complete</th>
<th>Percent</th>
<th>Field complete</th>
<th>Percent</th>
<th>Final not Located</th>
<th>Percent</th>
<th>Other NIR</th>
</tr>
</thead>
<tbody>
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<td>Totals</td>
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<td>4,487</td>
<td>28.26%</td>
<td>2,566</td>
<td>57.19%</td>
<td>1,971</td>
<td>1.96%</td>
<td>87.52%</td>
<td>270</td>
<td>6.02%</td>
<td>290</td>
<td></td>
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<tr>
<td>Nonresponders</td>
<td>38</td>
<td>0.24%</td>
<td>5</td>
<td>13.16%</td>
<td>3</td>
<td>7.89%</td>
<td>0</td>
<td>1</td>
<td>2.63%</td>
<td>2</td>
<td>5.26%</td>
<td>2</td>
<td></td>
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<tr>
<td>Poor responders</td>
<td>595</td>
<td>3.75%</td>
<td>141</td>
<td>23.70%</td>
<td>60</td>
<td>10.08%</td>
<td>30</td>
<td>77</td>
<td>17.98%</td>
<td>15</td>
<td>2.52%</td>
<td>19</td>
<td></td>
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<tr>
<td>Dropouts</td>
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<td>14.76%</td>
<td>1,033</td>
<td>44.09%</td>
<td>526</td>
<td>22.45%</td>
<td>373</td>
<td>517</td>
<td>37.99%</td>
<td>96</td>
<td>4.10%</td>
<td>47</td>
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<td>36.65%</td>
<td>25</td>
<td>13.09%</td>
<td>24</td>
<td>34</td>
<td>30.37%</td>
<td>8</td>
<td>4.19%</td>
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<tr>
<td>Private school in '88</td>
<td>2,370</td>
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<td>481</td>
<td>20.30%</td>
<td>328</td>
<td>13.84%</td>
<td>241</td>
<td>176</td>
<td>17.59%</td>
<td>20</td>
<td>0.84%</td>
<td>44</td>
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<tr>
<td>Private school '90/'92</td>
<td>96</td>
<td>0.60%</td>
<td>31</td>
<td>32.29%</td>
<td>23</td>
<td>23.96%</td>
<td>17</td>
<td>9</td>
<td>27.08%</td>
<td>1</td>
<td>1.04%</td>
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<tr>
<td>Hispanic</td>
<td>1,457</td>
<td>9.18%</td>
<td>471</td>
<td>32.33%</td>
<td>280</td>
<td>19.22%</td>
<td>201</td>
<td>227</td>
<td>29.38%</td>
<td>24</td>
<td>1.65%</td>
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<tr>
<td>Asian Pacific Islander</td>
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<td>236</td>
<td>27.36%</td>
<td>127</td>
<td>14.60%</td>
<td>106</td>
<td>101</td>
<td>23.79%</td>
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<td>1.72%</td>
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<tr>
<td>Native American</td>
<td>132</td>
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<td>30.30%</td>
<td>25</td>
<td>18.94%</td>
<td>18</td>
<td>20</td>
<td>28.79%</td>
<td>0</td>
<td>0.00%</td>
<td>2</td>
<td></td>
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<tr>
<td>Black high test q'tle</td>
<td>79</td>
<td>0.50%</td>
<td>21</td>
<td>26.08%</td>
<td>16</td>
<td>20.25%</td>
<td>11</td>
<td>7</td>
<td>22.78%</td>
<td>0</td>
<td>0.00%</td>
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<td>Black other</td>
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<td>7.00%</td>
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<td>201</td>
<td>18.08%</td>
<td>143</td>
<td>190</td>
<td>29.95%</td>
<td>30</td>
<td>2.70%</td>
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<td></td>
</tr>
<tr>
<td>White low SES q'tle</td>
<td>1,292</td>
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<td>387</td>
<td>29.95%</td>
<td>229</td>
<td>17.72%</td>
<td>180</td>
<td>171</td>
<td>27.17%</td>
<td>12</td>
<td>0.93%</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>White high SES q'tle</td>
<td>1,505</td>
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<td>277</td>
<td>18.41%</td>
<td>181</td>
<td>12.03%</td>
<td>157</td>
<td>88</td>
<td>16.28%</td>
<td>8</td>
<td>0.53%</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>White mid SES</td>
<td>3,789</td>
<td>23.87%</td>
<td>902</td>
<td>23.81%</td>
<td>542</td>
<td>14.30%</td>
<td>470</td>
<td>337</td>
<td>21.30%</td>
<td>39</td>
<td>1.03%</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>1st FU refreshed</td>
<td>1</td>
<td>0.01%</td>
<td>0</td>
<td>0.00%</td>
<td>0</td>
<td>0.00%</td>
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<td>0</td>
<td>0.00%</td>
<td>0</td>
<td>0.00%</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>2nd FU refreshed</td>
<td>2</td>
<td>0.01%</td>
<td>0</td>
<td>0.00%</td>
<td>0</td>
<td>0.00%</td>
<td>0</td>
<td>0</td>
<td>0.00%</td>
<td>0</td>
<td>0.00%</td>
<td>0</td>
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<tr>
<td>Other</td>
<td>3</td>
<td>0.02%</td>
<td>1</td>
<td>33.33%</td>
<td>0</td>
<td>0.00%</td>
<td>0</td>
<td>1</td>
<td>33.33%</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Percentages may not add to 100 percent due to rounding.

<a> This does not include 89 ineligible or dead sample members.
Chapter Four: Production Statistics, Quality Assurance, and Statistical Quality Control

4.1 Response Rates

The overall unweighted response rate was 94 percent and the weighted response rate was 91 percent. Table 4.1.1 shows both our unweighted and weighted response rates by various subgroups.

NORC achieved an 85 percent weighted response rate for all sampling strata except three as shown in the bottom of Table 4.1.1; Table 4.1.2 shows response rates from the previous and present round(s) of NELS data collection for the Nonresponder and Poor responder subgroups.

4.2 System Measures

The direct collection of data from systems enabled the close monitoring of work flow and level of effort, as well as production and cost predictions. The following CATI variables were measured:

- Number of completed interviews per hour, per day, and cumulatively.
- Number of completed interviews per interviewer hour, per hour, per day, and cumulatively.
- Missed appointments per hour.
- Number of cases each interviewer handled, per hour and per day.
- TNMS interviewer hours per completed interview.
- Number of interviewers logged into TNMS, per hour and per day.

Monitoring the number of completed interviews per hour and per day helped to detect variability from day to day and in the days of the week across weeks. When analyzing data about telephone interviewing level of effort and outcome for the same day of the week across weeks, the same days in different weeks have the same characteristics. For example, Monday and Tuesday late evening hours were generally very productive, and Wednesday early evening hours were more productive than late evening hours.

Completed interviews per interviewer hour is useful for determining effectiveness in a particular hour of the day. Dividing the number of interviews by the number of interviewers working in an hour "normalizes" the total completed interviews for that hour, so that an hour of interviewing that seems most productive can be analyzed further to determine if the production is due solely to the number of interviewers present.

When the number of completed interviews per interviewer hour rose significantly above the mean number of completed interviews per interviewer hour, the number of missed appointments was likely to be higher. Thus, those data were used to adjust staff levels in order to preserve efficiency throughout the NELS:88/94 telephone data collection period.
<table>
<thead>
<tr>
<th>Table 4.1.1--Completion rates by selected strata</th>
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<tbody>
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<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td>Total 15.875*</td>
</tr>
<tr>
<td>Completed cases</td>
</tr>
<tr>
<td>Unweighted percent</td>
</tr>
<tr>
<td>Weighted percent</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>Respondent sex</td>
</tr>
<tr>
<td>Male: 7.895</td>
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<tr>
<td>7.354</td>
</tr>
<tr>
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</tr>
<tr>
<td>90.24%</td>
</tr>
<tr>
<td>Female: 7.980</td>
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<tr>
<td>7.561</td>
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<tr>
<td>94.75%</td>
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<tr>
<td>91.48%</td>
</tr>
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<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>Respondent race/ethnicity</td>
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<tr>
<td>1.088</td>
</tr>
<tr>
<td>94.53%</td>
</tr>
<tr>
<td>90.85%</td>
</tr>
<tr>
<td>Hispanic: 2.288</td>
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<tr>
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</tr>
<tr>
<td>87.98%</td>
</tr>
<tr>
<td>Black: 1.840</td>
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<tr>
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<tr>
<td>87.45%</td>
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<tr>
<td>White: 10.303</td>
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</tr>
<tr>
<td>Second follow-up standard test quartile</td>
</tr>
<tr>
<td>Lowest test quartile: 2.669</td>
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<tr>
<td>91.98%</td>
</tr>
<tr>
<td>2nd: 2.850</td>
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<td>2.710</td>
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<tr>
<td>94.21%</td>
</tr>
<tr>
<td>3rd: 2.836</td>
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<td>96.71%</td>
</tr>
<tr>
<td>4th: 2.982</td>
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</tr>
<tr>
<td>Missing: 55</td>
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<tr>
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<td>96.42%</td>
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<tr>
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<td>3.986</td>
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</tr>
<tr>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>Socioeconomic status quartile</td>
</tr>
<tr>
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<tr>
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<tr>
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<tr>
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<tr>
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<td>1FU freshened: 559</td>
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<td>Dropout status</td>
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<td>75.81%</td>
</tr>
<tr>
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<td>2.133</td>
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<tr>
<td>91.04%</td>
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<tr>
<td>89.36%</td>
</tr>
<tr>
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<td>95.75%</td>
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<td>95.90%</td>
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<tr>
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<td>125</td>
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<tr>
<td>94.70%</td>
</tr>
<tr>
<td>94.09%</td>
</tr>
<tr>
<td>Black high test quartile: 79</td>
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<td>96.56%</td>
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<tr>
<td>90.23%</td>
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<td>White low SES quartile: 1.292</td>
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<td>1.228</td>
</tr>
<tr>
<td>95.06%</td>
</tr>
<tr>
<td>93.87%</td>
</tr>
<tr>
<td>White high SES quartile: 1.505</td>
</tr>
<tr>
<td>1.472</td>
</tr>
<tr>
<td>97.81%</td>
</tr>
<tr>
<td>97.63%</td>
</tr>
<tr>
<td>White mid SES: 3.789</td>
</tr>
<tr>
<td>3.644</td>
</tr>
<tr>
<td>96.17%</td>
</tr>
<tr>
<td>95.61%</td>
</tr>
<tr>
<td>1FU freshened: 1</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>100.00%</td>
</tr>
<tr>
<td>100.00%</td>
</tr>
<tr>
<td>2FU freshened: 2</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>100.00%</td>
</tr>
<tr>
<td>100.00%</td>
</tr>
<tr>
<td>Other: 3</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>66.67%</td>
</tr>
<tr>
<td>66.67%</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>* This does not include 89 ineligible or dead sample members.</td>
</tr>
</tbody>
</table>

4-2
The number of missed appointments per hour was measured to ensure that we kept missed appointments to a minimum. If appointments were being missed at a greater than acceptable rate in a particular hour, the missed appointment case records, staff levels, and completed interviews per interviewer per hour were reviewed to determine any special causes.

Knowing the TNMS interviewer hours per completed interview was useful for monitoring unit cost. This broader measurement of interviewing level of effort was multiplied by the standard per interviewer rate to give data about cost per completed telephone interview:

- Calls made per interviewer per hour;
- Total calls made by all interviewers, per day and cumulatively;
- Number of calls per completed interview, per day and cumulatively;
- Total number of case records worked by all interviewers, per day;
- Average questionnaire administration time, per day and cumulatively; and
- Total TNMS logged time divided by the amount of time spent in interviews.

Data were also collected directly from the CMS to monitor level of effort and outcomes:

- Number of cases found per locator per hour;
- Number of cases receiving each locating treatment;
- Number of aged locating cases;
- Number of cases sent from telephone interviewing to locating each day; and
- Number of cases released to locators each day.

The number of cases found per locator per hour was used to evaluate locator performance. If a locator found significantly more or fewer cases per hour than the mean, a supervisor reviewed the locator's case assignment to determine the cause. If the locator deviated from the standard process, the supervisor worked with the locator to determine why. This enabled supervisors to identify locators who needed additional training and to discover processes that needed improvement.

The cases receiving each locating treatment were measured. If many cases needed a particular locating treatment, additional locators were assigned to work on these cases. Also, these data informed the rate at which more cases were released to be worked.

The number of cases sent from telephone interviewing to locating each day was measured to inform work flow and staff levels. After the first days of locating, we measured locating outcomes.
(that is, how many respondents were found and how many cases were not found and received a particular treatment) to determine locating turnaround time until cases were either found or referred for in-person interviewing.

The number of cases assigned to locators each day was measured and examined along with locating case cycle time, the number of hours locators worked, and the number of respondents found in order to determine the correct number of cases to release to locators. Unfortunately, this strategy was not as successful as we desired.

4.3 Questionnaire Frequency Review

Questionnaire frequencies were produced and reviewed throughout the field period to ensure that the questionnaire was capturing the data as specified. The initial review took place after approximately 2,000 cases were completed. Several errors were identified and corrected early in the field period.

After about half of the field cases were completed, the first SAQ (Self-administered Questionnaire) frequencies were reviewed. These data were again reviewed after all the field cases were completed and before being merged with the CATI data. Finally, a thorough review of the combined CATI and SAQ data took place before the Data Analysis System (DAS) and other data delivery files were produced.

4.4 SQC Monitoring

SQC monitoring was one of the primary responsibilities of telephone supervisors. NORC was contracted to monitor 2 percent of all telephone activities: gaining cooperation, interviewing, refusal aversion and conversion, and locating. The following sections detail the supervisor's responsibilities and some of the problems encountered during SQC monitoring.

4.4.1 Monitoring Schedule Generation

Every Monday morning, before telephone interviewing began, the monitoring supervisor ran the program to generate and print a monitoring schedule for each day of the week (See Exhibit 1). The scheduler program sequentially numbered the sessions, and after each session number on the schedule, the report listed the station to be monitored, that station's telephone extension, and the session start and stop times. After the stop time, there was a blank space for the supervisor in charge of assigning sessions to write in the name of the assigned monitor and another line for a backup monitor.

Difficulties with the Scheduler Program. The scheduler program read the telephone center utilization data, a file with the times each station was expected to be occupied by a NELS interviewer or locator. From time to time, the interviewer and locator station assignments changed because of changing project demands and unexpected changes to interviewer and locator work schedules. Therefore, it was difficult to keep the database up to date and accurately reflecting station use. The
monitoring supervisor spent most of the week making session assignments and updating the scheduler database. The scheduler program divided the day into three parts: morning, afternoon, and evening. If a station was used for even one hour during the day, for example, in the morning, it could be

Exhibit 1--Example of a monitoring schedule

<table>
<thead>
<tr>
<th>Session</th>
<th>Start time</th>
<th>Stop time</th>
<th>Monitor</th>
<th>Backup monitor</th>
</tr>
</thead>
<tbody>
<tr>
<td>2170</td>
<td>09:15:00</td>
<td>09:30:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2171</td>
<td>09:35:00</td>
<td>09:50:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2172</td>
<td>09:55:00</td>
<td>10:10:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2173</td>
<td>10:15:00</td>
<td>10:30:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2174</td>
<td>10:35:00</td>
<td>10:50:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2175</td>
<td>10:55:00</td>
<td>11:10:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2176</td>
<td>17:22:00</td>
<td>17:37:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2177</td>
<td>17:42:00</td>
<td>17:57:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2178</td>
<td>18:02:00</td>
<td>18:17:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2179</td>
<td>18:22:00</td>
<td>18:37:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2180</td>
<td>18:42:00</td>
<td>18:57:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2181</td>
<td>19:02:00</td>
<td>19:17:00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

selected to be monitored for any hour of that part of day--in this case, any hour in the morning. Thus this system selected many vacant stations for monitoring: more than 50 percent of all scheduled sessions during the course of NELS:88/94 data collection were vacant stations.

Another difficulty with the schedule program design was that stations were identified by the network node address. Monitors used a commercial program, NRCall, to visually monitor an interviewer's screen; NRCall worked by using user names and not network and node addresses. In order to know who was working at each station, another program was run to produce a cross-walk between the network node addresses on the session's schedule and the user names needed for NRCall. Since the name of the person logged-in changed throughout the day and week, the cross-walk program had to be run shortly after the beginning of each shift.

The scheduler algorithm allowed for up to six concurrent sessions to ensure random session selection. It was common for session stop and start times to overlap. Since there were times when there were not enough scheduled supervisors to monitor all sessions, three of the best interviewers were selected and trained to be monitors. The additional help reduced the number of sessions missed, but it did not eliminate the problem.
In addition to missing sessions, there was an additional problem with starting the monitoring session on time. The data capture system automatically tracked session start and end times. Since the times between scheduled sessions were irregular--sometimes 1 minute, sometimes 47 minutes--supervisors would note the time of their next monitoring session and continue to work on other tasks. In the meantime, the supervisors who were busy assisting interviewers or locators, would find themselves late for sessions. Even closely watching the clock did not always ensure that the supervisor would be on time because the computer system clock gradually lost time throughout the week.

The scheduler program was not very flexible since it ran a schedule for an entire week at one time. If the staff was reduced mid-week, as sometimes happened late in the data collection, the monitoring schedule for that week could not be easily reduced to reflect this change. Also, a schedule for a given week could not be run in advance because it would over-write the present week’s schedule and cause problems analyzing the data for that week.

4.4.2 Monitoring Session Data Capture

Each monitor needed a 286 PC logged into NRCall to view the interviewer's screen and a 386 PC logged into the Paradox monitoring data capture program to document the session. There were five primary data capture screens. The first (Exhibit 2) collected the session number, the user name, and the monitor ID. The next three screens focussed on locating, interviewing, and noninterviewing activities, respectively. The last data capture screen asked for an evaluation of the skills and deficits observed during the entire monitoring session.

Exhibit 2--Screen used to capture interviewer name and session number
Menu choices for choosing activity (along top of screen)

<table>
<thead>
<tr>
<th>Choice</th>
<th>Choice Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviewing</td>
<td>Interviewing</td>
</tr>
<tr>
<td>Locating</td>
<td>CMS Locating</td>
</tr>
<tr>
<td>Noninterviewing</td>
<td>Gaining Cooperation Lite Locating Refusal Conversion</td>
</tr>
<tr>
<td>Station not in Use</td>
<td>No one at Assigned Station</td>
</tr>
<tr>
<td>Computer Not in use</td>
<td>Station occupied Computer not in Use</td>
</tr>
<tr>
<td>Station in use on Other Project</td>
<td>Different Project</td>
</tr>
<tr>
<td>Quit</td>
<td>Session Done Summarize &amp; Quit</td>
</tr>
</tbody>
</table>

On the locating data capture screen (Exhibit 3), the monitor would rank the locating skills using a 0 to 5 scale. "0" meant the skill, for example, probing, was not observed; "1" meant that the locator needed drastic improvement; "3" meant "average skill demonstrated" and was used whenever the locator did a good job; "5" meant "excellent skill demonstrated." There was also space for comments on the locator's work; however, in most cases when a comment was called for, the comment field was insufficient.

Exhibit 3--Screen used to capture observations of locating activity
The interviewing data capture screen (Exhibit 4) collected the NELS:88/94 question numbers where errors occurred, as well as comments about the errors. Like the locating screen, the comment field here was insufficient. Although monitors used standard abbreviations, they still had problems conveying the actual errors in detail. For example, a monitor could say that an interviewer failed to probe but might not have enough space to say what probing was needed. This limitation prevented helpful interviewer feedback, but since the SQC approach to monitoring did not call for feedback unless the process was out-of-control, this did not present a problem.

**Exhibit 4--Screen used to capture observations of interviewing activity**
The noninterviewing activities data capture screen (Exhibit 5) was very simplistic. The monitor recorded any errors observed in gaining cooperation, locating, or refusal conversion. There was also a short, usually insufficient, comment field.

**Exhibit 5--Screen used to capture observations of non-interviewing activity**

```
Noninterviewing Activities
Project: NELS3

Code type of Error Observed
G = Error in Gaining Cooperation
L = Error in Lite Locating
R = Error in Refusal Conversion

Error Type  ___
Comments:
Leave Blank if no errors or if not applicable

Press F2 to Exit
```

On the evaluation screen (Exhibit 6) there were a series of skills listed on the screen, for example, "Conversational Style" and "Professionalism," which the monitor would rate using the same 0 through 5 scale found on the locating data capture screen. Again, the comment field that had an insufficient length. Of all the places in the data capture program, this screen probably required the longest comment field in order to be meaningful to the supervisor reviewing the monitoring data.

**Exhibit 6--Screen used to capture session summary information**

```
Session Summary Screen
Please evaluate these from 0 to 5
where: 1 = needs improvement
Identification of Self:   5 = excellent
Explanation of Study:
Use of Call Notes:   0 = no chance to observe
Refusal Conversion:   /not applicable
Cadence: _______
Speed: _______
Presentation: _______
Professionalism: _______
Conversational Style: _______
Comments: _______

Press F2 to Continue
```
4.4.3 Monitor Training

In addition to training on the data capture system, all monitors were trained to evaluate conversational interviewing. The monitoring supervisor presented examples of deviations and errors to the group, and the group discussed how they would distinguish between deviations and errors: deviations were acceptable, errors were not. To insure cross-monitor reliability, the monitoring supervisor oversaw the monitors and met with them to discuss monitoring issues.

4.4.4 Monitoring Data Analysis

Since the monitoring data were captured in Paradox, queries could be made to determine if NELS:88/94 data capture done by the interviewers and locators was in control according to SQC standards. If the system did go out of control the data were available to determine why, so that action could be taken to resume control. Although interviewers were not given direct feedback on their monitored interviews, some data were used to determine issues to be discussed in weekly group interviewer meetings.

The data were also used to improve the monitoring process by determining when the most problems completing monitoring sessions occurred. After examining these data adjustments in staff schedules were made to improve our monitoring performance.

4.4.5 Additional Monitoring Problems

When the monitoring of locating work began, two short-term problems were experienced and later corrected. First, the interviewing and monitoring software for NELS:88/94 were on the Novell file server that differed from the file server where the locating software resided. Problems using NRCall to view the screens of the PCs at which the locators were working were experienced because locating was on a different server. Second, there were difficulties connecting by telephone to monitor the telephone extensions on the second floor where the locators were situated.

4.4.6 Monitoring Results

All interviewing tasks remained within statistical control throughout the field period; the cumulative errors per minute monitored, for telephone data collection, was 0.070.

4.5 SQC Coding

Verbatim text and the associated codes from all cases were exported daily until 1,000 cases were complete. At that point, many interviewers had completed about 10 cases. A team of three expert coders reviewed the data and re-coded as necessary. This team provided evaluation data to supervisors so that timely feedback could be given to interviewers about the quality of industry, occupation, IPEDS, and major field of study coding.
For major field of study, industry and occupation coding, the goals of the review were twofold: to judge whether the verbatim strings were complete and appropriate codes assigned. For IPEDS coding, the verbatim strings entered for "uncodable" and foreign institutions were reviewed to ensure that they were sufficient (no review of coded institutions was possible, errors in this process were detected during the on-line monitoring).

Since the error rate on the first 1,000 cases was judged to be acceptable, half of the codes from the second 1,000 completed cases were randomly selected for review. The error rate for the second group was also found to be acceptable, therefore, 25 percent of the next group of 1,000 was reviewed. When the third group of 1,000 cases reflected an acceptable error rate we made yet another reduction in the percent of cases reviewed. The next two groups of 1,000 completed cases were reviewed at 10 percent and 5 percent respectively. Interviewer coding remained in control throughout the field period; after the first 5,000 cases were completed, cases were reviewed at a rate of 5 percent of the interviewers' work.

Feedback to interviewers continued throughout the field period. A control chart was generated for each coding type to plot interviewer coding performance, and was prominently displayed in a heavy traffic area of the telephone center. In addition, original codes were cross-tabulated with the expert codes to identify areas that were giving the interviewers the most trouble. Based on this analysis and the coders notes on the verbatim strings, when necessary, supervisors held retraining sessions with interviewers.
Chapter Five: Weights, Standard Errors, Design Effects, Nonresponse Rates

5.1 Purpose of Weighting

Weighting survey data compensates for unequal probabilities of selection and adjusts for the effects of nonresponse. Weights are often calculated in several steps. In the first step, unadjusted weights are calculated as the inverse of the probabilities of selection, taking into account all stages of the sample selection process. In the second step, these initial weights are adjusted to compensate for unit nonresponse; such nonresponse adjustments are typically carried out separately within multiple weighting cells. These steps were followed in creating the NELS:88/94 weights.

In order to maintain consistency in weights across the various waves and across the various weights within waves, multidimensional raking was also applied when creating NELS:88 weights. In the third follow-up, raking was performed with respect to base year school characteristics, race, gender, and status in each of the rounds.

5.2 Calculation of Third Follow-up Weights

The following procedures were used to calculate the weights for use with the third follow-up data.

I. Weights to be calculated

A. F3QWT

This weight applies to all members of the third follow-up sample who completed a questionnaire in 1994, regardless of their participation status in previous rounds. When used with the appropriate sample flags (F3UNIV2A, F3F1STFL, and F3UNIV2D), this weight allows projections to the following populations:


- spring 1990 tenth graders eligible to complete questionnaires in 1992 and 1994, regardless of 1990 eligibility; and

B. F3PNLWT
This panel weight applies to sample members who completed questionnaires in all four rounds of NELS:88. F3PNLWT can be used in longitudinal analyses to make projections to the population of spring 1988 eighth graders.

C. F3F1PNWT
This panel weight applies to sample members who completed questionnaires in 1990, 1992, and 1994, regardless of base year status. F3F1PNWT allows projections (when used with the flag variable F3F1PNFL) in longitudinal analyses to the population of spring 1990 tenth graders.

D. F3F2PNWT
This panel weight applies to sample members who completed questionnaires in 1992 and 1994, regardless of base year or first follow-up status. F3F2PNWT allows projections (when used with the flag variable F3F2PNFL) in longitudinal analyses to the population of spring 1992 twelfth graders.

E. F3CXTWT
This weight is intended to be used with the 1992 school administrator and teacher data. It applies to 1994 respondents who were early graduates from or students in the spring of 1992 at the sampled second follow-up schools and who completed a 1992 questionnaire. (Teacher and school administrator data were collected from a subsample of the 1992 schools.) This weight allows analysts to generate national statistics for students using the associated teacher and school administrator data despite the bias against small cluster sizes in sample selection.

F. F3PAQWT
This weight is intended to be used with the 1992 parent data. It applies to all 1994 respondents for whom second follow-up parent questionnaire data were collected.

G. F3TRSCWT
This weight is intended to be used with the high school transcript data collected in the second follow-up. It applies to 1994 respondents whose second follow-up status was dropout, early graduate, or student in a sampled school and for whom transcripts were collected in 1992.

H. F3QWTG8
This weight is equal to F3QWT for 1994 respondents who were in the eighth grade in the spring of 1988 and is equal to zero for all other respondents. Use of this weight allows projections to the population of spring 1988 eighth graders who were eligible to complete questionnaires in 1992 and 1994, regardless of 1988 and 1990 eligibility.

I. F3QWTG10

5-2
This weight is equal to F3QWT for 1994 respondents who were in the tenth grade in the spring of 1990 and is equal to zero for all other respondents. For this weight, 1990 tenth grade cohort membership is based on the 1990 enrollment status used in 1994 weighting (see II.A below). For sample members whose status was not determined in 1990, 1990 enrollment status was imputed. F3QWTG10 allows projections to the population of spring 1990 tenth graders who were eligible to complete questionnaires in 1992 and 1994, regardless of 1990 eligibility.

J. F3QWTG12
This weight is equal to F3QWT for 1994 respondents who were in the twelfth grade in the spring of 1992 and is equal to zero for all other respondents. For this weight, 1992 twelfth grade cohort membership is based on the 1992 enrollment status used in 1994 weighting (see II.A below). For sample members whose status was not determined in 1992, 1992 enrollment status was imputed. F3QWTG12 allows projections to the population of spring 1992 twelfth graders who were eligible to complete questionnaires in 1992 and 1994.

K. F3QWT92G
This weight is equal to F3QWT for 1994 respondents who received a high school diploma between September 1, 1991 and August 31, 1992 or respondents whose diploma receipt date is not known but who began their postsecondary education between June 1 and October 31, 1992. F3QWT92G is zero for all other 1994 respondents. F3QWT92G allows projections to the population of persons who received a high school diploma in the 1991-1992 academic year.

II. Process for calculation of weights

A. Expand the second follow-up classification scheme
As a part of the second follow-up weighting process, all sample members were divided into basic sample groups depending upon their status during data collection for each of the three rounds of NELS:88. Freshened students were assigned the status of their linked student for those rounds where they were not yet in the sample. The possible values included:

1. Eligible, dropout as of survey date
2. Eligible, in school, in expected grade
3. Eligible, in school, not in expected grade
4. Ineligible
   a. in school, in expected grade
   b. in school, not in expected grade
   c. not in school
5. Out of scope (deceased or out of country)
6. Eligible, freshened, dropout as of survey date
7. Eligible, freshened, in school
8. Ineligible, freshened

Sample members for whom status was unknown had their status imputed based upon the weighted distribution of status across others in their base year, first follow-up, and second follow-up categories and, where group size permitted, race and gender were also considered.

In this classification scheme, "dropout" generally refers to a student who has left a diploma granting high school program. This would include members who are not pursuing an education at all, home study students, members who are continuing their education in a nontraditional school, and institutionalized members. There were two exceptions to this general rule. First, early graduates were included in the "in school" category. Second, because sample members who attended nontraditional schools during the first follow-up were classified as students then, they were treated as such during the calculation of their first follow-up status.

"Ineligible" refers to members who were not given the questionnaire due to a language barrier or a mental or physical incapacity.

"Expected grade" means 10th grade in the first follow-up and 12th grade in the second follow-up.

A third follow-up status was defined and used in conjunction with the status categories developed during the second follow-up. The possible values for the third follow-up status included:

1. Eligible, received high school diploma
2. Eligible, received GED or certificate
3. Eligible, working toward high school diploma or equivalent
4. Eligible, did not finish high school and is not working toward diploma or equivalency
5. Deceased or ineligible for third follow-up

Sample members for whom status was not determined in 1994 had their status imputed using the method employed in the second follow-up.

"Ineligible for third follow-up" refers only to sample members who were not given the questionnaire because they entered the NELS:88 sample as exchange students and had returned to their home country prior to the 1994 data collection.
B. Calculate the third follow-up design weight

In the second follow-up, multiple design weights were created to allow for school and parent subsampling. For weights unaffected by second follow-up sampling (F2QWT, F2PNLWT) and for the dropouts and early graduates for F2TRSCWT (transcript), the second follow-up design weight was equal to the sample member's first follow-up design weight. For F2CXTWT (teacher and school administrator) and for sample members associated with sampled schools for F2TRSCWT, the second follow-up design weight was equal to the sample member's first follow-up design weight divided by the school's selection probability. For F2PAQWT, the design weight used was the first follow-up design weight divided by the parent's second follow-up selection probability.

The basic 1994 design weight was calculated at the time of the 1994 sampling. Sampling groups were defined and each was assigned a percentage of cases to be selected. Cases were selected such that the overall selection probability was a fixed percent per sampling group, but with probability of selection within the group proportional to the second follow-up design weight. This design weight, F3RAWWT, was used to compute F3QWT, F3F2PNWT, F3F1PNWT, and F3PNLWT. F3QWTG8, F3QWTG10, F3QWTG12, and F3QWT92G were in turn derived from F3QWT. Using a similar procedure as the second follow-up, the design weight used for F3PAQWT was F3RAWWT divided by the parent's second follow-up selection probability. The design weights for F3TRSCWT and F3CXTWT were F3RAWWT divided by the second follow-up school selection probability for those sample members whose inclusion was determined by school affiliation or F3RAWWT for those who were included despite their school affiliation.

C. Calculate third follow-up expanded weight

This cross-sectional weight was developed for all members of the NELS:88/94 sample, regardless of their questionnaire completion status and was used to develop targets for the 1994 respondent weights. A multidimensional raking procedure was used to adjust the basic third follow-up design weight, F3RAWWT, where the marginal target categories were based on roster race (API, Hispanic, other) and gender, base year school type, base year school region, base year school urbanicity, and the status values from the classification scheme described in step II.A. Target margins were developed using the first follow-up expanded weight for students who received one and the second follow-up design weight for freshened students.

For this weight only, the NELS sample members who were excluded from the 3FU sample because they were deceased or ineligible for the 2FU sample were included. This was to ensure a consistency in the population sizes across the rounds. These cases were dropped when the targets were developed, thereby automatically
shrinking the targets to accommodate the loss of the corresponding population members.

D. Adjustment for nonresponse

Creation of nonresponse adjustment cells for each 1994 weight was based on combinations of the classification scheme described in II.A. as well as roster gender and roster race (Hispanic, API, other) for the members of that weight’s population. The steps for creating the nonresponse cells and adjusted weight included:

1. Cells were initially defined by dividing sample members into groups based upon their base year, first follow-up, and second follow-up status. Cells that had fewer than 50 members or less than 10 respondents were combined at the second follow-up level. Base year and first follow-up distinctions were maintained, but within these, cells with second follow-up values of 1, 2, or 3 were combined as necessary to achieve the minimum cell size. Combining cells with status 1 and 3 occurred first. If necessary, cells with status of 1 and 3 then were combined with cells with status 2.

2. Cells that contained more than 100 members and 20 respondents might have been eligible for division. A cell was divided if all resulting subgroups met the minimum 50/10 requirement. Divisions were first considered on the basis of third follow-up status, then roster gender, then roster race.

3. Once the cells were defined for a given weight, the appropriate third follow-up design weight for each responding member was inflated by a factor equal to the inverse of the weighted response rate for the cell.

E. Multidimensional raking

Using F2QWT, targets were developed for each weight for race (White, Black, Hispanic, API, Native American, other), gender, base year school region, base year school urbanicity, and base year school type. Targets were developed for current and prior round status and total population sums for each weight using F3EXPWT.
<table>
<thead>
<tr>
<th></th>
<th>F3QWT</th>
<th>F3PNLWT</th>
<th>F3F1PWT</th>
<th>F3F2PWT</th>
<th>F3CXTWT</th>
<th>F3PAQWT</th>
<th>F3TRSCWT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>214.67</td>
<td>226.25</td>
<td>226.45</td>
<td>218.21</td>
<td>227.69</td>
<td>251.57</td>
<td>252.28</td>
</tr>
<tr>
<td><strong>Variance</strong></td>
<td>55,899.72</td>
<td>61,822.48</td>
<td>60,950.67</td>
<td>57,695.52</td>
<td>130,221.50</td>
<td>85,368.41</td>
<td>193,899.00</td>
</tr>
<tr>
<td><strong>Standard deviation</strong></td>
<td>236.43</td>
<td>248.64</td>
<td>246.88</td>
<td>240.20</td>
<td>360.86</td>
<td>292.18</td>
<td>440.34</td>
</tr>
<tr>
<td><strong>Coefficient of variation (X 100)</strong></td>
<td>110.14</td>
<td>109.90</td>
<td>109.02</td>
<td>110.08</td>
<td>158.49</td>
<td>116.14</td>
<td>174.55</td>
</tr>
<tr>
<td><strong>Minimum</strong></td>
<td>7.96</td>
<td>11.27</td>
<td>10.93</td>
<td>9.34</td>
<td>16.48</td>
<td>8.27</td>
<td>7.20</td>
</tr>
<tr>
<td><strong>Maximum</strong></td>
<td>6,135.13</td>
<td>7,549.94</td>
<td>7,521.50</td>
<td>7,118.84</td>
<td>12,444.78</td>
<td>8,358.50</td>
<td>12,940</td>
</tr>
<tr>
<td><strong>Skewness</strong></td>
<td>7.65</td>
<td>10.94</td>
<td>9.34</td>
<td>8.92</td>
<td>16.60</td>
<td>8.59</td>
<td>10.78</td>
</tr>
<tr>
<td><strong>Kurtosis</strong></td>
<td>108.61</td>
<td>211.61</td>
<td>163.12</td>
<td>147.95</td>
<td>428.73</td>
<td>142.01</td>
<td>185.95</td>
</tr>
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<td><strong>Sum</strong></td>
<td>3,201.743</td>
<td>2,968.426</td>
<td>3,160.792</td>
<td>3,201.743</td>
<td>2,677.913</td>
<td>3,197.396</td>
<td>3,155.673</td>
</tr>
<tr>
<td><strong>Number of cases</strong></td>
<td>14.915</td>
<td>13.120</td>
<td>13.958</td>
<td>14.673</td>
<td>11.761</td>
<td>12.710</td>
<td>12.509</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>F3QWTG8</th>
<th>F3QWTG10</th>
<th>F3QWTG12</th>
<th>F3QWTG2G</th>
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<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>214.06</td>
<td>208.98</td>
<td>206.66</td>
<td>202.48</td>
</tr>
<tr>
<td><strong>Variance</strong></td>
<td>55,531</td>
<td>48,003.99</td>
<td>43,861.64</td>
<td>39,828</td>
</tr>
<tr>
<td><strong>Standard deviation</strong></td>
<td>235.65</td>
<td>219.10</td>
<td>209.43</td>
<td>199.57</td>
</tr>
<tr>
<td><strong>Coefficient of variation (X 100)</strong></td>
<td>110.08</td>
<td>104.84</td>
<td>101.34</td>
<td>98.56</td>
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<tr>
<td><strong>Minimum</strong></td>
<td>7.96</td>
<td>7.96</td>
<td>16.23</td>
<td>7.96</td>
</tr>
<tr>
<td><strong>Maximum</strong></td>
<td>6,135.13</td>
<td>4,907.83</td>
<td>4,907.83</td>
<td>4,907.83</td>
</tr>
<tr>
<td><strong>Skewness</strong></td>
<td>7.69</td>
<td>6.92</td>
<td>7.23</td>
<td>7.37</td>
</tr>
<tr>
<td><strong>Kurtosis</strong></td>
<td>109.82</td>
<td>86.00</td>
<td>97.27</td>
<td>103.00</td>
</tr>
<tr>
<td><strong>Sum</strong></td>
<td>3,063,693</td>
<td>2,829,380</td>
<td>2,572,268</td>
<td>2,356,268</td>
</tr>
<tr>
<td><strong>Number of cases</strong></td>
<td>14,312</td>
<td>13,539</td>
<td>12,447</td>
<td>11,637</td>
</tr>
</tbody>
</table>

5.3 Standard Errors and Design Effects

In this section, the calculation of standard errors as a measure of sampling variability in survey results are discussed; the standard error is an estimate of the expected difference between a statistic from a particular sample and the corresponding population value.

**Survey Standard Errors.** Because the NELS:88 sample design involved stratification, the disproportionate sampling of certain strata, and clustered (i.e. multi-stage) probability sampling, the resulting statistics are more variable than they would have been had they been based on data from a simple random sample of the same size.

The calculation of exact standard errors for survey estimates can be difficult and expensive. Popular statistical analysis packages such as SPSS (Statistical Program for the Social Sciences) or SAS (Statistical Analysis System) do not adjust for complex sampling designs of the type used in NELS:88 in the calculation of standard errors. However, several procedures are available for calculating precise estimates of sampling errors for complex samples. Procedures such as Taylor Series approximations, Balanced Repeated Replication (BRR), and Jackknife Repeated Replication (JRR) produce similar results.<sup>1</sup> Consequently, it is largely a matter of convenience which approach is taken. For NELS:88, NORC used the Taylor Series procedure to calculate the standard errors.

**Design Effects.** The impact of departures from simple random sampling on the precision of sample estimates is often measured by the design effect (designated as DEFF). For any statistical estimator (for example, a mean or a proportion), the design effect is the ratio of the estimate of the variance of a statistic derived from consideration of the sample design to that obtained from the formula for simple random samples. The square root of the design effect (also called the root design effect, and designated as DEFT) is also useful. The following formulas define the design effects and root design effect for this section:

\[
\text{DEFF} = \frac{(\text{DESIGN-SE})^2}{(\text{SRS-SE})^2} \quad (1)
\]

\[
\text{DEFT} = \frac{\text{DESIGN-SE}}{\text{SRS-SE}} \quad (2)
\]

where DESIGN-SE designates the standard error of an estimate calculated by taking into account the complex nature of the survey design, and SRS-SE designates the standard error of the same estimate calculated as if the survey design was a simple random sample.

### 5.3.1 Third Follow-up Standard Errors and Design Effects

Standard errors and design effects were calculated for 30 means and proportions based on the NELS:88 third follow-up student and dropout data. As in the previous rounds, the goal was to estimate standard errors/design effects for all respondents including dropouts.
Selection of Third Follow-up Items. Criteria similar to those used in the second follow-up were used to select questions for the third follow-up standard error/design effects analysis. The first criterion was whether a question had been used in the NELS:88 analysis of standard errors/design effects in any of the previous rounds. This overlap resulted in the inclusion of five items. Additional items were then chosen if they appeared in the crosswalk of the other rounds. Sixteen of the remaining items selected appear in one or more of the previous rounds. The remaining nine items were chosen at random from the third follow-up such that three items involved information about postsecondary education, three pertained to work activity, and three involved personal information about the respondent.

Results. Standard errors and design effects were calculated for each of the items for the sample as a whole, including students and dropouts. The analyses were then repeated for the 17 sampling subgroups. Standard errors and design effects were calculated using the third follow-up respondents weighted by the full sample questionnaire design weight, F3QWT.

The individual item standard errors, design effects (DEFF), and root design effects (DEFT) for all respondents are presented along with summary statistics in Tables 5.3.1 through 5.3.15. Four of the sampling subgroups were omitted from the design effect analysis because of insufficient sample size. These were "Nonresponders," "1990 Freshened," "1992 Freshened," and "Other."
Table 5.3.1 - Explanation of variable names for variables used in computation of standard errors and design effects

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPOSTEX1</td>
<td>Respondent reported taking the SAT</td>
</tr>
<tr>
<td>PPOSTEX2</td>
<td>Respondent reported taking the ACT</td>
</tr>
<tr>
<td>PPOSTEX3</td>
<td>Respondent reported taking the ASVAB</td>
</tr>
<tr>
<td>PPOSTEX4</td>
<td>Respondent reported taking other entrance exam</td>
</tr>
<tr>
<td>CHILDREN</td>
<td>Respondent has children of his/her own</td>
</tr>
<tr>
<td>SUCSWRLR</td>
<td>Having success in work is very important</td>
</tr>
<tr>
<td>LOTSMONY</td>
<td>Having lots of money is very important</td>
</tr>
<tr>
<td>STRGRFRND</td>
<td>Strong friendships are very important</td>
</tr>
<tr>
<td>STDYWORK</td>
<td>Having steady work is very important</td>
</tr>
<tr>
<td>CHILDOPTY</td>
<td>Giving my children better opportunities than I had is very important</td>
</tr>
<tr>
<td>DEATH</td>
<td>Respondent has experienced death in the family</td>
</tr>
<tr>
<td>ILLDISBL</td>
<td>Respondent or family member has been ill or disabled</td>
</tr>
<tr>
<td>CRIME</td>
<td>Respondent or family member has been a victim of crime</td>
</tr>
<tr>
<td>YRREC</td>
<td>Respondent reported the date of receiving diploma/GED/certificate</td>
</tr>
<tr>
<td>TVWATCH</td>
<td>Respondent reports watching more than 2 hours of television per weekday</td>
</tr>
<tr>
<td>EDEXPECT</td>
<td>Highest level of education respondent expects to attain is graduate degree</td>
</tr>
<tr>
<td>OCCFUTCD=MGR</td>
<td>Respondent expects to have a managerial position at age 30</td>
</tr>
<tr>
<td>OCCFUTCD=TECH</td>
<td>Respondent expects to be working in a technical position at age 30</td>
</tr>
<tr>
<td>MARSTAT</td>
<td>Respondent’s current marital status is married</td>
</tr>
<tr>
<td>F3PSENUM</td>
<td>Number of postsecondary institutions respondent reports attending</td>
</tr>
<tr>
<td>JOBS1:Y/N</td>
<td>Respondent reports holding at least one job between June and December 1992</td>
</tr>
<tr>
<td>HOBIES</td>
<td>Respondent spends time on hobbies</td>
</tr>
<tr>
<td>PARSPORT</td>
<td>Respondent spends time participating in sports</td>
</tr>
<tr>
<td>VOLUNTE2</td>
<td>Respondent has volunteered for a work or union related organization</td>
</tr>
<tr>
<td>VOLUNTE4</td>
<td>Respondent has volunteered for a religious organization</td>
</tr>
<tr>
<td>VOLUNTE8</td>
<td>Respondent has volunteered for an “other” organization</td>
</tr>
<tr>
<td>NUMARIED</td>
<td>Number of times respondent has been married</td>
</tr>
<tr>
<td>NUMCHILD</td>
<td>Number of children born to respondent</td>
</tr>
<tr>
<td>NUMJOBS1</td>
<td>Number of jobs held by respondent between June and December 1992</td>
</tr>
<tr>
<td>MAJCODE=Phil</td>
<td>Respondent’s major at first postsecondary institution was philosophy</td>
</tr>
</tbody>
</table>

Table 5.3.2 - NELS:88 third follow-up student data, standard errors and design effects for all students

<table>
<thead>
<tr>
<th>Summary statistics</th>
<th>Estimate</th>
<th>Design std. err.*</th>
<th>DEFF</th>
<th>DEFT</th>
<th>Unweighted N</th>
<th>SRS std. err.**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2.94</td>
<td>1.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard deviation</td>
<td>0.78</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>1.22</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>5.17</td>
<td>2.27</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>PPOSTEX1</td>
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<td>1.96</td>
<td>14889</td>
<td>0.404</td>
</tr>
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<td>1.91</td>
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</tr>
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</tr>
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<td>3.92</td>
<td>1.98</td>
<td>14891</td>
<td>0.303</td>
</tr>
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<td>1.52</td>
<td>14845</td>
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</tr>
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<td>1.52</td>
<td>14843</td>
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</tr>
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<td>14843</td>
<td>0.209</td>
</tr>
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</table>

Source: NCES, National Education Longitudinal Study of 1988-1994 12712794
* Standard error calculated taking into account the sample design
** Standard error calculated under assumptions of simple random sampling
Table 5.3.3.-NELS:88 third follow-up student data, standard errors and design effects for poor responders

<table>
<thead>
<tr>
<th>Variables</th>
<th>Estimate</th>
<th>Design std. err.*</th>
<th>DEFF</th>
<th>DEFT</th>
<th>Unweighted N</th>
<th>SRS std. err.**</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPOSTEX1</td>
<td>41.47</td>
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<tr>
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<td>1.97</td>
<td>1.45</td>
<td>1.20</td>
<td>438</td>
<td>1.636</td>
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* Standard error calculated taking into account the sample design
** Standard error calculated under assumptions of simple random sampling
Table 5.3.4 - NELS:88 third follow-up student data, standard errors and design effects for dropouts

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Note: "low n" indicates sample size is insufficient for reliable estimates.
** Standard error calculated under assumptions of simple random sampling
Table 5.3.5: NELS:88 third follow-up student data, standard errors and design effects for respondents ineligible prior to 1992

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| Source: NCES, National Education Longitudinal Study of 1988-1994 12712794
| Note: "low n" indicates sample size is insufficient for reliable estimates.
| ** Standard error calculated taking into account the sample design.
| ** Standard error calculated under assumptions of simple random sampling.
### Table 5.36: NELS:88 third follow-up student data, standard errors and design effects for respondents in private school in 1988

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* Standard error calculated taking into account the sample design

** Standard error calculated under assumptions of simple random sampling
Table 5.3.7 - NELS:88 third follow-up student data, standard errors and design effects for respondents in private school in 1990 or 1992

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* Standard error calculated taking into account the sample design
** Standard error calculated under assumptions of simple random sampling
Table 5.3.8 - NELS:88 third follow-up student data, standard errors and design effects for only public and Hispanic.

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* Standard error calculated taking into account the sample design
** Standard error calculated under assumptions of simple random sampling
Table 5.3.9: NELS:88 third follow-up student data, standard errors and design effects for only public and Asian/Pacific Islander

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* Standard error calculated taking into account the sample design
** Standard error calculated under assumptions of simple random sampling
Table 5.3.10 - NELS:88 third follow-up student data, standard errors and design effects for only public and Native American

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Source: NCES, National Education Longitudinal Study of 1988-1994 I2712794
Note: "low n" indicates sample size is insufficient for reliable estimates.
* Standard error calculated taking into account the sample design
** Standard error calculated under assumptions of simple random sampling
Table 5.3.11.- NELS:88 third follow-up student data, standard errors and design effects for only public and black with high test scores

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- **PPOSTX3**: 33.58 7.06 1.68 1.29 75 5.453
- **PPOSTX4**: 4.47 2.24 0.88 0.94 75 2.384
- **CHILDREN**: 8.95 5.18 2.47 1.57 75 3.297
- **SCHOOL**: 80.94 5.45 2.35 1.53 75 3.555
- **LOSTMONY**: 27.18 6.78 1.74 1.32 75 5.137
- **STRGFRND**: 86.14 5.73 2.06 1.44 75 3.960
- **STDWORK**: 90.43 4.16 1.56 1.25 75 3.332
- **CHILDPT**: 95.38 3.63 2.24 1.50 75 2.424
- **DEATH**: 53.09 6.85 1.41 1.19 75 5.762
- **ILLDISBL**: 37.37 7.20 1.66 1.29 75 5.586
- **CRIME**: 14.15 4.89 1.48 1.22 75 4.024
- **YRREC**: 95.04 4.22 2.84 1.69 75 2.504
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- **EDEXPECT**: 58.47 6.91 1.47 1.21 75 5.690
- **OCFUTOC-MGR**: 11.27 4.55 1.55 1.25 75 3.662
- **OCFUTOC-TECH**: 9.28 4.29 1.64 1.28 75 3.350
- **MARSTAT**: 2.02 1.44 0.78 0.89 75 1.627
- **F3PENSIONS**: 0.98 0.07 1.56 1.25 75 0.056
- **JOBS1/Y/N**: 83.01 4.51 1.08 1.04 75 4.336
- **HOBBIES**: 39.93 7.43 1.73 1.31 75 5.655
- **PSPORT**: 40.11 6.64 1.38 1.17 75 5.660
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- **MAJCODE1=Phil.**: low n low n low n low n low n low n low n low n


Note: "Low n" indicates sample size is insufficient for reliable estimates.
* Standard error calculated taking into account the sample design
** Standard error calculated under assumptions of simple random sampling
Table 5.3.12—NELS:88 third follow-up student data, standard errors and design effects: only public and black with other scores

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Source: NCES, National Education Longitudinal Study of 1988-1994 (27/12/94)
Note: "low n" indicates sample size is insufficient for reliable estimates.
* Standard error calculated taking into account the sample design
** Standard error calculated under assumptions of simple random sampling
Table 5.3.13—NELS:88 third follow-up student data, standard errors and design effects: only public and white with low SES

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Summary statistics

Variables

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- **PPOSTX2**: 24.95, 1.61, 1.69, 1.30, 1224, 1.237
- **PPOSTX3**: 31.99, 1.91, 2.05, 1.43, 1224, 1.333
- **PPOSTX4**: 3.09, 0.62, 1.57, 1.25, 1224, 0.495
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- **LOTSMDY**: 40.38, 1.61, 1.32, 1.15, 1223, 1.403
- **STRGFRND**: 89.15, 1.24, 1.95, 1.39, 1223, 0.889
- **STDWORK**: 92.44, 0.95, 1.58, 1.26, 1223, 0.756
- **CHLDOPT**: 95.47, 0.65, 1.19, 1.09, 1223, 0.595
- **DEATH**: 46.44, 1.80, 1.59, 1.26, 1223, 1.426
- **ILLDISBL**: 26.44, 1.50, 1.41, 1.19, 1222, 1.262
- **CRIME**: 5.94, 0.77, 1.30, 1.14, 1221, 0.676
- **YRREC**: 89.22, 1.31, 2.19, 1.48, 1228, 0.885
- **TVWATCH**: 62.11, 1.55, 1.25, 1.12, 1223, 1.387
- **EDEXPECT**: 36.44, 1.34, 1.60, 1.27, 1225, 1.059
- **OCFUTCD-MGR**: 7.65, 0.84, 1.20, 1.10, 1200, 0.767
- **OCFUTCD-TECH**: 7.05, 0.86, 1.35, 1.16, 1200, 0.739
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- **FPSN10WE**: 0.47, 0.02, 1.38, 1.18, 1228, 0.017
- **POWSNL**: 82.95, 1.17, 1.19, 1.09, 1227, 1.074
- **HOBBIES**: 53.31, 1.77, 1.54, 1.24, 1223, 1.427
- **PAPSPORT**: 44.81, 1.74, 1.50, 1.22, 1222, 1.423
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- **VOLUNTE4**: 8.30, 0.89, 1.27, 1.13, 1222, 0.789
- **VOLUNTEB**: 5.75, 0.80, 1.44, 1.20, 1222, 0.666
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- **NUMCHILD**: 0.16, 0.02, 2.78, 1.67, 1227, 0.012
- **NUMJOBS**: 1.26, 0.03, 0.94, 0.97, 1227, 0.031
- **MAJCODE1=Phil.**: 0.18, 0.18, 0.96, 0.98, 548, 0.184


* Standard error calculated taking into account the sample design

** Standard error calculated under assumptions of simple random sampling

5-22
Table 5.3.14- NELS:88 third follow-up student data, standard errors and design effects: only public and white with high SES

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* Standard error calculated taking into account the sample design
** Standard error calculated under assumptions of simple random sampling
Table 5.3.15.-NELS:88 third follow-up student data, standard errors and design effects for only public and white with middle SES

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<td>1.35</td>
<td>0.02</td>
<td>1.38</td>
<td>1.18</td>
<td>3640</td>
</tr>
<tr>
<td>MAJCODE1=Phil.</td>
<td>0.07</td>
<td>0.05</td>
<td>0.96</td>
<td>0.98</td>
<td>2571</td>
</tr>
</tbody>
</table>

* Standard error calculated taking into account the sample design
** Standard error calculated under assumptions of simple random sampling

---

5-24
5.3.2 Use of Design Effects and Approximate Standard Errors

Researchers who do not have access to software for computing accurate estimates of standard errors can use the mean design effects presented in this report to approximate the standard errors of statistics based on the NELS:88 data. Design-corrected standard errors for a proportion can be estimated from the standard error computed using the formula for the standard error of a proportion based on a simple random sample and the appropriate mean root design effect (DEFT):

\[
SE = \text{DEFT} \times \sqrt{p(1-p)/n} \quad (1)
\]

where \( p \) is the weighted proportion of respondents giving a particular response, \( n \) is the size of the sample, and \( \text{DEFT} \) is the mean root design effect.

Similarly, the standard error of a mean can be estimated from the weighted variance of the individual scores and the appropriate mean \( \text{DEFT} \):

\[
SE = \text{DEFT} \times \sqrt{\text{Var}/n} \quad (2)
\]

where \( \text{Var} \) is the sample variance, \( n \) is the size of the sample, and \( \text{DEFT} \) is the mean root design effect.

Standard errors may also be needed for other types of estimates than the simple means and proportions that are the basis for the results presented here. A rule of thumb can be used to estimate approximate standard errors for comparisons between subgroups. If the subgroups crosscut schools, then the design effect for the difference between the subgroup means will be somewhat smaller than the design effect for the individual means; consequently, the variance of the difference estimate will be less than the sum of the variances of the two subgroup means from which it is derived:

\[
\text{Var}(b-a) < \text{Var}(b) + \text{Var}(a) \quad (3)
\]

in which \( \text{Var}(b-a) \) refers to the variance of the estimated difference between the subgroup means, and \( \text{Var}(a) \) and \( \text{Var}(b) \) refer to the variances of the two subgroup means. It follows from equation (3) that \( \text{Var}(a) + \text{Var}(b) \) can be used in place of \( \text{Var}(b-a) \) with conservative results.

A final rule of thumb is that more complex estimators show smaller design effects than simple estimators.<2> Thus, correlation and regression coefficients tend to have smaller design effects than subgroup comparisons, and subgroup comparisons have smaller design effects than means. This implies that it will be conservative to use the mean root design effects presented here in calculating approximate standard errors for complex statistics, such as multiple regression coefficients. The procedure for calculating such approximate standard errors is the same as with simpler estimates: first, a standard error is calculated using the formula for data from a simple
One analytic strategy for accommodating complex survey designs is to use the mean design
effect to adjust for the effective sample size resulting from the design. For example, one could
create a new rescaled, design effect-adjusted weight, which is the product of the inverse of the
design effect and the rescaled case weight

\[ \text{NEWWGT} = ((1/\text{DEFF}) \ast (\text{F3QWT} / (\Sigma \text{F3QWT} / N))) \]

for second follow-up full sample data), and use this new weight to deflate the obtained sample
size to take into account the inefficiencies due to a sample design that departs from a simple
random sample. Using this procedure, statistics calculated by a statistical program such as SPSS
will reflect the reduction in sample size in the calculation of standard errors and degrees of
freedom. Such techniques only approximately capture the effect of the sample design on sample
statistics. However, while not providing a complete accounting of the sample design, this
procedure is a decidedly better approach than conducting an analysis that assumes the data were
collected from a simple random sample. The analyst applying this correction procedure should
carefully examine the statistical software he or she is using and assess whether the program treats
weights in a way that will produce the effect described above.

5.4 Unit Nonresponse

Unit nonresponse occurs when an individual respondent (such as a student, school
administrator, or teacher) declines to participate, or when the cooperation of a school cannot be
secured. In the base year, an analysis of school-level nonresponse suggested that, to the extent
that schools can be characterized by size, control, organizational structure, student composition,
and other characteristics, the impact of nonresponding schools on the quality of the student
sample is small (for details, see the Base Year Sample Design Report). School nonresponse has
not been assessed in the first or second follow-ups for two reasons. First, there was practically
no school-level nonresponse; institutional cooperation levels approached 99 percent in both
rounds. Second, the first and second follow-up samples were student-driven, unlike the two-
stage initial sample design in the base year. Hence, even if a school refused in either the first or
second follow-ups, the individual student was pursued outside of school. In the third follow-up,
school level nonresponse was not a factor because the respondents were no longer in high school.

The effect of student-level nonresponse within the responding schools was not assessed in
the base year, although males, blacks, and Hispanics tended to be nonparticipants more often
than females, whites, or Asians. The NELS:88 weights are constructed to adjust for unit
nonresponse. The weighted unit nonresponse rate for various subgroups in the third follow-up
are shown in Table 5.4.1.
Table 5.4.1 - Unit nonresponse rate by subgroup

<table>
<thead>
<tr>
<th></th>
<th>Target n</th>
<th>Wtd. nonresponse</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>15875*</td>
<td>0.0914</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>7895</td>
<td>0.0976</td>
</tr>
<tr>
<td>Female</td>
<td>7980</td>
<td>0.0852</td>
</tr>
<tr>
<td><strong>Race/ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>1151</td>
<td>0.0915</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2288</td>
<td>0.1202</td>
</tr>
<tr>
<td>Black</td>
<td>1840</td>
<td>0.1255</td>
</tr>
<tr>
<td>White</td>
<td>10303</td>
<td>0.071</td>
</tr>
<tr>
<td>Native American</td>
<td>230</td>
<td>0.0814</td>
</tr>
<tr>
<td>Missing</td>
<td>63</td>
<td>0.5213</td>
</tr>
<tr>
<td><strong>Second follow-up test quartile</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest quartile</td>
<td>2669</td>
<td>0.0802</td>
</tr>
<tr>
<td>2nd</td>
<td>2850</td>
<td>0.0579</td>
</tr>
<tr>
<td>3rd</td>
<td>2836</td>
<td>0.0329</td>
</tr>
<tr>
<td>4th</td>
<td>2982</td>
<td>0.0191</td>
</tr>
<tr>
<td>Missing</td>
<td>55</td>
<td>0.0146</td>
</tr>
<tr>
<td>Did not complete test</td>
<td>4483</td>
<td>0.1738</td>
</tr>
<tr>
<td><strong>Socioeconomic status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest quartile</td>
<td>4062</td>
<td>0.0822</td>
</tr>
<tr>
<td>2nd</td>
<td>3784</td>
<td>0.0644</td>
</tr>
<tr>
<td>3rd</td>
<td>3742</td>
<td>0.0525</td>
</tr>
<tr>
<td>4th</td>
<td>3635</td>
<td>0.0358</td>
</tr>
<tr>
<td>Missing</td>
<td>652</td>
<td>0.3539</td>
</tr>
<tr>
<td>8th grade cohort</td>
<td>14890</td>
<td>0.0852</td>
</tr>
<tr>
<td>2FU freshened</td>
<td>117</td>
<td>0.2312</td>
</tr>
<tr>
<td>1FU freshened</td>
<td>559</td>
<td>0.1486</td>
</tr>
<tr>
<td>Base year ineligible</td>
<td>309</td>
<td>0.185</td>
</tr>
<tr>
<td>Never dropped out</td>
<td>13337</td>
<td>0.0762</td>
</tr>
<tr>
<td>Ever dropped out</td>
<td>2538</td>
<td>0.1623</td>
</tr>
<tr>
<td>Public</td>
<td>13383</td>
<td>0.0941</td>
</tr>
<tr>
<td>Catholic</td>
<td>1355</td>
<td>0.0611</td>
</tr>
<tr>
<td>NAIS private</td>
<td>595</td>
<td>0.1063</td>
</tr>
<tr>
<td>Other private</td>
<td>542</td>
<td>0.0788</td>
</tr>
<tr>
<td><strong>1994 sampling subgroup</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonresponders</td>
<td>38</td>
<td>0.7503</td>
</tr>
<tr>
<td>&quot;Poor&quot; responders</td>
<td>595</td>
<td>0.2419</td>
</tr>
<tr>
<td>&quot;Good&quot; responders</td>
<td>15242</td>
<td>0.0572</td>
</tr>
<tr>
<td>Dropouts</td>
<td>2343</td>
<td>0.1064</td>
</tr>
<tr>
<td>Ineligible before '92</td>
<td>191</td>
<td>0.082</td>
</tr>
<tr>
<td>Private school in '88</td>
<td>2370</td>
<td>0.0434</td>
</tr>
<tr>
<td>Private school '90/'92</td>
<td>96</td>
<td>0.0188</td>
</tr>
<tr>
<td>Only Public and:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>1457</td>
<td>0.0462</td>
</tr>
<tr>
<td>Asian</td>
<td>870</td>
<td>0.041</td>
</tr>
<tr>
<td>Native American</td>
<td>132</td>
<td>0.0591</td>
</tr>
<tr>
<td>Black w/high test</td>
<td>79</td>
<td>0.0344</td>
</tr>
<tr>
<td>Black other</td>
<td>1112</td>
<td>0.098</td>
</tr>
<tr>
<td>White low SES</td>
<td>1292</td>
<td>0.0613</td>
</tr>
<tr>
<td>White high SES</td>
<td>1505</td>
<td>0.0237</td>
</tr>
<tr>
<td>White middle SES</td>
<td>3789</td>
<td>0.0439</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>0.3333</td>
</tr>
</tbody>
</table>

Source: NCES, National Education Longitudinal Study of 1988-1994

* This does not include 89 ineligible and dead sample members.
5.5 Item Nonresponse

Sampling and coverage errors are two key components of total survey error. Sampling error is quantified through the standard errors and design effects for key variables as reported above. There are other sources and types of nonobservational error, including estimate error or bias associated with unit (individual) nonresponse and item nonresponse. In addition to its role as a potential source of bias, item nonresponse also diminishes the number of observations that can be used in calculating statistics from affected data elements and thus increases sampling variances. Since item nonresponse is an important potential and uncorrected source of data bias, it is necessary to measure its impact so that analysts can properly take potential response biases into account when developing their analysis plans. NCES's standard asserts that total weighted nonresponse for an item (unit nonresponse multiplied by item nonresponse) should not exceed 30 percent. This section reports specifically on nonsampling measurement error as a function of item nonresponse in key variables.

Item nonresponse occurs when a respondent fails to complete certain items on the survey instrument. While bias associated with unit nonresponse has been controlled by making adjustments to case weights, item nonresponse has generally not been compensated for in the NELS:88 student component datasets. There are two exceptions to this generalization.

The first exception is machine editing, through which certain nonresponse problems are rectified for some items by imposing inter-item consistency, particularly by forcing logical agreement between filter and dependent questions. For example, the missing response to a filter question can often be inferred if dependent questions have been answered. Because the edited files were used in the nonresponse analysis reported below, this adjustment to item nonresponse is reflected in the results of the analysis.

The second exception is that some key classification variables have been constructed in part from additional sources of information when questionnaire data are missing. Data from school records (for example, student sex or race/ethnicity as given on the sampling roster) or other respondent sources (for example, the second follow-up questionnaire) have been used to replace missing data.

A further point to note is that there may be some hidden nonresponse in the NELS:88 questionnaire data that is impossible to quantify. This is the case because many questions use a "mark all that apply" format in the SAQ or involve global "anything else" questions in the interview. While such a format results in slightly less burden to the respondent, it also makes it impossible to distinguish between a negative response and nonresponse. The resulting inability to distinguish negative response and nonresponse creates the potential for nonresponse biases that cannot be measured and thus cannot become the basis for precise warnings to users about the limitations of data.

A final point is that unit nonresponse is a further source of missing item data—nonparticipating students complete no questionnaire items. Weights accommodate student nonresponse by projecting questionnaire data to the full population, with appropriate adjustments for defined subgroups. However, nonresponse-adjusted weights cannot compensate for the bias.
that arises if nonrespondents and respondents would have answered the questionnaire differently. Hence "total response" should be thought of as the survey (unit) response rate times the item response rate. (For example, given a cross-sectional weighted student response rate of 91 percent, and an item response rate of 88 percent, total response would be 80 percent.)

Two main objectives guide the following item nonresponse analysis. One objective is to quantify student questionnaire nonresponse for the entire sample on key variables that appeared on the student questionnaire. A second objective is to describe nonresponse patterns in terms of sampling subgroups.

Population and Data File Definitions

Definition 1: "Item"
For purposes of this analysis, "item" refers to each data element or variable. For a question composed of multiple subparts, each subpart eliciting a distinct response is counted as an item for item nonresponse purposes. (Thus, a single question that poses three subquestions is treated as three variables.)

Definition 2: "Response Rate"
NCES standards stipulate that item response rates (Ri) "are to be calculated as the number of respondents for whom an in-scope response was obtained (i.e., the response conformed to acceptable categories or ranges), divided by the number of completed interviews for which the question (or questions if a composite variable) was intended to be asked":

\[
R_i = \frac{\text{weighted # of respondents with in-scope responses}}{\text{weighted # of completed interviews for which question was intended to be asked}}
\]

In-scope responses were considered to be valid answers (including a "don't know" response when this was a legitimate response option). Out-of-scope responses were refusals, and missing responses.

Definition 3: "Analysis Populations"
The item nonresponse analysis population for the student questionnaire was used. This consisted of all students who completed any form of the questionnaire, regardless of whether specific nonquestionnaire data such as test scores were missing.

Definition 4: "Student and Dropout Questionnaire Data File"
The public use data file with machine-edited, weighted data was used as the basis for the analysis. Nonresponse rates of composite and other constructed variables and test data were not examined in this analysis.

Definition 5: "Nonresponse"
For the student questionnaire, several reserved codes were used to categorize nonresponse. The reserved codes and definitions appear below. The first two--reserved codes--define out-of-scope
or illegitimate nonresponse, and were used as the basis for this nonresponse analysis.

**Refused critical item.** Respondent was unwilling to answer the question at the time of the questionnaire administration and upon nonresponse follow-up by survey administrators.

**Missing.** The response is illegitimately missing. That is, a datum that should be present for this respondent is missing. Data elements not appearing on the abbreviated or modified student or dropout questionnaires were considered as illegitimately missing.

**Legitimate skip.** The response is legitimately missing. That is, owing either to responses to preceding filter questions or to other respondent characteristics, data for this item should not be present for this respondent. Responses under this reserved code were not included in the nonresponse analysis.

**Don't know.** "Don't Know" is often used as a nonresponse code. In the NELS:88 dataset, "Don't Know" is embedded as a legitimate response category in some of the questionnaire items. For purposes of this analysis, "Don't Know" was not classified as a nonresponse.

Table 5.5 shows item nonresponse rates (proportions) for the key items for all third follow-up respondents and for the sampling subgroups.
### Table 5.5: Proportion of third follow-up respondents not responding to Descriptive Summary Report variables by sampling subgroup

<table>
<thead>
<tr>
<th>Children status</th>
<th>Marital status</th>
<th>Year and month first child born</th>
<th>1988 at risk of dropping out factors</th>
<th>Race or ethnicity as of 1994</th>
<th>Annual support for another person as of 1994</th>
<th>Expected income at age 30</th>
<th>Total earnings from jobs in 1993</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>0.0021</td>
<td>0.0004</td>
<td>0.0000</td>
<td>0.1243</td>
<td>0.0038</td>
<td>0.0596</td>
<td>0.0074</td>
</tr>
<tr>
<td>1994 sampling subgroup</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonresponders</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>0.0000</td>
<td>0.5776</td>
<td>0.0228</td>
<td>0.0814</td>
</tr>
<tr>
<td>Poor responders</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>0.0012</td>
<td>0.0107</td>
<td>0.0018</td>
<td>0.0540</td>
</tr>
<tr>
<td>Ever dropped out</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>0.0031</td>
<td>0.9785</td>
<td>0.0039</td>
<td>low n</td>
</tr>
<tr>
<td>Ineligible prior to 1992</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>0.0004</td>
<td>0.0183</td>
<td>0.0003</td>
<td>0.0981</td>
</tr>
<tr>
<td>Private school in 1988</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>0.0000</td>
<td>0.0190</td>
<td>0.0000</td>
<td>low n</td>
</tr>
<tr>
<td>Only public and Hispanic</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>0.0004</td>
<td>0.0006</td>
<td>0.0000</td>
<td>0.0278</td>
</tr>
<tr>
<td>Only public and Asian Pacific Islander</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>0.0012</td>
<td>0.0009</td>
<td>0.0000</td>
<td>0.0099</td>
</tr>
<tr>
<td>Only public and Native American</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>0.0037</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0074</td>
</tr>
<tr>
<td>Only public and Black with high tests</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0124</td>
</tr>
<tr>
<td>Only public and Black with other scores</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0660</td>
</tr>
<tr>
<td>Only public and White with low SES</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>0.0003</td>
<td>0.0008</td>
<td>0.0000</td>
<td>0.0219</td>
</tr>
<tr>
<td>Only public and White with high SES</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>0.0006</td>
<td>0.0006</td>
<td>0.0000</td>
<td>0.0279</td>
</tr>
<tr>
<td>Only public and White with middle SES</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>0.0030</td>
<td>0.0003</td>
<td>0.0000</td>
<td>0.0268</td>
</tr>
<tr>
<td>1990 freshened</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
</tr>
<tr>
<td>1992 freshened</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
</tr>
<tr>
<td>Other</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
</tr>
</tbody>
</table>

Source: NCES, National Education Longitudinal Study of 1988-1994 Methodology 1/26/95

Note: "low n" indicates that the sample size is too small for a reliable estimate to be calculated.
Table 5.5 (Continued) - Proportion of third follow-up respondents not responding to Descriptive Summary Report variables by sampling subgroup

<table>
<thead>
<tr>
<th></th>
<th>Attendance spells at first postsecondary institution</th>
<th>Attended first choice postsecondary institution</th>
<th>Degree or certificate sought at first institution</th>
<th>Enrollment status at first institution</th>
<th>Highest level of education expected in first postsecondary to first institution</th>
<th>In state education in 1994</th>
<th>Postsecondary Still enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>0.0012</td>
<td>0.3143</td>
<td>0.0004</td>
<td>0.0004</td>
<td>0.0016</td>
<td>0.0781</td>
<td>0.0000</td>
</tr>
<tr>
<td>1994 sampling subgroup</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonresponders</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
</tr>
<tr>
<td>Poor respondents</td>
<td>0.0043</td>
<td>0.5321</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0043</td>
<td>0.1991</td>
<td>0.0000</td>
</tr>
<tr>
<td>Ever dropped out</td>
<td>0.0017</td>
<td>0.6267</td>
<td>0.0013</td>
<td>0.0000</td>
<td>0.0029</td>
<td>0.2201</td>
<td>0.0000</td>
</tr>
<tr>
<td>Ineligible prior to 1992</td>
<td>0.0000</td>
<td>0.3103</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.1446</td>
<td>0.0000</td>
</tr>
<tr>
<td>Private school in 1988</td>
<td>0.0009</td>
<td>0.2113</td>
<td>0.0003</td>
<td>0.0000</td>
<td>0.0007</td>
<td>0.0733</td>
<td>0.0000</td>
</tr>
<tr>
<td>Private school in 1990 or 1992</td>
<td>0.0000</td>
<td>0.2849</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0393</td>
<td>0.0000</td>
</tr>
<tr>
<td>Only public and Hispanic</td>
<td>0.0031</td>
<td>0.4726</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0009</td>
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</table>

Source: NCES, National Education Longitudinal Study of 1988-1994 Methodology 1/26/95
Note: "low n" indicates that the sample size is too small for a reliable estimate to be calculated.
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<th>Type of first institution attended</th>
<th>Valid post-secondary education started</th>
<th>Valid secondary education started</th>
<th>Year first job</th>
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<th>Satisfied with job's importance</th>
<th>Satisfied with job's pay</th>
<th>Satisfied with job's security</th>
<th>Satisfied with job's opportunities working for conditions</th>
<th>Satisfied with education</th>
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<tr>
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<td>Low n</td>
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</table>

Source: NCES, National Education Longitudinal Study of 1988-1994 Methodology 1/26/95
Note: "Low n" indicates that the sample size is too small for a reliable estimate to be calculated.
<table>
<thead>
<tr>
<th></th>
<th>Satisfied with opportunities for advancement</th>
<th>Satisfied with opportunities to use education</th>
<th>1994 high school diploma status</th>
<th>Last high school programming type</th>
<th>Was birth control used during religious activities</th>
<th>Was birth control used during first sexual intercourse</th>
<th>Year spent and time on religious activities</th>
<th>Sexual intercourse</th>
<th>Year spent and time on religious activities</th>
<th>Sexual intercourse</th>
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</thead>
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<td>0.0055</td>
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<tr>
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<td>0.0075</td>
<td>0.0321</td>
<td>0.0763</td>
<td>0.0028</td>
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<td>0.0188</td>
<td>0.0006</td>
<td>0.0097</td>
<td>0.0055</td>
<td>0.0163</td>
<td>0.1133</td>
<td>0.0030</td>
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<td>0.0207</td>
<td>0.0000</td>
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<td>0.0029</td>
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<tr>
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<td>0.0000</td>
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<td>1992 Freshened</td>
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</table>

Note: "low n" indicates that the sample size is too small for a reliable estimate to be calculated.
<table>
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<tr>
<th>Subgroup</th>
<th>Spent time participating in sports</th>
<th>Spent time reading for pleasure</th>
<th>Spent time talking or doing things with parents</th>
<th>Spent time working on hobbies</th>
<th>Employer-assistance received</th>
<th>Hours per week training attended in 1993</th>
<th>Informal on-the-job training received</th>
<th>Off-site formal training received</th>
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</thead>
<tbody>
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<td>0.0054</td>
<td>0.0061</td>
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<td>0.0306</td>
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<tr>
<td>1994 sampling subgroup</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Nonresponders</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
</tr>
<tr>
<td>Poor responders</td>
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<td>0.0101</td>
<td>0.0101</td>
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<td>0.0089</td>
<td>0.0077</td>
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<tr>
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<td>0.0020</td>
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<td>low n</td>
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<tr>
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<td>low n</td>
<td>low n</td>
<td>low n</td>
</tr>
<tr>
<td>Only public and Black with high tests</td>
<td>0.0000</td>
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<td>0.0000</td>
<td>0.0000</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
</tr>
<tr>
<td>Only public and Black with other scores</td>
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<td>0.0028</td>
<td>0.0028</td>
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<td>0.0268</td>
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<td>0.0029</td>
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<tr>
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<td>low n</td>
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<td>low n</td>
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<tr>
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<td>low n</td>
<td>low n</td>
<td>low n</td>
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<td>low n</td>
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<td>low n</td>
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</tbody>
</table>

Source: NCES, National Education Longitudinal Study of 1988-1994 Methodology 1/26/95
Note: "low n" indicates that the sample size is too small for a reliable estimate to be calculated.
Table 5.5 (Continued)--Proportion of third follow-up respondents not responding to Descriptive Summary Report variables by sampling subgroup

<table>
<thead>
<tr>
<th></th>
<th>On-site formal training weeks</th>
<th>Total training was attended in 1993</th>
<th>Importance of being able to find steady work</th>
<th>Importance of having lots of money</th>
<th>Importance of having strong friendship</th>
<th>Importance of professional success</th>
<th>Importance of employment with volunteer children organizations worked</th>
<th>Importance of providing opportunities for better work opportunities</th>
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</thead>
<tbody>
<tr>
<td>Total</td>
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<td>0.0303</td>
<td>0.0046</td>
<td>0.0046</td>
<td>0.0048</td>
<td>0.0046</td>
<td>0.0049</td>
<td>0.0061</td>
</tr>
<tr>
<td>1994 sampling subgroup</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonresponders</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
</tr>
<tr>
<td>Ever dropped out</td>
<td>0.0313</td>
<td>0.0335</td>
<td>0.0067</td>
<td>0.0063</td>
<td>0.0070</td>
<td>0.0062</td>
<td>0.0069</td>
<td>0.0078</td>
</tr>
<tr>
<td>Ineligible prior to 1992</td>
<td>low n</td>
<td>low n</td>
<td>0.0313</td>
<td>0.0313</td>
<td>0.0313</td>
<td>0.0313</td>
<td>0.0313</td>
<td>0.0313</td>
</tr>
<tr>
<td>Private school in 1988</td>
<td>0.0085</td>
<td>0.0096</td>
<td>0.0020</td>
<td>0.0020</td>
<td>0.0021</td>
<td>0.0020</td>
<td>0.0020</td>
<td>0.0020</td>
</tr>
<tr>
<td>Only public and Hispanic</td>
<td>0.0117</td>
<td>0.0318</td>
<td>0.0024</td>
<td>0.0024</td>
<td>0.0024</td>
<td>0.0024</td>
<td>0.0024</td>
<td>0.0120</td>
</tr>
<tr>
<td>Only public and Asian Pacific Islander</td>
<td>low n</td>
<td>low n</td>
<td>0.0035</td>
<td>0.0030</td>
<td>0.0030</td>
<td>0.0030</td>
<td>0.0035</td>
<td>0.0030</td>
</tr>
<tr>
<td>Only public and Black with high tests</td>
<td>low n</td>
<td>low n</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
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<tr>
<td>Only public and Black with other scores</td>
<td>0.0268</td>
<td>0.0271</td>
<td>0.0028</td>
<td>0.0028</td>
<td>0.0039</td>
<td>0.0028</td>
<td>0.0034</td>
<td>0.0028</td>
</tr>
<tr>
<td>Only public and White with low SES</td>
<td>0.0157</td>
<td>0.0300</td>
<td>0.0029</td>
<td>0.0029</td>
<td>0.0029</td>
<td>0.0029</td>
<td>0.0029</td>
<td>0.0041</td>
</tr>
<tr>
<td>Only public and White with high SES</td>
<td>0.0239</td>
<td>0.0261</td>
<td>0.0013</td>
<td>0.0013</td>
<td>0.0013</td>
<td>0.0013</td>
<td>0.0018</td>
<td>0.0013</td>
</tr>
<tr>
<td>Only public and White with middle SES</td>
<td>0.0197</td>
<td>0.0352</td>
<td>0.0056</td>
<td>0.0056</td>
<td>0.0056</td>
<td>0.0056</td>
<td>0.0058</td>
<td>0.0063</td>
</tr>
<tr>
<td>1990 freshened</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
</tr>
<tr>
<td>1992 freshened</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
</tr>
<tr>
<td>Other</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
</tr>
</tbody>
</table>

Source: NCES. National Education Longitudinal Study of 1988-1994 Methodology 1/26/95
Note: "Low n" indicates that the sample size is too small for a reliable estimate to be calculated.
<table>
<thead>
<tr>
<th>Employer provided paid maternity leave</th>
<th>Employer provided paid sick leave</th>
<th>Employer provided unpaid leave to care for others</th>
<th>Employer provided unpaid maternity leave</th>
<th>Industry of longest held job</th>
<th>Job expected at age in 1993</th>
<th>Jobs held in 1994</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>0.0169</td>
<td>0.0150</td>
<td>0.0151</td>
<td>0.0164</td>
<td>0.0157</td>
<td>0.4491</td>
</tr>
<tr>
<td>1994 sampling subgroup</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonresponders</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
</tr>
<tr>
<td>Poor respondents</td>
<td>0.0214</td>
<td>0.0214</td>
<td>0.0247</td>
<td>0.0214</td>
<td>0.2839</td>
<td>0.0137</td>
</tr>
<tr>
<td>Ever dropped out</td>
<td>0.0149</td>
<td>0.0118</td>
<td>0.0123</td>
<td>0.0145</td>
<td>0.0128</td>
<td>0.0875</td>
</tr>
<tr>
<td>Ineligible prior to 1992</td>
<td>0.0043</td>
<td>0.0043</td>
<td>0.0043</td>
<td>0.0043</td>
<td>0.0043</td>
<td>0.3587</td>
</tr>
<tr>
<td>Private school in 1988</td>
<td>0.0079</td>
<td>0.0074</td>
<td>0.0074</td>
<td>0.0090</td>
<td>0.0081</td>
<td>0.7170</td>
</tr>
<tr>
<td>Private school in 1990 or 1992</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
</tr>
<tr>
<td>Only public and Hispanic</td>
<td>0.0239</td>
<td>0.0227</td>
<td>0.0227</td>
<td>0.0239</td>
<td>0.0239</td>
<td>0.4288</td>
</tr>
<tr>
<td>Only public and Asian Pacific Islander</td>
<td>0.0193</td>
<td>0.0193</td>
<td>0.0193</td>
<td>0.0193</td>
<td>0.0193</td>
<td>0.6929</td>
</tr>
<tr>
<td>Only public and Native American</td>
<td>0.0327</td>
<td>0.0178</td>
<td>0.0178</td>
<td>0.0178</td>
<td>0.0327</td>
<td>0.4145</td>
</tr>
<tr>
<td>Only public and Black with high tests</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>0.6505</td>
</tr>
<tr>
<td>Only public and Black with other scores</td>
<td>0.0244</td>
<td>0.0194</td>
<td>0.0194</td>
<td>0.0224</td>
<td>0.0194</td>
<td>0.4129</td>
</tr>
<tr>
<td>Only public and White with low SES</td>
<td>0.0209</td>
<td>0.0204</td>
<td>0.0204</td>
<td>0.0204</td>
<td>0.0209</td>
<td>0.2509</td>
</tr>
<tr>
<td>Only public and White with high SES</td>
<td>0.0059</td>
<td>0.0032</td>
<td>0.0032</td>
<td>0.0032</td>
<td>0.0032</td>
<td>0.7571</td>
</tr>
<tr>
<td>Only public and White with middle SES</td>
<td>0.0153</td>
<td>0.0135</td>
<td>0.0135</td>
<td>0.0135</td>
<td>0.0144</td>
<td>0.4621</td>
</tr>
<tr>
<td>1990 freshened</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
</tr>
<tr>
<td>1992 freshened</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
</tr>
<tr>
<td>Other</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
<td>low n</td>
</tr>
</tbody>
</table>

Source: NCES, National Education Longitudinal Study of 1988-1994 Methodology 1/26/95
Note: "low n" indicates that the sample size is too small for a reliable estimate to be calculated.
### Table 5.5 (Continued) - Proportion of third follow-up respondents not responding to Descriptive Summary Report variables by sampling subgroup

<table>
<thead>
<tr>
<th>Registered to vote</th>
<th>Voted in 1992 presidential election</th>
<th>Voted in last year</th>
<th>Employer provided a pension plan</th>
<th>Employer provided childcare assistance</th>
<th>Employer provided dental benefits</th>
<th>Employer provided life insurance</th>
<th>Employer provided medical benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>0.0047</td>
<td>0.0049</td>
<td>0.0048</td>
<td>0.0154</td>
<td>0.0157</td>
<td>0.0150</td>
<td>0.0153</td>
</tr>
</tbody>
</table>

**1994 sampling subgroup**

- **Nonresponders**
  - Low n
  - Poor responders: 0.0101
  - Ever dropped out: 0.0054
  - Ineligible prior to 1992: 0.0313
  - Private school in 1988: 0.0023
  - Private school in 1990 or 1992: 0.0000
  - Only public and Hispanic: 0.0035
  - Only public and Native American: 0.0000
  - Only public and Black with high tests: 0.0000
  - Only public and Black with other scores: 0.0028
  - Only public and White with low SES: 0.0009
  - Only public and White with high SES: 0.0013
  - Only public and White with middle SES: 0.0051
  - 1990 freshened: Low n
  - Other: Low n

- **1992 freshened**
  - Low n

**Source:** NCES, National Education Longitudinal Study of 1988-1994 Methodology 1/26/95

Note: "Low n" indicates that the sample size is too small for a reliable estimate to be calculated.
Table 5.5 (Continued) -- Proportion of third follow-up respondents not responding to Descriptive Summary Report variables by sampling subgroup

<table>
<thead>
<tr>
<th>Labor force status</th>
<th>Months unemployed in 1993</th>
<th>First postsecondary education intensity and timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>0.0087</td>
<td>0.0090 0.0073</td>
</tr>
<tr>
<td>1994 sampling subgroup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonresponders</td>
<td>low n</td>
<td>low n</td>
</tr>
<tr>
<td>Poor responders</td>
<td>0.0146</td>
<td>0.0171 0.0102</td>
</tr>
<tr>
<td>Ever dropped out</td>
<td>0.0192</td>
<td>0.0186 0.0396</td>
</tr>
<tr>
<td>Eligible prior to 1992</td>
<td>0.0028</td>
<td>0.0000 0.0000</td>
</tr>
<tr>
<td>Private school in 1988</td>
<td>0.0055</td>
<td>0.0022 0.0051</td>
</tr>
<tr>
<td>Private school in 1990 or 1992</td>
<td>0.0000</td>
<td>0.0000 0.0000</td>
</tr>
<tr>
<td>Only public and Hispanic</td>
<td>0.0092</td>
<td>0.0128 0.0089</td>
</tr>
<tr>
<td>Only public and Asian Pacific Islander</td>
<td>0.0046</td>
<td>0.0100 0.0060</td>
</tr>
<tr>
<td>Only public and Native American</td>
<td>0.0134</td>
<td>0.0175 0.0129</td>
</tr>
<tr>
<td>Only public and Black with high tests</td>
<td>0.0000</td>
<td>0.0000 0.0000</td>
</tr>
<tr>
<td>Only public and Black with other scores</td>
<td>0.0137</td>
<td>0.0181 0.0053</td>
</tr>
<tr>
<td>Only public and White with low SES</td>
<td>0.0058</td>
<td>0.0042 0.0135</td>
</tr>
<tr>
<td>Only public and White with high SES</td>
<td>0.0012</td>
<td>0.0018 0.0057</td>
</tr>
<tr>
<td>Only public and White with middle SES</td>
<td>0.0062</td>
<td>0.0054 0.0035</td>
</tr>
<tr>
<td>1990 freshened</td>
<td>low n</td>
<td>low n  low n</td>
</tr>
<tr>
<td>1992 freshened</td>
<td>low n</td>
<td>low n  low n</td>
</tr>
<tr>
<td>Other</td>
<td>low n</td>
<td>low n  low n</td>
</tr>
</tbody>
</table>

Note: "low n" indicates that the sample size is too small for a reliable estimate to be calculated.
5.6 Nonresponse Bias Analysis

Comparisons were made between subgroups defined on the basis of whether the respondent had complete data for each of 15 critical variables used in the NELS:88/94 Descriptive Summary Report. A case was classified as "valid" for a given variable if the respondent had an in-scope response code (including "don't know"), and as "missing" if the response code corresponded to "missing" or "refused." Respondents classified as "legitimate skip" for a given variable were excluded from the analysis of that variable.

The distribution of valid and missing cases was broken down by gender, race/ethnicity, socioeconomic status, school type, and 1994 diploma status. The results are shown in Tables 5.6.1 - 5.6.15 below. Note that some of the apparently significant differences are due to one or another of the subgroups accounting for 100 percent of a given category. In this case, the standard error is zero, and the t-value should not be interpreted.

Annual support for another person as of 1994 (AMTSUPRT):

For reported annual support for another person as of 1994, there were significantly more females in the missing category than in the valid category. There were also significantly more whites in the missing category and significantly fewer Hispanics. No other differences in Table 5.6.1 are statistically significant.
Table 5.6.1--Bias analysis for annual support for another person as of 1994 (AMTSUPRT)

<table>
<thead>
<tr>
<th></th>
<th>Valid percent</th>
<th>Valid standard error</th>
<th>Percent missing</th>
<th>Missing standard error</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>94.04</td>
<td>0.97</td>
<td>5.96</td>
<td>0.97</td>
<td></td>
</tr>
</tbody>
</table>

**Gender as of 1994**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Valid percent</th>
<th>Valid standard error</th>
<th>Percent missing</th>
<th>Missing standard error</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>59.21</td>
<td>2.31</td>
<td>39.04</td>
<td>8.00</td>
<td>2.422</td>
</tr>
<tr>
<td>Female</td>
<td>40.79</td>
<td>2.31</td>
<td>60.96</td>
<td>8.00</td>
<td>-2.422</td>
</tr>
</tbody>
</table>

**Race or ethnicity as of 1994**

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Valid percent</th>
<th>Valid standard error</th>
<th>Percent missing</th>
<th>Missing standard error</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian/Pacific Islander</td>
<td>2.35</td>
<td>0.44</td>
<td>3.65</td>
<td>1.82</td>
<td>-0.694</td>
</tr>
<tr>
<td>Hispanic</td>
<td>21.56</td>
<td>2.16</td>
<td>7.43</td>
<td>2.66</td>
<td>4.124</td>
</tr>
<tr>
<td>Black</td>
<td>28.44</td>
<td>2.48</td>
<td>18.74</td>
<td>7.44</td>
<td>1.237</td>
</tr>
<tr>
<td>White</td>
<td>45.51</td>
<td>2.55</td>
<td>66.82</td>
<td>7.81</td>
<td>-2.594</td>
</tr>
<tr>
<td>American Indian/Alaskan native</td>
<td>2.15</td>
<td>0.59</td>
<td>3.36</td>
<td>2.50</td>
<td>-0.471</td>
</tr>
</tbody>
</table>

**1992 High school sector**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Valid percent</th>
<th>Valid standard error</th>
<th>Percent missing</th>
<th>Missing standard error</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>95.44</td>
<td>1.48</td>
<td>100.00</td>
<td>0.00</td>
<td>na</td>
</tr>
<tr>
<td>Catholic</td>
<td>2.54</td>
<td>0.73</td>
<td>0.00</td>
<td>0.00</td>
<td>na</td>
</tr>
<tr>
<td>Other private</td>
<td>2.01</td>
<td>1.33</td>
<td>0.00</td>
<td>0.00</td>
<td>na</td>
</tr>
</tbody>
</table>

**1994 High school diploma status**

<table>
<thead>
<tr>
<th>Status</th>
<th>Valid percent</th>
<th>Valid standard error</th>
<th>Percent missing</th>
<th>Missing standard error</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High school diploma</td>
<td>66.84</td>
<td>2.28</td>
<td>61.55</td>
<td>8.43</td>
<td>0.606</td>
</tr>
<tr>
<td>GED or equivalent</td>
<td>10.03</td>
<td>1.31</td>
<td>9.09</td>
<td>5.65</td>
<td>0.162</td>
</tr>
<tr>
<td>Working toward degree</td>
<td>10.78</td>
<td>1.79</td>
<td>14.13</td>
<td>6.49</td>
<td>-0.498</td>
</tr>
<tr>
<td>Dropout</td>
<td>12.35</td>
<td>1.38</td>
<td>15.24</td>
<td>6.03</td>
<td>-0.467</td>
</tr>
</tbody>
</table>

**1992 Socioeconomic quartile**

<table>
<thead>
<tr>
<th>Quartile</th>
<th>Valid percent</th>
<th>Valid standard error</th>
<th>Percent missing</th>
<th>Missing standard error</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low quartile</td>
<td>44.71</td>
<td>2.33</td>
<td>35.91</td>
<td>8.49</td>
<td>1.000</td>
</tr>
<tr>
<td>Middle two quartiles</td>
<td>46.77</td>
<td>2.32</td>
<td>56.65</td>
<td>8.56</td>
<td>-1.114</td>
</tr>
<tr>
<td>High quartile</td>
<td>8.51</td>
<td>1.17</td>
<td>7.44</td>
<td>3.60</td>
<td>0.283</td>
</tr>
</tbody>
</table>

Source: NCES, National Education Longitudinal Study of 1988-1994
Note: Percentages may not add to 100 percent due to rounding.
"na" indicates "not applicable."
Enrollment status at first postsecondary institution (ENRLSTA1):

None of the comparisons with non-zero standard errors are statistically significant.

Table 5.6.2-Bias analysis for enrollment status at first postsecondary institution (ENRLSTA1)

<table>
<thead>
<tr>
<th></th>
<th>Valid Percent</th>
<th>Valid Standard Error</th>
<th>Missing Percent</th>
<th>Missing Standard Error</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>99.96</td>
<td>0.02</td>
<td>0.04</td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td>Gender as of 1994</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>47.98</td>
<td>0.78</td>
<td>69.69</td>
<td>24.58</td>
<td>-0.883</td>
</tr>
<tr>
<td>Female</td>
<td>52.02</td>
<td>0.78</td>
<td>30.31</td>
<td>24.58</td>
<td>0.883</td>
</tr>
<tr>
<td>Race or ethnicity as of 1994</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>5.03</td>
<td>0.39</td>
<td>0.00</td>
<td>0.00</td>
<td>na</td>
</tr>
<tr>
<td>Hispanic</td>
<td>9.30</td>
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Note: Percentages may not add to 100 percent due to rounding.
"na" indicates "not applicable."
Type of first postsecondary institution attended (F3SEC2A1):

There are significantly more respondents with GEDs or certificates in the missing category, as is the case with respondents currently enrolled or working on a GED or certificate, while those who do have a diploma constitute a significantly greater percentage in the valid response group. Low and Middle SES account for a greater percentage of the missing group, while High SES respondents represent a significantly greater proportion of the valid group.

Table 5.6.3--Bias analysis for type of first postsecondary institution attended (F3SEC2A1)

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<tr>
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Source: NCES, National Education Longitudinal Study of 1988-1994
Note: Percentages may not add to 100 percent due to rounding.
Still enrolled at first postsecondary institution (F3STILL):

For this variable, there were significantly more females in the missing category than in the valid category. None of the other comparisons with non-zero standard errors are statistically significant.

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Note: Percentages may not add to 100 percent due to rounding.
"na" indicates "not applicable."
Types of volunteer organizations worked with (F3VOLUNT):

High SES respondents showed significantly fewer missing responses. None of the other comparisons with non-zero standard errors are statistically significant for this variable.

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</table>

Note: Percentages may not add to 100 percent due to rounding.
"na" indicates "not applicable."
Year and month of first sexual intercourse (FIRSTSEX):

For this variable, there were significantly more females in the missing category than in the valid category. Those who have a diploma also constitute a significantly greater percentage in the missing response group, while those with GEDs or certificates have fewer in the missing group. None of the other comparisons with non-zero standard errors are statistically significant for this variable.

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Note: Percentages may not add to 100 percent due to rounding.
Labor force status in 1993 (LABFOR93):

For this variable, dropouts constitute a significantly greater proportion of the missing group. A significantly higher proportion of valid respondents is accounted for by respondents with diplomas and high SES respondents. None of the other comparisons are statistically significant for this variable.

Table 5.6.7—Bias analysis for labor force status in 1993 (LABFOR93)

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Note: Percentages may not add to 100 percent due to rounding.
Voted last year in local, state, or national election (NATELEC):

For this variable, the only significant comparison showed Catholic school students were more likely to be in the valid response group.

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<tr>
<td>Female</td>
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<td>0.63</td>
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</table>

Note: Percentages may not add to 100 percent due to rounding.
Job expected at age 30 (OCCFUTCD):

For this variable, the only significant comparison showed Catholic school students were more likely to be in the valid response group.

Table 5.6.9-Bias analysis for job expected at age 30 in 1994 (OCCFUTCD)

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<td>4.25</td>
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<td>Dropout</td>
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<td>High quartile</td>
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<td>0.90</td>
<td>15.02</td>
<td>5.30</td>
</tr>
</tbody>
</table>

Source: NCES, National Education Longitudinal Study of 1988-1994
Note: Percentages may not add to 100 percent due to rounding.
In-state at first postsecondary institution (PSEFIRIO):

For this variable, respondents with GEDs/Certificates constitute a significantly greater proportion of the missing group, as do respondents currently enrolled or working on a GED/Certificate, and low and middle SES respondents. A significantly higher proportion of valid respondents is accounted for by whites, respondents with diplomas, and high SES respondents.

Table 5.6.10--Bias analysis for in state at first postsecondary institution (PSEFIRIO)

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Note: Percentages may not add to 100 percent due to rounding.
Registered to vote (REGVOTE):

For this variable, Catholic school students were more likely to be in the valid response group, as were high SES respondents. None of the other comparisons are statistically significant.

<table>
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<tr>
<th>Table 5.6.11--Bias analysis for registered to vote (REGVOTE)</th>
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<td>Female</td>
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<tr>
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<tr>
<td>White</td>
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<tr>
<td>American Indian/</td>
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<tr>
<td>Alaskan native</td>
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<tr>
<td>High quartile</td>
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Source: NCES, National Education Longitudinal Study of 1988-1994
Note: Percentages may not add to 100 percent due to rounding.
Total earnings from jobs in 1993 (TOTLEAR2):

For this variable, blacks constitute a significantly greater proportion of the missing group, as do respondents with diplomas. A significantly higher proportion of valid respondents is accounted for by whites, respondents with GEDs/Certificates, and respondents currently working on a GED/Certificate. None of the other comparisons are statistically significant.

Table 5.6.12.-Bias analysis for total earnings from jobs in 1993 (TOTLEAR2)

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<th></th>
<th>Valid Percent</th>
<th>Valid standard error</th>
<th>Missing Percent</th>
<th>Missing standard error</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>93.26</td>
<td>0.36</td>
<td>6.74</td>
<td>0.36</td>
<td></td>
</tr>
<tr>
<td>Gender as of 1994</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>52.55</td>
<td>0.70</td>
<td>52.71</td>
<td>2.73</td>
<td>-0.057</td>
</tr>
<tr>
<td>Female</td>
<td>47.45</td>
<td>0.70</td>
<td>47.29</td>
<td>2.73</td>
<td>0.057</td>
</tr>
<tr>
<td>Race or ethnicity as of 1994</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>3.53</td>
<td>0.28</td>
<td>5.39</td>
<td>1.28</td>
<td>-1.420</td>
</tr>
<tr>
<td>Hispanic</td>
<td>10.55</td>
<td>0.79</td>
<td>14.33</td>
<td>1.79</td>
<td>-1.932</td>
</tr>
<tr>
<td>Black</td>
<td>11.33</td>
<td>0.76</td>
<td>20.88</td>
<td>3.04</td>
<td>-3.048</td>
</tr>
<tr>
<td>White</td>
<td>73.36</td>
<td>1.11</td>
<td>58.75</td>
<td>3.07</td>
<td>4.475</td>
</tr>
<tr>
<td>American Indian/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alaskan native</td>
<td>1.23</td>
<td>0.24</td>
<td>0.64</td>
<td>0.32</td>
<td>1.475</td>
</tr>
<tr>
<td>1992 High school sector</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public</td>
<td>91.76</td>
<td>0.63</td>
<td>87.50</td>
<td>1.89</td>
<td>2.138</td>
</tr>
<tr>
<td>Catholic</td>
<td>4.91</td>
<td>0.41</td>
<td>8.03</td>
<td>1.43</td>
<td>-2.097</td>
</tr>
<tr>
<td>Other private</td>
<td>3.32</td>
<td>0.48</td>
<td>4.46</td>
<td>1.36</td>
<td>-0.790</td>
</tr>
<tr>
<td>1994 High school diploma status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school diploma</td>
<td>82.73</td>
<td>0.65</td>
<td>92.17</td>
<td>2.25</td>
<td>-4.031</td>
</tr>
<tr>
<td>GED or equivalent</td>
<td>6.03</td>
<td>0.38</td>
<td>2.13</td>
<td>0.53</td>
<td>5.980</td>
</tr>
<tr>
<td>Working toward degree</td>
<td>4.71</td>
<td>0.31</td>
<td>1.29</td>
<td>0.54</td>
<td>5.493</td>
</tr>
<tr>
<td>Dropout</td>
<td>5.54</td>
<td>0.47</td>
<td>4.41</td>
<td>2.20</td>
<td>0.947</td>
</tr>
</tbody>
</table>

Source: NCES, National Education Longitudinal Study of 1988-1994
Note: Percentages may not add to 100 percent due to rounding.
Degree or certificate sought at first institution (TYPDEGC1):

None of the comparisons with non-zero standard errors are statistically significant.

<table>
<thead>
<tr>
<th>Table 5.6.13--Bias analysis for degree or certificate sought at first institution (TYPDEGC1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Percent</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Gender as of 1994</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Race or ethnicity as of 1994</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
</tr>
<tr>
<td>Hispanic</td>
</tr>
<tr>
<td>Black</td>
</tr>
<tr>
<td>White</td>
</tr>
<tr>
<td>American Indian/Alaskan native</td>
</tr>
<tr>
<td>1992 High school sector</td>
</tr>
<tr>
<td>Public</td>
</tr>
<tr>
<td>Catholic</td>
</tr>
<tr>
<td>Other private</td>
</tr>
<tr>
<td>1994 High school diploma status</td>
</tr>
<tr>
<td>High school diploma</td>
</tr>
<tr>
<td>GED or equivalent</td>
</tr>
<tr>
<td>Working toward degree</td>
</tr>
<tr>
<td>Dropout</td>
</tr>
<tr>
<td>1992 Socioeconomic quartile</td>
</tr>
<tr>
<td>Low quartile</td>
</tr>
<tr>
<td>Middle two quartiles</td>
</tr>
<tr>
<td>High quartile</td>
</tr>
</tbody>
</table>

Note: Percentages may not add to 100 percent due to rounding.
Months unemployed in 1993 (UNEMPL93):

For this variable, public school students constitute a significantly greater proportion of the missing group, as do dropouts and low SES respondents. A significantly higher proportion of valid respondents is accounted for by whites, Catholic school students, students of "other private" schools, respondents with diplomas, and high SES respondents. None of the other comparisons are statistically significant.

<table>
<thead>
<tr>
<th>Table 5.6.14--Bias analysis for months unemployed in 1993 (UNEMPL93)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent valid</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Gender as of 1994</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Race or ethnicity as of 1994</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
</tr>
<tr>
<td>Hispanic</td>
</tr>
<tr>
<td>Black</td>
</tr>
<tr>
<td>White</td>
</tr>
<tr>
<td>American Indian/Alaskan native</td>
</tr>
<tr>
<td>1992 High school sector</td>
</tr>
<tr>
<td>Public</td>
</tr>
<tr>
<td>Catholic</td>
</tr>
<tr>
<td>Other private</td>
</tr>
<tr>
<td>1994 High school diploma status</td>
</tr>
<tr>
<td>High school diploma</td>
</tr>
<tr>
<td>GED or equivalent</td>
</tr>
<tr>
<td>Working toward degree</td>
</tr>
<tr>
<td>Dropout</td>
</tr>
<tr>
<td>1992 Socioeconomic quartile</td>
</tr>
<tr>
<td>Low quartile</td>
</tr>
<tr>
<td>Middle two quartiles</td>
</tr>
<tr>
<td>High quartile</td>
</tr>
</tbody>
</table>

Source: NCES, National Education Longitudinal Study of 1988-1994
Note: Percentages may not add to 100 percent due to rounding.
Voted in 1992 presidential election (VOTEPRES):

For this variable, Hispanics were more likely to be in the valid response group, as were Catholic school students. None of the other comparisons are statistically significant.

Table 5.6.15-Bias analysis for voted in 1992 presidential election (VOTEPRES)

<table>
<thead>
<tr>
<th></th>
<th>Percent valid</th>
<th>Valid standard error</th>
<th>Percent missing</th>
<th>Missing standard error</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>99.51</td>
<td>0.08</td>
<td>0.49</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td>Gender as of 1994</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>50.76</td>
<td>0.63</td>
<td>36.98</td>
<td>7.69</td>
<td>1.786</td>
</tr>
<tr>
<td>Female</td>
<td>49.24</td>
<td>0.63</td>
<td>63.02</td>
<td>7.69</td>
<td>-1.786</td>
</tr>
<tr>
<td>Race or ethnicity as of 1994</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>3.91</td>
<td>0.30</td>
<td>2.26</td>
<td>1.40</td>
<td>1.152</td>
</tr>
<tr>
<td>Hispanic</td>
<td>11.39</td>
<td>0.84</td>
<td>5.06</td>
<td>2.02</td>
<td>2.893</td>
</tr>
<tr>
<td>Black</td>
<td>13.67</td>
<td>0.82</td>
<td>18.37</td>
<td>7.15</td>
<td>-0.653</td>
</tr>
<tr>
<td>White</td>
<td>69.54</td>
<td>1.18</td>
<td>72.30</td>
<td>7.44</td>
<td>-0.366</td>
</tr>
<tr>
<td>American Indian/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alaskan native</td>
<td>1.49</td>
<td>0.34</td>
<td>2.02</td>
<td>2.01</td>
<td>-0.260</td>
</tr>
<tr>
<td>1992 High school sector</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public</td>
<td>91.13</td>
<td>0.63</td>
<td>94.73</td>
<td>4.40</td>
<td>-0.810</td>
</tr>
<tr>
<td>Catholic</td>
<td>5.08</td>
<td>0.39</td>
<td>0.80</td>
<td>0.80</td>
<td>4.809</td>
</tr>
<tr>
<td>Other private</td>
<td>3.79</td>
<td>0.50</td>
<td>4.48</td>
<td>4.34</td>
<td>-0.158</td>
</tr>
<tr>
<td>1994 High school diploma status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school diploma</td>
<td>80.91</td>
<td>0.67</td>
<td>70.54</td>
<td>8.06</td>
<td>1.282</td>
</tr>
<tr>
<td>GED or equivalent</td>
<td>6.34</td>
<td>0.41</td>
<td>10.38</td>
<td>5.18</td>
<td>-0.777</td>
</tr>
<tr>
<td>Working toward degree</td>
<td>5.38</td>
<td>0.31</td>
<td>9.26</td>
<td>5.22</td>
<td>-0.742</td>
</tr>
<tr>
<td>Dropout</td>
<td>7.37</td>
<td>0.44</td>
<td>9.82</td>
<td>4.81</td>
<td>-0.507</td>
</tr>
<tr>
<td>1992 Socioeconomic quartile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low quartile</td>
<td>24.63</td>
<td>0.78</td>
<td>28.33</td>
<td>8.00</td>
<td>-0.460</td>
</tr>
<tr>
<td>Middle two quartiles</td>
<td>50.21</td>
<td>0.74</td>
<td>59.39</td>
<td>8.54</td>
<td>-1.071</td>
</tr>
<tr>
<td>High quartile</td>
<td>25.16</td>
<td>0.90</td>
<td>12.28</td>
<td>5.28</td>
<td>2.405</td>
</tr>
</tbody>
</table>

Note: Percentages may not add to 100 percent due to rounding.
Chapter Six: Data Quality

Since its inception in 1988, the National Education Longitudinal Study has established and maintained a consistently high level of data quality. The quality of the data collected in the third follow-up can be assessed at three levels. First, several a priori controls were set in place in the data collection system, CATI, which helped insure quality on-line as the instrument was being administered. Second, as the data were coded a series of decision rules applied at the data entry level helped insure consistency. Finally, evaluation of the data post hoc insures internal consistency and comparability to the previous rounds of NELS.

6.1 Computer-Assisted Telephone Interview (CATI) Contingency Checks and Data Quality

As described above, the AutoQuest CATI system was used to present the questionnaire items to the interviewer on a series of screens, each with one or more questions. Between screens, the system evaluated the responses to completed questions and used the results to route the interviewer to the next appropriate question. Because the appropriate skip patterns were implemented by the system on-line, the system avoided the sometimes confusing instructions involved in skipping intermediate questionnaire items.

The system also applied a series of cross-checks to the responses, such as valid ranges, data field size and data type (e.g., numeric or text), and consistency with other answers or data from previous rounds. If it detected an inconsistency because of an interviewer's incorrect entry, or if the respondent simply realized that he or she made an error earlier in the interview, the interviewer could go back and change the earlier response. As the new response was entered, all of the edit checks that were performed at the first response were performed again. The system then worked its way forward through the questionnaire using the new value in all skip instructions, consistency checks, and the like until it reached the first unanswered question, and control was then returned to the interviewer. In addition, when problems were encountered, the system could suggest prompts for the interviewer to use in eliciting a better or more complete answer.

6.2 Decision Rules for Computer-Assisted Data Entry (CADE)

For the third follow-up, a number of decision rules were needed to ensure that verbatim and occasional unexpected responses were dealt with in a consistent manner. Verbatim responses were collected on a number of items such as occupation and major field of study. In order to make efficient use of the data, it was also desirable to assign consistent, standard codes to these responses. For example, when respondents indicated their occupation, the interviewers recorded their verbatim response. The system then checked that response using a keyword search, matching it to a subset of standard industry and occupation codes, and presented the interviewers with a set of choices based on the keyword matches. The interviewer then chose the option which most closely matched the information provided by the respondent, probing for
additional information when necessary. The chosen response codes were subsequently subjected to quality control by having professional coders read and recode the verbatim responses. On a regularly basis throughout the data collection process, feedback on the results of this quality evaluation was given to the interviewers.

Additional decision rules involved the coding of unexpected responses. In the CATI data collection, out of range responses were trapped on-line allowing the interviewer to correct them during data collection. However, with the SAQ, occasional out of range values did occur. For example, dropout respondents were asked to indicate what grade they were in when they dropped out. The intended range had a lower limit of 9, however a small number of respondents gave 8 as the grade level. It was decided to combine them with the 9th grade dropouts. In general, these decisions involved only a small number of respondents and a small number of variables per respondent.

6.3 Internal Consistency of Responses to Related Items

The third follow-up questionnaire contains a number of items related to a single topic or variable, and information obtained directly from one item can often be cross-checked indirectly by looking at other items indirectly. For example, there are three questions related to marriage: Current Marital Status, Were You Ever Married, and How Many Times Have You Been Married. If the responses to these questions are consistent, a respondent whose current status is single, never married should show "zero" as the number of times married and "no" as the response to "Were you ever married" on the SAQ or "Legitimate Skip" to the same question on the CATI. Table 6.3.1 shows a cross-tabulation of Current Marital Status by Number of Times Married, which indicates that five cases inconsistently indicate zero marriages for currently married respondents. This is the only inconsistency in this table, and represents far less than 1 percent of the data.

<table>
<thead>
<tr>
<th>Current marital status</th>
<th>Number of times married</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Single, never married</td>
<td>12388</td>
</tr>
<tr>
<td>Married</td>
<td>5</td>
</tr>
<tr>
<td>Divorced, separated</td>
<td>0</td>
</tr>
<tr>
<td>Widowed</td>
<td>0</td>
</tr>
<tr>
<td>Marriage-like relation</td>
<td>960</td>
</tr>
</tbody>
</table>


Table 6.3.2 shows no inconsistency between the responses to "Were you ever married" and Number of Times Married. (The large number of "legitimate skips" is due to the skip pattern in CATI based on the response to current marital status.)
Similarly, information related to high school completion is provided by a variable directly specifying 1994 high school diploma status. This indicator estimates that 87 percent (with a standard error of .53) of respondents have received a high school diploma, GED, or certificate. A second variable indicates the month and year the respondent received a diploma, GED, or certificate. The percentage of valid responses (taking into account the legitimate skips) to this item provides an indirect estimate of the same information, which yields an estimate of 87 percent (with a standard error of .63).

The NELS:88/94 dataset also contains variables pre-loaded from the second follow-up, which provided a cross check for responses to similar items and allowed the CATI interviewers to prompt for responses from respondents with missing values from the previous round. Two critical variables for data quality are sex and race/ethnicity.

Table 6.3.3 shows the cross-tabulation of F2SEX by F3SEX and shows an extremely high degree of consistency between the two separate codings of respondent sex.

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>F2SEX</td>
<td>7349</td>
<td>5</td>
<td>7354</td>
</tr>
<tr>
<td>F3SEX</td>
<td>1</td>
<td>7560</td>
<td>7561</td>
</tr>
</tbody>
</table>


Similarly, Table 6.3.4 shows relatively few inconsistencies between the second follow-up coding of race/ethnicity and that of the third follow-up. Furthermore, these results show the advantage of using preloaded variables in CATI. Most of the "inconsistencies" are due to the reclassification of second follow-up missing values (code 8) to valid values in the third follow-
Additional variables that were used in the second round to compute design effects also appeared in the third round questionnaire and were once again used to compute design effects (see Chapter 5). These were also examined for consistency of responses between the two rounds, and the results are shown in Tables 6.3.5 to 6.3.8. For the most part, these are consistent with the level of quality indicated above. For responses related to taking the three specified entrance exams (SAT, ACT, and ASVAB), coding errors representing 1 percent of responses for SAT and ACT and 5 percent for ASVAB appear as those who responded "yes" in the second follow-up and "no" in the third.

Table 6.3.4--Cross-tabulation of 1992 race (F2RACE) by 1994 race (F3RACE)

<table>
<thead>
<tr>
<th>F3RACE</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>1087</td>
<td>2107</td>
<td>1685</td>
<td>9802</td>
<td>212</td>
<td>1</td>
<td>21</td>
</tr>
</tbody>
</table>

F2RACE
1 1084 0 0 4 0 0 0 1088
2 0 2104 0 3 0 0 0 2107
3 0 0 1681 0 0 0 0 1681
4 0 0 0 9787 0 0 0 9787
5 0 0 0 0 211 0 0 211
8 3 3 4 8 1 1 21 41


Table 6.3.5--"Have you taken the SAT?": cross-tabulation of second follow-up by third follow-up

<table>
<thead>
<tr>
<th>Yes</th>
<th>Plan to</th>
<th>Do not plan to</th>
<th>Not thought about it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>4889</td>
<td>959</td>
<td>3834</td>
</tr>
</tbody>
</table>

3rd follow up
Yes 4828 193 326 195
No 61 766 3508 1915

The one exception to the relatively low level of inconsistency in responses was observed in the reports of taking "other" entrance exams. While this could be due to failure to remember after two years or to a different understanding of the term entrance exam, it may also be a function of the difference in questionnaire modalities (in the second follow-up, the SAQ item may have been clearer than the third follow-up CATI probe), and this may indicate the need for caution in interpreting data on "other" categories based on verbatim responses to global "anything else" probes.
Though not an indicator of the quality of the data coding per se, it is also interesting to compare the second follow-up responses indicating intention to take or not to take an exam with the third follow-up responses on whether the exam was taken. In all four questions, the vast majority of respondents who indicated that they intended to take an exam in the second follow-up report that they did not take it, while the majority of those who said they did not intend to take an exam report that they in fact did not take it. Thus, researchers should exercise caution before attempting to use reported intention as a surrogate for actual behavior.

6.4 Comparison of Third Follow-up Design Effects to Previous Rounds

Table 6.4.1 shows that the design effects in the third follow-up are somewhat lower than those of the first and second follow-ups but are higher than those in the base year. For the most part, the other statistics on the design effects are comparable to those observed for the second follow-up.

Subsampling existed in NELS:88 in the 1990 round, and this introduced additional variability into the weights along with some loss in sample efficiency. However, in the 1994 round, subsampling was conducted so that the probability of retention was inversely proportional to the second follow-up raw weight. This is the primary reason for the decrease in the third follow-up design effect. Additionally, the somewhat reduced design effect for the 1994 round may also reflect the considerable degree of sample dispersion that occurred after the respondents had completed high school and entered postsecondary institutions, the military, or other sectors of the labor market. This dispersion increases variability not due to the sampling design and hence increases the denominator in the calculation of the design effect.

Table 6.4.1--NELS:88 base year through third follow-up: mean design effects (DEFFs) and root design effects (DEFTs) for student and dropout respondents (full sample)

<table>
<thead>
<tr>
<th>Year</th>
<th>BY DEFF</th>
<th>BY DEFT</th>
<th>F1 DEFF</th>
<th>F1 DEFT</th>
<th>F2 DEFF</th>
<th>F2 DEFT</th>
<th>F3 DEFF</th>
<th>F3 DEFT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2.54</td>
<td>1.56</td>
<td>3.86</td>
<td>1.92</td>
<td>3.71</td>
<td>1.89</td>
<td>2.94</td>
<td>1.70</td>
</tr>
<tr>
<td>SD</td>
<td>1.11</td>
<td>0.33</td>
<td>1.68</td>
<td>0.41</td>
<td>1.68</td>
<td>0.37</td>
<td>0.78</td>
<td>0.22</td>
</tr>
<tr>
<td>Min</td>
<td>1.35</td>
<td>1.16</td>
<td>2.01</td>
<td>1.42</td>
<td>2.10</td>
<td>1.45</td>
<td>1.49</td>
<td>1.22</td>
</tr>
<tr>
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<td>8.46</td>
<td>2.91</td>
<td>11.12</td>
<td>3.33</td>
<td>5.17</td>
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Chapter Seven: Composite Variables

Composite variables are constructed in order to enhance substantive analyses. Since research questions frequently require independent or control variables such as the type of postsecondary institution or the individual's gender, a large set of classification variables has been carefully constructed and added to the records.

Most composite variables were constructed from two or more sources, and they may combine questionnaire items from the same or different NELS:88 data files, as well as from the same survey year or across different survey waves. Some composites are drawn from an external sampling resource that is unavailable to users, or use an external conceptual scheme in order to rank order or otherwise recode survey data. A few composites are sufficiently central to analyses that they have been constructed in each round of the survey. Some values should change over time; for example, if a sample member marries or has children, the family formation variables will change. Some variables, such as race/ethnicity and gender, should in theory be constant for an individual over time, yet in practice may change if new information updates the old. For example, regardless of actual participation in NELS:88, a race/ethnicity composite is constructed for all sample members. In a situation where a former nonparticipant later takes part in the survey, the value of the race composite may in very rare instances change from a value that had been imputed on earlier datasets. Such differences illustrate how the validity of certain classification variables is strengthened over time. In terms of these variables, the most recent round contains the best information for sample members who participated in that wave of NELS:88.

7.1 Demographic Composites

Many of the NELS:88 composite variables are respondent demographic characteristics. For example, F3SEX represents gender while F3RACE is the higher level race/ethnicity composite that has been constructed for the third follow-up. These variables are important to so many research questions that missing data cannot be tolerated. In the second follow-up, these characteristics were taken directly from the second follow-up new student supplement or from analogous first follow-up variables. If these sources were not available or contained missing data, sample member gender was taken from base year school rosters. Any cases that still suffered from missing values had gender imputed from the sample member's name or if that could not be done unambiguously, the value for gender was randomly assigned. Second follow-up race was also constructed from several sources of information, the first source being student self report (from either the base year student questionnaire or the first or second follow-up new student supplement). If the student information was missing or, for student-reported race of Native American, inconsistent with that of the base year parent report, the values from the parent questionnaire were used. If race was still missing, the race identified on the school roster was used.

The derived second follow-up values for gender were preloaded into the CATI
questionnaire and used to ensure that the correct respondent had been located for interview. Although the respondent was not asked the question, in a few instances the interviewer noted that the preloaded value was incorrect and recorded a corrected value for sex.

The derived NELS:88/92 values for race were also preloaded in the CATI questionnaire and, in those instances where a race value was missing, a question was asked. In order to create the F3API and F3HISP subcategories, more specific questions were subsequently asked of all sample members who were of Hispanic or Asian or Pacific Islander (API) background. In a few instances, when asked more specific questions, the respondent answered that he or she was not API or Hispanic, and then the preloaded race value was changed. In each case, the respondent asked that the value be changed to White. Gender and race/ethnicity questions were not asked in the hard copy questionnaire, so for these cases F3SEX, F3RACE, F3API, and F3HISP will be equal to the analogous second follow-up variables.

7.2 High School Status

The variable F3DIPLOM, which contains the sample member's high school completion status (diploma, GED, certificate, currently enrolled, currently working toward equivalency, or dropout), was derived from several sources. When available, 1992 transcript or questionnaire data indicating the completion of a diploma or equivalent was preloaded into the CATI questionnaire. If prior round data did not indicate that the respondent had completed high school, the respondent was asked about his or her current status and last high school program type. F3HSPROG, last high school program type, was derived from 1992 transcript data when available and from 1994 questionnaire data only when it was not available from the transcripts. The 1994 questionnaire asked the date the sample member completed his or her diploma or equivalency, F3HSCPDT. If the question was not answered, then when available 1992 transcript and questionnaire sources were used. F3EVDOST indicates if the sample member ever dropped out of high school, regardless of his or her current status. F3SEQ indicates if the sample members received their high school diploma with the class of 1992. Both F3EVDOST and F3SEQ draw on 1994 data when available and use second follow-up transcript and questionnaire data as secondary sources.

7.3 Labor Force Experience

NELS:88/94 questions about respondents' labor force experience between June 1992 and their interview dates were used to create a variety of composites. JOBFIRHR, JOBFIRIN, JOBFIROC, JOBLASHR, JOBBLASIN, JOBLASOC contain the hours per week, industry, and occupation codes for the first and last jobs that the primarily employed respondents reported. LABR0692 to LABR0894 is a series of monthly variables that summarize their employed/unemployed status. UNEMPL92 and UNEMPL93 contain the number of full calendar months that the respondent reported being unemployed during 1992 and 1993. F3SAMJOB reflects whether the respondent was employed by the same employer throughout the entire reporting period. LABFOR93 describes overall 1993 labor force participation status.
7.4 Postsecondary Education

A variety of composites were created by using NELS:88/94 questions about the respondent's participation in postsecondary education in conjunction with the 1993/94 IPEDS data. For example, F3NUMINT indicates the total number of postsecondary institutions the respondent reported attending, including military training programs which were later determined not to be valid postsecondary institutions. F3PSENUM is the corrected number of valid postsecondary institutions the sample members reported attending. TRANSTYP reflects respondents' patterns of transferring between different types of institutions. ENROL0692 to ENROL0894 is a month by month series of variables that concatenate the student's enrollment status and institution type. F3PSEATN contains the highest level of education the sample member has attained. For those sample members who had achieved associate degrees and certificates by their interview, EAADATE, ECEDATE, TIMAA, and TIMCERT contain the dates and time to completion information. F3STILL is a flag that shows whether, at the time of the interview, the respondent was still enrolled in his or her first institution. F3ATTEND contains the total number of months that the respondent attended a postsecondary institution between June 1992 and August 1994. Please note that if the respondent was still enrolled at the time of the interview, the assumed ending date for calculation of enrollment and attendance was August 1994. PSEBEGST is a measure of the timing and intensity of first postsecondary attendance. PSECHOIC indicates if and when the sample members attended the first institution to which they reported applying. F3SEC1A1 and F3SEC1A2 contain the type of institution for the first and second institutions to which they reported applying. When available, data on the institutions to which respondents applied was obtained from the 1994 questionnaire data, and if 1994 data were not available, 1992 data were used.

F3PSEAT, F3PSECT, F3PSEEN, and F3SEC2A are each a series of variables that describe for up to five institutions the numbers of months the respondent attended the institution, continuity of attendance, the number of months enrolled at the institution, and the type of the institution. Attendance is defined as the time the respondent was actually at the institution. In cases where the respondent attended an institution several separate times, the times between spells were not used to calculate the variable.

Enrollment is defined as the total amount of time between the first enrollment and the last enrollment, including time between separate spells. PSEFIR, PSEFIRD, PSEFIRMJ, PSEFIRST, PSEFIRTY, PSEFIRSZ, PSEFIRMN, PSEFIRIO, PSELONG, PSELONDT, PSELONMJ, PSELONST, PSELONTY, PSELONSZ, PSELONMN, PSELONIO, PSELF, PSELASDT, PSELASMJ, PSELASST, PSELFAY, PSELFASSZ, PSELFASMN, and PSELFASIO are a series of variables that contain the institution code, initial date of enrollment, code for major field of study, full or part time status, type of institution, size centile, percent minority, and in-state or out-of-state status (relative to the sample member's home state) for the first, longest enrolled, and last institutions attended.

7-3
In the institution level file, F3SECT contains the type of each institution. TUITFEES is a measure of the cost of attending the institution and TOTATTND, a measure of the total annual attendance (TUITFEES and TOTATTND are expressed in deciles).

7.5 Family Formation and Values

NELS:88/94 questions addressing marital status, children, and values were used to create a number of composites. If 1994 data were not available, 1992 data were used when appropriate. F3MARST and F3MARDT contain the sample member's marital status and the date of a first marriage. F3NUMCHL and F3CHLDDT contain the number of biological children and the birth date of the first biological child. F3SEXDT contains the date of first sexual intercourse. F3JOBSAT and F3WORKO are weighted scales that draw on multiple questions concerning job satisfaction and work orientation. F3VOLUNT contains the number of types of volunteer organizations with which the respondent reporting working in the prior year. F3VOTED and F3RGVOTE provide information about voting history.

Endnotes


Appendix A

CATI Instrument Code
Definitions:

- \( J \) means *jump*.
- \( ^\) means *insert*. For example, in the question “Now, please think back to the middle of February 1994. At that time were you... \(^C1\), \(^C1\) indicates that the response category identified as \( C1 \) is inserted in the question text.
- An asterisk (*) indicates a comment.
- \( Q \), as in \( Q1UT \), holds a variable.

L91  209=REFUSED
L92  210=DON'T KNOW
Q1UT  R7  CASEID
Q2UT  R20  P_R1STNM - RESPONDENT'S FIRST NAME
Q3UT  R1  P_R2NDNM - RESPONDENT'S MIDDLE INITIAL
Q4UT  R20  P_R3RDNM - RESPONDENT'S LAST NAME
Q5UT  R2  P_RDOB-MONTH
Q6UT  R2  P_RDOB-DAY
Q7UT  R2  P_RDOB-YEAR
Q8FT  R 1  P_SEX
C1  MALE
C2  FEMALE
Q9FT  R 1  P_RACE
C1  ASIAN OR PACIFIC ISLANDER
C2  HISPANIC, REGARDLESS OF RACE
C3  BLACK, NOT OF HISPANIC ORIGIN
C4  WHITE, NOT OF HISPANIC ORIGIN
C5  AMERICAN INDIAN OR ALASKAN NATIVE
C6  OTHER
Q10UT  R3  P_SSN-FIRST 3 DIGITS
Q11UT  R2  P_SSN-SECOND 2 DIGITS
Q12UT  R4  P_SSN-THIRD 4 DIGITS
*FIRST SET OF STATUS VARS - 1=MISSING 2=NOT MISSING
Q13UT  R1  P_RDOB-MONTH STATUS
Q14UT  R1  P_RDOB-DAY STATUS
Q15UT  R1  P_RDOB-YEAR STATUS
Q16UT  R1  P_SEX STATUS
Q17UT  R1  P_RACE STATUS
Q18UT  R1  P_SSN STATUS-FIRST 3 DIGITS
Q19UT  R1  P_SSN STATUS-SECOND 2 DIGITS STATUS
Q20UT  R1  P_SSN STATUS-THIRD 4 DIGITS STATUS
*END OF FIRST SET OF STATUS VARS
Q21FT  R 1  P_HS STATUS
C1  received a high school diploma?
C2  received a GED?
C3  received a certificate of attendance?
C4  are currently enrolled in high school?
C5  are currently working toward the equivalent of a hs diploma / (GED)?
C6  did not graduate or earn GED/cert & are not currently worki
/ng toward GED/cert?
Q22UT  R40  P_NAME OF LAST SECONDARY SCHOOL ATTENDED
Q23UT  R2  P_DATE RECEIVED DIPLOMA,GED/CERT MONTH
Q24UT  R2  P_DATE RECEIVED DIPLOMA,GED/CERT DAY
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</tr>
<tr>
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</tr>
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<tr>
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<td>C1</td>
<td>SAT (Scholastic Aptitude Test)</td>
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<tr>
<td>C2</td>
<td>ACT (American College Testing exam)</td>
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<tr>
<td>C3</td>
<td>ASVAB (Armed Services Vocational Aptitude Battery)</td>
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<tr>
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<tr>
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<tr>
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*STATUS VARIABLES 1=MISSING 2=NOT MISSING

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A-4
Q59ET
Q60ET
Q61FT  R 1  *61FT  R 1  P_LOOPCOUTNER FOR HHROSTER HOUSEHOLD MEMBERS
C1  HUSBAND, WIFE, OR PARTNER?
C2  CHILDREN OR STEP-CHILDREN (R'S CHILDREN ONLY)?
C3  FATHER (BIOLOGICAL/NATURAL)?
C4  OTHER MALE GUARDIAN (SUCH AS A STEPFATHER OR FOSTER FATHER) /?
C5  MOTHER (BIOLOGICAL/NATURAL)?
C6  OTHER FEMALE GUARDIAN (SUCH AS A STEPMOTHER OR FOSTER MOTHER) /?
C7  OTHERS NOT ALREADY LISTED ABOVE?
Q62UT  R2  *62UT  R2  P_HHROSTER - HHPRTNER--HHOTHERS NUMBER OF HOUSEHOLD TYPES
Q63UT  R40  P_RAADDRESS - RESPONDENT'S STREET ADDRESS
Q64UT  R40  P_RCITY - RESPONDENT'S CITY
Q65UT  R2  P_RSTATE - RESPONDENT'S STATE
Q66UT  R5  P_RZIP - RESPONDENT'S ZIP
Q67UT  R3  P_RAREACODE - RESPONDENT'S AREA CODE
Q68UT  R7  P_RPHONE - RESPONDENT'S PHONE
Q69UT  R20  P_PARENT FIRST NAME
Q70UT  R20  P_PARENT MIDDLE NAME
Q71UT  R20  P_PARENT LAST NAME
Q72UT  R40  P_PARENT STREET
Q73UT  R40  P_PARENT CITY
Q74UT  R2  P_PARENT STATE
Q75UT  R5  P_PARENT ZIP
Q76UT  R3  P_PARENT AREACODE
Q77UT  R7  P_PARENT PHONE
Q78FT  R 1  P_DROPOUT STATUS
C1  NOT DROPOUT
C2  DROPOUT
Q79UT  5  INTERVIEWER NAME
Q80UT  4  INTERVIEWER ID
Q81UT  35  BANNER Q | Intv: ^79  Resp: ^2 ^4
Q82UT  9  Current month
Q83UT  8  Current year-2 digits
Q84UT  7  Current year-4 digits
Q85UT  10  Current day of the month - 2 digits
J86  87
Q86X  DUMMY FOR REFERED
C1  \[ 1=1(G0)
J87  88
Q87X  DUMMY FOR DON'T KNOW
C1  \[ 1=1(G0)
J88  89
Q88X  DUMMY FOR NOT APPLICABLE
C1  \[ 1=1(G0)
Q89UT  31  TNMS REFERENCE NUMBER
J90  91
Q90X  DUMMY FOR MISSING
C1  \[ 1=1(G0)
V  H
*!
*!
Q91UT  12  DATE - DATE OF INTERVIEW

A-5
Before I go on, I am required to let you know that your participation in this study is voluntary, and that all information you provide will be kept confidential. Let's begin.

* SCREEN mode

Now, let's talk about your current activities. Are you now . . .

Now, please think back to the middle of February 1994. At that time were you...
INTERVIEWER: IF R DOES NOT LIVE ALONE, CODE "OTHER PEOPLE LIVE IN
HOUSEHOLD." IF R IS LIVING IN A DORM ROOM, THE HOUSEHOLD INCLUDES ALL
MEMBERS WHO ARE LIVING IN THE SAME ROOM WITH THE R. IT WOULD NOT INCLUDE
MEMBERS OF THE ENTIRE DORMITORY.

Are you currently . . .?

The next few questions are about the composition of your household.

Again thinking back to the middle of February 1994, please tell me who
lived in your household besides yourself at that time.

INTERVIEWER: IF R DOES NOT LIVE ALONE, CODE "OTHER PEOPLE LIVE IN
HOUSEHOLD." IF R WAS LIVING IN A DORM ROOM, THE HOUSEHOLD INCLUDES ALL
MEMBERS WHO WERE LIVING IN THE SAME ROOM WITH THE R. IT WOULD NOT INCLUDE
MEMBERS OF THE ENTIRE DORMITORY.

C1  Single, never married?
C2  Married?
C3  Divorced/separated?
C4  Widowed?, or
C5  Not married but living in a marriage-like relationship?

Q100FB  HHALONE - HOUSEHOLD MEMBERS
C1  RESPONDENT LIVES ALONE
C2  OTHER PEOPLE IN HOUSEHOLD

******************************************************************************
Q101UT  2  ELAPSED TIME AFTER hhhalone
J102  107  100(1."\n"."\n")
Q102UB  HHROSTER- HH EDIT SCREEN
/INTERVIEWER: ENTER THE NUMBER OF EACH TYPE OF HOUSEHOLD
/MEMBER NEXT TO THE TYPE

******************************************************************************
J103  102  BM62(G1)+61(1)=SPouse/PARTNER MUST NOT BE GREATER THAN ONE!?
J103  102  B99(1.3.4)+M62(1)+61(1)=ROSTER HAS SPouse/PARTNER BUT NOT MA
/Rried or living together in MARSTAT
J103  102  BM62(G2)+61(2)=IF NUMBER OF CHILDREN IS REALLY GREATER THAN
/ 20, ENTER 20!
J103  102  BM62(G1)+61(3)=NO MORE THAN ONE FATHER IS ALLOWED!
J103  102  BM62(G1)+61(4)=NO MORE THAN ONE MALE GUARDIAN IS ALLOWED!
J103  102  BM62(G1)+61(5)=NO MORE THAN ONE MOTHER IS ALLOWED!
J103  102  BM62(G1)+61(6)=NO MORE THAN ONE FEMALE GUARDIAN ALLOWED!
J103  102  BM62(G20)+61(7)=IF NUMBER OF OTHERS IS REALLY GREATER THAN 2
/J, ENTER 20!
J103  102  BM62("\n","\n","\n")=INVALID FUNCTION KEY USED
J103  102  BM62(N"\n"N"\n"N"\n")+61(1/7)=IF NO PEOPLE IN A CATEGORY, FI
/LL THE FIELD WITH 00
Q103UT  2  ELAPSED TIME AFTER hhroster

******************************************************************************
J105  100  B104(1)+100(2)=INCONSISTENCY - ROSTER SAYS NO ADDITIONAL PE
/PLE
Q105FB  HHTOTAL - TOTAL NUMBER IN HOUSEHOLD

This means that you have a total of 104 people living in your household,
/including yourself. Is that correct?
INTERVIEWER: IF ANSWER IS "NO" CORRECT DISCREPANCIES.

C1 YES
C2 NO
G 2,1
J106 102 B105(2)=CORRECT DISCREPANCIES
Q106UT 2 ELAPSED TIME AFTER hhtotal
J107 108
Q107X TEXT SUBSTITUTION FOR SPSNAME1
C1 spouse's
C2 partner's
G 1=99(2)
G 2=99(5)

* TEXT SUBST FOR SPSNAME1

*! SCREEN spsname1
* Instruct: "INSERT" = "spouse's" IF "MARSTAT" = 2. "INSERT" = "partner's" IF
* Instruct: "MARSTAT" = 5.

Q108UB 40 SPSNAME1 - SPOUSE/PARTNER'S FIRST NAME

What is your ^107 full name?

FIRST NAME: ^B
MIDDLE NAME: ^B
LAST NAME: ^B

Q110UB 40 SPSNAME3 - SPOUSE/PARTNER'S LAST NAME

 Have you ever been married?

J112 114

* SCREEN evrmaried
Q112FB EVRMARIED - EVER BEEN MARRIED

Have you ever been married?

* B
C1 YES
C2 NO
G 2,1
Q113UT 2 ELAPSED TIME AFTER evrmaried

Have you ever been married?

* B
C1 YES
C2 NO
G 2,1
Q114UT 2 ELAPSED TIME AFTER evrmaried

Have you ever been married?

* B
C1 YES
C2 NO
G 2,1
Q115UT 2 ELAPSED TIME AFTER evrmaried

Have you ever been married?

* B
C1 YES
C2 NO
G 2,1
Q116UT 2 ELAPSED TIME AFTER evrmaried

Have you ever been married?
A-9

J114 120 112(2."π"."π")

* SCREEN numaried
Q114UB 2 NUMARIED - HOW MANY TIMES MARRIED
/\^C1
/ How many times have you been married?
/
/\^B
V (1/4,95)(Nn)
*RANGE CHANGED FROM 1/95
Q115UT 2 ELAPSED TIME AFTER numaried
***************************************************
!*SKIP [IF NUMARIED = REF,DK,N/A THEN GOTO depchild]
J116 120 114("π"."π")
J116 117
Q116X MARDATE TEXT SUBST
C1 your
C2 your first
G 1=114(1)
G 2=114(N1)
!* MARDATE TEXT SUBST Q
!
* SCREEN mardate
* Instruct: "INSERT" = "your" IF "NUMARIAGE" = 1. "INSERT" = "your first" IF
* Instruct: "NUMARIAGE" > 1.
Q117UB 2 MARDATE - FIRST MARRIAGE BEGIN DATE-MONTH
/\^C1
/ When did ^116 marriage begin?
/
/\^B/^B
V (1/12)(Nn)
Q118UB 2 MARDATE - FIRST MARRIAGE BEGIN DATE-YEAR
V (90/^83,95)(Nn)
*RANGE FROM YEAR CHANGED FROM 85/CURRENT
*119 118 B117(95)+118(N95)+117(N95)+118(95)=MONTH AND YEAR SHOULD BE
/95
J119 118 B118(Q83)+82(LQ117)+117(N95)=DATE IS AFTER CURRENT DATE
Q119UT 2 ELAPSED TIME AFTER mardate
***************************************************
!* SCREEN depchild
Q120UB 2 DEPCHILD - NUMBER OF DEPENDENT CHILDREN
/\^C1
/ Now I'd like to get some information about any dependent children you may
/ have. Please tell me how many dependent children you have (including children
/ born to you, adopted, foster-care and stepchildren), regardless of whether
/ or not they currently live with you.
/ / INTERVIEWER: ENTER "0" IF NONE.
/ /
/\^B
/ /
/ How many children have you had?
/ /
/ INTERVIEWER: THE CHILDREN MUST HAVE BEEN BORN TO R. ENTER "0" IF NONE.
/ /
/\^B
V (0/4,95,U5/20)(Nn)
Q121UB 2 NUMCHILD - NUMBER CHILDREN BORN TO R
V (0/5,95)(Nn)
Q122UT 2 ELAPSED TIME AFTER depchild
J123 131 121(0)
Q123S NUMBER OF CHILDREN LOOP COUNTER
C1 oldest child
A-10

C2                   next oldest child
C3                   next oldest child
C4                   next oldest child
C5                   next oldest child

G                    1/5=121(95)

Q124UB    2   DOBCHILD1 - BIRTHDATE OF CHILD BORN TO R-MONTH

/  
/ ~IF 121(1)
/ What is the birthdate of that child?
/ ~ELSE
/ What is the birthdate of the ^123 born to you?
/ ~END
/  
/ ^B/^B/^B

V                    (1/12)(Nn)

Q125UB    2   DOBCHILD1 - BIRTHDATE OF CHILD BORN TO R-DAY

V                    (1/31)(Nn)

Q126UB    2   DOBCHILD1 - BIRTHDATE OF CHILD BORN TO R-YEAR

V                    (87/^83,95){NN}

*127 124            B124(95)+(126(N95).125(N95)).126(95)+(124(N95).125(N95)).125
// (95)+(126(N95).124(N95))=INVALID DATE
J127 124            B126(Q83)+82(LQ124).126(Q83)+124(Q82)+85(LQ125)=BIRTH DATE I
/S AFTER CURRENT DATE
J127 124            B124(2)+125(G29).124(9.4.6.11)+125(GE31)=INVALID DATE
J127 124            B129(Q126)+126(G0)+129(N95)+129(Q126)+127(GQ124)+127(N95)+1
/24(G0)+126(G0)=PREVIOUS CHILD IS BORN AFTER THIS CHILD
J127 124            B129(Q126)+127(Q124)+126(G0)+124(G0)+128(GQ125)+125(G0)+128( 
/N95)=PREVIOUS CHILD IS BORN AFTER THIS CHILD
J127 128            124(G0)=:/^124:
J127 128            124(0)

Q127U    2   INSERTED DOB MONTH
/HIT ALT-B
J128 129            125(G0)=:/^125:
J128 129            125(0)

Q128U    2   INSERTED DOB DAY
J129 130            126(G0)=:/^126:
J129 130            126(0)

Q129U    2   INSERTED DOB YEAR
/HIT ALT-B
Q130UT    2   ELAPSED TIME AFTER dobchild1
R123 130

*******************************************************************************

Q131ET
Q132ET
*******************************************************************************

*!
*! SKIP [IF "VSTATUS" <> MISSING THEN GOTO vpostexam]
J133 172            55(2)
* SCREEN hsstatus
* THIS QUESTION IS CODED ONLY IF CURRENT STATUS IS DIFFERENT FROM
* PRELOADED STATUS.
Q133UP          HSSTATUS - HS DIPLOMA GED OR CERT STATUS
/^C1^S2
/~IF 55(1)
/ In the next section of our interview, we will be discussing your education
/ experiences. We'll begin by talking about your high school experiences.
/~END
/
/ Which of the following best describes your high school graduation status?
/ You...
/  
/~E21
Q134UT    2   ELAPSED TIME AFTER HSSTATUS

A-10
**---------------------------------------------**
!* SKIP [IF "P_DROPOUT STATUS" = 2 AND "HSSTATUS" = 6 THEN GOTO vpostexam]
J135 174  78(2)+21(6)
!* !
!*SKIP [IF "P_NAME OF LAST SECONDARY SCHOOL ATTENDED" = MISSING THEN GOTO
* schoolnm]
J135 137  22(" ")+22S(L2).41(1)
Q135FB  VSECSCHOL-VERIFY PRELOAD NAME OF LAST SECONDARY SCHOOL ATTENDED
/
/
/Was ^22 the last high school you attended?
/\^C2
/\^B
C1                   YES
C2                   NO
G                    2,1
Q136UT       2       ELAPSED TIME AFTER VSECSCHOL
J137 139             135(1)
Q137UP               SCHOOLNM-LAST ATTENDED SECONDARY SCHOOL NAME
/
/
/What is the name of the last high school you attended?
/
/\^E22
J138 137            B22(" |R")+22S(L2)+22(N"p"+N"p")=DON'T LEAVE FIELD BLANK
Q138UT       2       ELAPSED TIME AFTER SCHOOLNM
Q139ET
Q140ET
!*SKIP [IF "P_DROPOUT STATUS" != 2 OR "HSSTATUS" != 1/5 THEN GOTO venroll]
J141 143             78(N2).21(N1/5)
Q141UP               SDATESEC-START /END LAST SEC SCHOOL
/
/What are the dates of your most recent period of enrollment at
/^22? In what month and year did you
/start attending ^22?
/
/INTERVIEWER: BE SURE TO GET THE MOST RECENT PERIOD OF ENROLLMENT IF R
/HAS ATTENDED THIS HIGH SCHOOL MORE THAN ONE TIME.
/
/\^E27/^E28
/
/In what month and year did you stop attending
/^22?
/
/INTERVIEWER: IF RESPONDENT IS CURRENTLY ATTENDING THIS SCHOOL ENTER 96/96.
/
/\^E29/^E30
J142 141            B27(0+N"\tau"+N"\tau") .27(G12) .28(0+N"\tau"+N"\tau") .28(L78) +28(G0) .28(G
/Q83+N95) .28(Q83) +27(GQ82+N95)=INVALID START DATE
J142 141            B29(0+N"\tau"+N"\tau") .29(G12+N96) .30(0+N"\tau"+N"\tau") .30(GQ83)+30(N96
/) =INVALID STOP DATE
J142 141            B30(L86)+30(G0) .30(Q83)+29(GQ82)+29(N96+N95)=INVALID STOP DA
/TB
J142 141            B28(GQ30)+28(N95)+30(G0) .28(Q30)+30(G0)+27(GQ29)+27(N95)+29(G
/G0)=START DATE IS AFTER FINISH DATE
*142 141            B27(95)+28(N95).27(N95)+28(95)=IF OUT OF RANGE ENTER 95 FOR
/MONTH AND YEAR
J142 141            B29(96)+30(N96).29(N96)+30(96)=IF CURRENTLY ENROLLED, ENTER
/96 FOR MONTH AND YEAR
Q142UT       2       ELAPSED TIME AFTER SDATESEC/EDATESEC
!* SKIP [IF "HSSTATUS" = 1/3 THEN GOTO yearrec]
J143 165             21(1/3)
J143 145             26(0) .56(1)
Q143FB  VENROLL-VERIFY LAST GRADE ENROLLED IN

A-11
In our last interview with you, you said that 26 was the last grade you were enrolled in. Is that correct?

YES

NO

What is the highest grade you have been enrolled in (even if you did not complete the grade)?

What is the highest grade you have completed?

At 22, which of the following best describes the type of program you in.

A college prep, academic, or specialized academic program (i.e. Science or Math)?

Another specialized high school program?

A vocational, technical, or business and career program?

A special education program?

An alternative, Stay-in-School, or Dropout Prevention Program?

A general high school program?
INTERVIEWER: READ PROGRAM TYPES AND CODE ALL THAT APPLY.
/^C1
C1 Special instructional programs?
C2 Tutoring by teachers?
C3 Tutoring by other students?
C4 Incentives or rewards for attendance or classroom performance?
/Ce?
C5 Individual or group counseling?
C6 Career counseling?
C7 Job placement assistance?
C8 Health care or health care referrals?
C9 Childcare or nurseries for your children?
C10 NONE OF THE ABOVE
J162 161 B161(10)+161(1/9)=CAN'T HAVE NONE WITH OTHER RESPONSES
Q162UT 2 ELAPSED TIME AFTER SPECINST1
*/! SKIP [IF "HSSTATUS" = 1/3 THEN GOTO yearrec]
J163 165 21(1/3)
Q163FB GDCRTEST-WAS GED OR CERTIFICATION TEST TAKEN
/^C2
/Have you ever taken a GED or certification exam?
<table>
<thead>
<tr>
<th>Column</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>YES</td>
</tr>
<tr>
<td>C2</td>
<td>NO</td>
</tr>
<tr>
<td>G</td>
<td>2,1</td>
</tr>
</tbody>
</table>

Q164UT 2 ELAPSED TIME AFTER GDCRTEST

*! SKIP [IF "HSSTATUS"=4/6 THEN GOTO vpostexam]

Q165ET

J166 167
text subst for yearrec

C1 high school diploma
C2 GED
C3 certificate

G 1=21(N2+N3)
G 2=21(2)
G 3=21(3)

J167 172 21(4/6)

* SCREEN yearrec

* Instruct: "INSERT" = "high school diploma" IF "HSSTATUS" OR "P_HS STATUS" = 1,
* Instruct: 2, 3, OR 4. "INSERT" = "GED" IF "HSSTATUS" OR "P_HS STATUS" = 5.

Q167UP YEARREC - MONTH AND YEAR HS DIPLOMA OR GED WAS RECEIVED

/C1

In what month and year did you receive your ^166?

/"^E23/^E25

J168 167

B25("H",."H",."H") =INVALID FUNCTION KEY

J168 167 25(G0) .25(0+N"("+N")") .25(GQ83) .25(Q83) +23(GQ82) = DATE IS BEFORE 86 OR AFTER ^82/^83

J168 167 23(G12) .23(0+N"("+N")") =INVALID MONTH

*REMOVED DATE RECEIVED DIPLOMA

/"^E23/^E25

J168 167 21(1) + (25(G91) .25(91) + 23(G5)) = DATE INCONSISTENT WITH EARLY

/"^C1

From what state did you receive your ^166?

/"V                    ("AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA,

/"ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OR, PA, PR, RI, SC, SD, TN, TX, U

/"T, VT, VA, WA, WV, WI, WY, CZ, GU, VI, FC")

/Q168UT 2 ELAPSED TIME AFTER YEARREC

Q169ET

**********************************************************

*! SKIP [IF "HSSTATUS" /= 2/3 THEN GOTO applysec]

J170 172 21(N2+N3)

* SCREEN gedstate

* Instruct: CHECK STATE ABBREVS.

Q170UB 2 GEDSTATE - STATE RECEIVED GED/CERTIFICATE

/"^E23/^E25

J172ET APPLYSEC - DELETED

Q173ET

**********************************************************

*! SKIP [IF "P_APPLY POSTSEC" (APPLYSEC) = 2/3 THEN GOTO numinst]

*CHECK ON CODES FOR NEW VERSION OF P_APPLY POSTSEC

J174 204 31(2/3)

*! SKIP [IF "P_POSTSEC ENTRANCE EXAMS" THROUGH "P_OFFERED AID POSTSEC" ARE ALL

* MISSING OR ALL VALID]

J174 204 46(1.2) + 47(Q46) + 48(Q46) + 49(Q46) + 52(Q46) + 53(Q46) + 54(Q46)

*! SKIP [IF "P_POSTSEC ENTRANCE EXAMS" = MISSING THEN GOTO vnumapply]

J174 179 46(1)

A-14
*! SKIP [IF "P_POSTSEC ENTRANCE EXAMS" = 5 THEN GOTO postexam]
J174 177             46(2)+32(5)
*! SKIP [IF "P_POSTSEC ENTRANCE EXAMS" = 4 AND "P_POSTSEC ENTRANCE EXAMS"
* ! <> 1/3 THEN GOTO postexam]
J174 177             46(2)+32(4)+32(N1+N2+N3+N5)
J174 175
Q174X                TEXT SUBST
C1                   Scholastic Aptitude Test (SAT)
C2                   American College Testing exam (ACT)
C3                   Armed Services Vocational Aptitude Battery (ASVAB)
C4                   OTHER
C5                   NONE
G                    1=32(1)
G                    2=32(2)
G                    3=32(3)
G                    4=32(4)
G                    5=32(5)
!* IN CASE NEED TEXT SUBSTITUTION TO DISPLAY LIST OF EXAMS PROPERLY
*!
* SCREEN vpostexam
Q175FB               VPOSTEXAM - VERIFY POSTSECONDARY ENTRANCE EXAMS TAKEN
/^C2
/ The last time we interviewed you, you said that you had taken the
/ following postsecondary entrance exams:
/
/~IF 32(1)
/ ^174(1)
/
/~END
/~IF 32(2)
/ ^174(2)
/
/~END
/~IF 32(3)
/ ^174(3)
/
/~END
/~IF 32(4)
/ ^174(4)
/
/~END
/~IF 32(5)
/ ^174(5)
/
/~END
/
/ Is this a complete list of the exams you have taken?
/
/^B
C1                   YES
C2                   NO
G                    2,1
Q176UT       2       ELAPSED TIME AFTER VPOSTEXAM
****************************************
*! SKIP [IF "VPOSTEXAM"=1 THEN GOTO vnumapply]
J177 179             175(1)
* SCREEN postexam
* ORIG_QTYPE = FIXED, MULTIPLE
Q177UP               POSTEXAM - POSTSECONDARY ENTRANCE EXAMS TAKEN
/^C1
/ Which of the following postsecondary entrance examinations have you
/ taken?
INTERVIEWER: READ LIST AND CODE ALL THAT APPLY.

E32
J178 177 B32(1/4)+32(5)=CANT HAVE NONE WITH OTHER RESPONSES
J178 177 B32(N1/5)+32(N"e"+N"f")=ENTER A RESPONSE
J178 177 B32(N6+N"e"+N"f")=SELECT "EXIT SCREEN"

Q178UT 2 ELAPSED TIME AFTER POSTEXAM

*******************************************************************************
!* SKIP [IF "P_NUM APPLY POSTSEC" = MISSING THEN GOTO numapply]
J179 181 47(1)
* SCREEN vnumapply
Q179FB VNUMAPPLY - VERIFY HOW MANY POSTSECONDARY SCHOOLS APPLIED T
/*^C2 */ Our records show that you have applied to ^33 postsecondary
 institution(s)? Is that correct?
/* /*^B */ C1 YES
C2 NO
G 2,1
Q180UT 2 ELAPSED TIME AFTER vnumapply

*******************************************************************************
!* SKIP [IF "VNUMAPPLY" = 1 THEN GOTO vnmaply]
J181 183 179(1)
* SCREEN numapply
* QUESTION WORDING AND RESPONSE CATEGORIES TAKEN FROM NELS 2ND
* FOLLOW-UP STUDENT QUESTIONNAIRE.
Q181UP NUMAPPLY - HOW MANY POSTSECONDARY SCHOOLS APPLIED TO
/*^C1 */ To how many postsecondary schools have you applied?
/* /*^E33 */ J182 181 B33(1)+33(2/4)=NONE AND OTHER CODES
J182 181 B33(1)+31(1)+45(1)=APPLIED TO SECONDARY SCHOOLS - CAN'T CHOS
/E NONE
Q182UT 2 ELAPSED TIME AFTER numapply

*******************************************************************************
!* SKIP [IF "P_NUM APPLY POSTSEC" = 1 THEN GOTO atenpost]
*! skip past both loops if applied to no schools
J183 204 33(1)
!* NUMAPPLY AND P_NUM APPLY POSTSEC ARE THE SAME
!* SKIP [IF "P_NUM APPLY POSTSEC" = 2 AND THE NUMBER OF PRELOADED
!* SCHOOLS = 2 THEN GOTO LOOP COUNTER BEFORE instapply]
!* number of schools has been changed so that number of schools is 1
!* but the number of preloaded names is 2
J183 189 33(2)+34(2)
!* SKIP [IF ("P_LOOP COUNTER" = MISSING) OR ("P_LOOP COUNTER" >=1 AND FIRST
!* ITERATION OF "P_NAME POSTSEC" = MISSING) OR (P_LOOP COUNTER = 2 AND SECOND
!* ITERATION OF "P_NAME POSTSEC" = MISSING) THEN GOTO LOOP COUNTER BEFORE
!* instapply]
J183 189 34(0).(M34(1)+35("e"."f"."i")).(M34(2)+35("e"."f"."i"))
*CHECK THIS LATER
* SCREEN vnamaply
*! use conditional screen
* Instruct: "INSERT" = "your first two choices for institutions to apply to were
* Instruct: IF MORE THAN ONE PRELOADED NAME OF POSTSECONDARY INSTITUTION.
* Instruct: "INSERT" = "you applied to" IF ONLY ONE PRELOADED NAME OF
* Instruct: POSTSECONDARY INSTITUTION.
Q183FB VNAMAPLY - VERIFICATION OF INSTITUTIONS APPLIED TO
/*^C2 */ ~IF 34(1)
/During our last interview with you, you stated that you applied to /^35M34(1)=.  Is this still correct?  
/~ELSE
/During our last interview with you, you stated that your first two choices /for institutions were ^35M34(1)= /and ^35M34(2)=.   Is this still correct?  
/~END
/
/"B
C1                   YES
C2                   NO
G                    2,1
Q184UT       2   ELAPSED TIME AFTER VNAMAPLY
****************************************
*! SKIP[IF "VNAMAPLY" != 1 THEN GOTO LOOP COUNTER BEFORE instapply]
J185 189         183(N1)
Q185UB               VACCEPT - VERIFY INFO FOR EACH SCHOOL
/
/
/INTERVIEWER:  VERIFY AND CORRECT INFORMATION FOR EACH SCHOOL.  
/ USE F3 TO CORRECT DATA.  
/  
/^35M34(1/2)="School name"^E38"ACCEPTED"^E39"APPLIED FOR AID"^E40"OFFERED AID" 
J186 185         BM38(0+N"="N")+34(1/2)=DON'T LEAVE ACCEPTED COLUMN MISSIN 
/G 
J186 185         BM39(0+N"="N")+34(1/2)=DON'T LEAVE APPLIED FOR AID COLUMN 
/MISSING 
J186 185         BM40(0+N"="N")+34(1/2)=DON'T LEAVE OFFERED AID COLUMN MIS 
/SING 
Q186UT       2   TIMESTAMP AFTER VSCHOOL
Q187ET
Q188ET
Q189S               LOOP FOR NEW INFO ON INSTITUTIONS APPLIED TO 
C1                   first
C2                   second
*/
*/
*?SKIP [IF "P_NUM APPLY POSTSEC" > 2 AND "VNAMAPLY" = 1 GOTO SECOND
*! ITERATION OF CURRENT LOOP COUNTER]
*! THIS LAST SKIP IS FOR PEOPLE WHO VERIFIED THEIR FIRST CHOICE, AND
*! CHANGED THE NUMBER OF SCHOOLS FROM ONE TO TWO
J190 189         189(1)+((34(2)+33(G2)).(34(1)+33(2)))
*! LOOP [1/2]
*! LOOP FOR NEW SCHOOLS APPLIED TO
Q190S               LOOP FOR NEW INFO ON INSTITUTIONS APPLIED TO 
C1                   first
C2                   second
*/
*/
*?SKIP [IF "P_NUM APPLY POSTSEC" > 2 AND "VNAMAPLY" = 1 GOTO SECOND
*! ITERATION OF CURRENT LOOP COUNTER]
*! THIS LAST SKIP IS FOR PEOPLE WHO VERIFIED THEIR FIRST CHOICE, AND
*! CHANGED THE NUMBER OF SCHOOLS FROM ONE TO TWO
J190 189         189(1)+33(G2)+183(1)
* SCREEN instapply
*! use conditional screen for text
* IPEDS CODED
* Instruct: "INSERT" = "the institution you applied to" IF "NUMAPPLY" = 2 (ONE
* Instruct: INSTITUTION APPLIED TO) "INSERT" = "the institution that was your
* Instruct: first choice" IF "NUMAPPLY" = 3 OR 4 (2 - 4 OR 5 OR MORE) AND LOOP =
* Instruct: 1. "INSERT" = "the institution that was your second choice" IF
* Instruct: "NUMAPPLY" = 3 OR 4 (2 - 4 OR 5 OR MORE) AND LOOP = 2.
Q190UP               INSTNAME1 - NAME OF INSTITUTION APPLIED TO
/^C1
/*IF 33(G2)
/ What is the name and location of the institution you applied to?
/~ELSE 33(G2)
/ What is the name and location of the institution that was your ^189 choice?
/~END
/
/
/ INTERVIEWER: CODE INSTITUTION ON NEXT SCREEN.
* RETRIEVE IPEDS CITY
* Instruct: LOOP "INSTNAME2" THROUGH "EDRELJOB" "NUMINST" (NUMBER OF INSTITUTION
* Instruct: ATTENDED) TIMES RETRIEVE IPEDS CITY
*! EXTERNAL PROGRAM QUESTIONS TO CODE IPEDS AND PASS BACK DATA
J191 198 190("π")=:/^86:
J191 198 190("π")=:/^87:
*191 198 190("π")=:/^88:
*191 198 190("π")=:/^90:
Q191UT 36 INSTNAME1-IPEDS CODE|IPEDNEWP(G:\,)
Q192UT 36 2 INSTNAME1-IPEDS SECTOR|IPEDNEWP(G:\,)
Q193UT 36 3 INSTNAME1-IPEDS INSTATE TUITION|IPEDNEWP(G:\,)
Q194UT 36 4 INSTNAME1-IPEDS OUT OF STATE TUITION|IPEDNEWP(G:\,)
Q195UT 36 5 INSTNAME1-IPEDS-STATE|IPEDNEWP(G:\,)
Q196UT 36 6 INSTNAME1-IPEDS-CITY|IPEDNEWP(G:\,)
Q197UT 36 7 INSTNAME1-IPEDS-SCHOOL NAME|IPEDNEWP(G:\,)
Q198UT 2 ELAPSED TIME AFTER INSTSTAT
*****************************************************************************
J199 204 190("π","π")
* SCREEN accepted
Q199FB ACEPTINST - ACCEPTANCE AT INSTITUTIONS APPLIED TO
//^C2
/ Were you accepted at ^197?
//
/^B
/ Did you apply for financial aid at ^197?
/
/^B
C1 YES
C2 NO
G 2,1
Q200FB APPLYAID - APPLICATION FOR FINANCIAL AID
C1 YES
C2 NO
G 2,1
Q201UT 2 ELAPSED TIME AFTER APPLYAID
*! SKIP [IF "ACCEPTINST" = 2 THEN GOTO bottom of loop]
J202 189 199(2)
Q202FB AIDOFFER - OFFERED FINANCIAL AID
//^C2
/ Were you offered financial aid at ^197?
/
/^B
C1 YES
C2 NO
G 2,1
*****************************************************************************
*! SCREEN aidoffer
Q203UT 2 ELAPSED TIME AFTER AIDOFFER
*****************************************************************************
*! SKIP [IF "P_NUM APPLY POSTSEC" = 2 AND LOOP COUNTER=1 THEN GOTO atenpost]
J189 204 33(2)+189(1)
*! SKIP AT END OF FIRST ITERATION IF ONLY ONE CHOICE
*! ENDLOOP
R189 203
Q204ET
Q205ET
*****************************************************************************
*!
* SCREEN numinst
NUMINST - NUMBER INSTITUTIONS ATTENDED SINCE JUNE 1992

Since June 1992, have you ever attended a university, college, or vocational/technical/trade school where you took courses for academic credit? IF YES, "How many institutions have you attended since June, 1992?"


V

TIME ELAPSED AFTER NUMINST

*! SKIP [IF "NUMINST" = REF, DK, OR N/A THEN GOTO edexpect]

J208 340

*! LOOP[1/7]

Q208S

LOOP INSTNAME2 - EDRELJOB

C1

C2

C3

C4

C5

C6

C7

G

G

J209 210

Q209X

text subst

C1

C2

C3

C4

C5

C6

C7

G

G

G

G

G

G

G

*! LOOP COUNTER, =1/6 IF NUMINST=1/6, =7 IF NUMINST >=7

*! DEFINE LOOP COUNTER SO THAT LOOP GOES THROUGH THE RIGHT NUMBER OF ITERATIONS

*! SECOND ALLOCATE VAR IS A TEXT SUBSTITUTION

*! SCREEN attedinst

* RETRIEVE IPEDS NAME

* Instruct: LOOP "INSTNAME2" THROUGH "EDRELJOB" "NUMINST" (NUMBER OF INSTITUTION ATTENDED)

* Instruct: ATTENDED TIMES "INSERT" = "first" IF LOOP = 1 OR "NUMINST" = 1

* Instruct: "INSERT" = "second" IF LOOP = 2 "INSERT" = "third" IF LOOP = 3

* Instruct: "INSERT" = "fourth" IF LOOP = 4 "INSERT" = "fifth" IF LOOP = 5

* Instruct: "INSERT" = "sixth" IF LOOP = 6 "INSERT" = next" IF LOOP >= 7 RETRIEV

* Instruct: IPEDS NAME

Q210UP

INSTNAME2 - NAME OF INSTITUTION ATTENDED

/"C1

/"IF 206(1)

/ What is the name and location of the institution you attended?

/"ELSE

/ What is the name and location of the ^209 institution you attended?

/"END
A-20

/ INTERVIEWER: CODE INSTITUTION ON NEXT SCREEN.
J211 218 210("=")=:/^86:
J211 218 210(\"\")=/^87:
*211 218 210(\"\")=/^88:
*211 218 210("=")=:/^90:
*/ SKIP [IF "INSTNAME2" = REF, DX, OR N/A THEN GOTO next iteration]
*/ 7 QUESTIONS TO CALL IPEDS CODING PROGRAM AND PASS BACK DATA
Q211UT 36 INSTNAME2-IPEDS CODE|IPEDNEWP(G:\,)
Q212UT 36 2 INSTNAME2-IPEDS SECTOR|IPEDNEWP(G:\,)
Q213UT 36 3 INSTNAME2-IPEDS INST TUIT|IPEDNEWP(G:\,)
Q214UT 36 4 INSTNAME2-IPEDS OUT OF STATE TUIT|IPEDNEWP(G:\,)
Q215UT 36 5 INSTNAME2-IPEDS STATE|IPEDNEWP(G:\,)
Q216UT 36 6 INSTNAME2-IPEDS CITY|IPEDNEWP(G:\,)
Q217UT 36 7 INSTNAME2-SCHOOL NAME|IPEDNEWP(G:\,)
Q218UT 2 ELAPSED TIME AFTER INSTITSTAT
J219 274 210("=")=:/^86:
*/ SKIP [IF IPEDS SCHOOL CODE >=1 AND < 999990 AND SECTOR CODE >=0 THEN
*/ GOTO kindinst]
*/ INSERT DATA INTO TYPEINST
J219 220 212(1/9)=:/^212:
*/
*/ SCREEN typeinst
*/ Instruct: LOOP "INSTNAME2" THROUGH "EDRELJOB" "NUMINST" (NUMBER OF INSTITUTION
*/ Instruct: ATTENDED) TIMES. (FOR FIELD TEST AND MAIN STUDY ONLY)ASK ONLY IF NO
Q219FB TYPEINST - TYPE OF INSTITUTION
*/C1
*/ What type of institution is ^217?
*/ Is it ...
*/
*/B
C1 Public, 4-year or above?
C2 Private nonprofit, 4-year or above?
C3 Private for-profit, 4-year or above?
C4 Public, 2-year?
C5 Private nonprofit, 2-year?
C6 Private for-profit, 2-year?
C7 Public, less than 2-year?
C8 Private nonprofit, less than 2-year?
C9 Private for-profit, less than 2-year?
J220 221 212(1/9)
Q220UT 2 ELAPSED TIME AFTER TYPEINST
*/ SKIP [IF "TYPEINST" != 4 AND "TYPEINST" != 5 AND "TYPEINST" = VALID THEN GOTO
*/typetuit]
J221 224 219(N4+N5+N6+N7+N8+N9+N10)
*/ SCREEN kindinst
Q221FB KINDINST - KIND OF INSTITUTION
*/C2
*/ Are you taking academic courses that you plan to transfer to a four year
*/college or university?
*/
*/B
C1 YES
C2 NO
G 2,1
**********************************************************************************************************
Q222ET
Q223UT 2 ELAPSED TIME AFTER kindinst
J224 225 219(6/9).219(4/5)+221(2)=:1:
J224 225 219(\"\")=:2:
Q224F DUMMY VAR - VOCATIONAL SCHOOL
/DUMMY QUESTION - BACKUP (ALT-B)
C1
A-21

C2
!*  SKIP [IF "TYPEINST" != 1 AND !=4 AND !=7 THEN GOTO amttuitn]
J225 227 219(N1+N4+N7)

* SCREEN typetuit
* Instruct: LOOP "INSTNAME2" THROUGH "EDRELJOB" "NUMINST" (NUMBER OF INSTITUTION
* Instruct: ATTENDED) TIMES
Q225FB TYPETUIT - IN-STATE OR OUT-OF-STATE TUITION

/*C1
/ Were you charged in-state or out-of-state tuition at
/ "^217?"
/
/ INTERVIEWER: IF R WAS NOT CHARGED ANY TUITION ASK IF S/HE WAS AN IN-STATE
/ OR OUT-OF-STATE STUDENT AND CODE ACCORDINGLY.
/
/*B
C1 IN-STATE
C2 OUT-OF-STATE
Q226UT 2 ELAPSED TIME AFTER typetuit

************************************************************************************
!*  SKIP [IF "TYPETUIT" = 1 AND IPEDS INSTATE TUITION > 0 THEN GOTO multatnd]
J227 228 225(1)+213(G0)="^213:
J227 228 225(1)+213(0+1+N"p"p+N"p"p+N"l"l+N"p")+211(N999994+N999995)+211(/N999996+N999997)+211(N999998+N999999)+211(N888888)+212(1/9)=:"^213:
!*  SKIP [IF "TYPETUIT" = 2 AND IPEDS OUTSTATE TUITION > 0 THEN GOTO multatnd]
J227 228 225(2)+214(G0)="^214:
J227 228 225(2)+214(0+1+N"p"p+N"p"p+N"l"l+N"p")+213(G0)+211(N999994+N9999
/N999995)+211(N999996+N999997)+211(N999998+N999999)+211(N888888)+212(1/9)=:"^214:
!*  SKIP [IF "TYPETUIT" = NOTANSWERED AND IPEDS INSTATE TUITION > 0 THEN goto
* multatnd]
J227 228 225(0)+213(G0)="^213:
J227 228 225(0)+213(0+1+N"p"p+N"p"p+N"l"l+N"p")+211(N999994+N999995)+211(/N999996+N999997)+211(N999998+N999999)+211(N888888)+212(1/9)=:"^213:

* SCREEN amttuitn
* RETRIEVE IPEDS TUITION
* Instruct: LOOP "INSTNAME2" THROUGH "EDRELJOB" "NUMINST" (NUMBER OF INSTITUTION
* Instruct: ATTENDED) TIMES. ASK ONLY IF NO IPEDS MATCH.
Q227UB 5 AMTTUITN - AMOUNT OF TUITION PAID AT INSTITUTION

/*C1
/ What was the total amount of tuition you were charged last year or the
/ most recent year you were enrolled at
/ "^217?"
/
/*B
V (0/19999, 99995, U20000/50000) (Nnnnn)
J228 229 225(1)+213(G0)
J228 229 225(1)+213(0+1+N"p"p+N"p"p+N"l"l+N"p")+211(N999994+N999995)+211(/N999996+N999997)+211(N999998+N999999)+211(N888888)+212(1/9)
J228 229 225(2)+214(G0)
J228 229 225(2)+214(0+1+N"p"p+N"p"p+N"l"l+N"p")+213(G0)+211(N999994+N9999
/N999995)+211(N999996+N999997)+211(N999998+N999999)+211(N888888)+212(1/9)
J228 229 225(0)+213(G0)
J228 229 225(0)+213(0+1+N"p"p+N"p"p+N"l"l+N"p")+211(N999994+N999995)+211(/N999996+N999997)+211(N999998+N999999)+211(N888888)+212(1/9)
Q228UT 2 ELAPSED TIME AFTER amttuitn

************************************************************************************
Q229ET MULTATND - ATTENDED INSTITUTION MORE THAN ONE PERIOD
Q230ET ELAPSED TIME AFTER multatnd
!*  SCREEN numatnd
Q231UB 1 NUMATND - NUMBER DIFFERENT TIMES ATTENDED INSTITUTION

/*C1
/ Not including summer or holiday breaks, have you attended
/ "^217
/ more than one time, that is, stopped attending for a period of
/ one term or more and then started attending again at a later date?
/ IF "YES", How many different times have you attended
/ ^217?
/
/ INTERVIEWER: IF R HAS NOT ATTENDED THE INSTITUTION MORE THAN ONE TIME,
/ ENTER "1". OTHERWISE, ENTER NUMBER OF DIFFERENT TIMES R HAS ATTENDED.
/
/^B
V (1/3, U4/7) {N}
Q232UT 2 ELAPSED TIME AFTER numatnd
Q233S LOOP COUNTER FOR SDINST EDINST
C1 the first time
C2 the second time
C'<3/7( the next time
G '<1/7(=231(GE'<1/7() * SCREEN sdinst edinst
* Instruct: LOOP "INSTNAME2" THROUGH "EDRELJOB" "NUMINST" (NUMBER OF INSTITUTION
* Instruct: ATTENDED) TIMES. STORE MONTH AND YEAR AS TWO SEPARATE VARIABLES.
Q234UB 2 SDINST - MONTH STARTED ATTENDING INSTITUTION
/^C1
/^IF 231(1)
/ When did you start attending
/ ^217?
/^ELSE
/ When did you start attending
/ ^217 ^233?
/^END
/
/^B/^B
/
/
/^IF 231(1)
/ When did you stop attending
/ ^217?
/^ELSE
/ When did you stop attending
/ ^217 ^233?
/^END
/
/ INTERVIEWER: ENTER "96/96" IF RESPONDENT IS CURRENTLY ATTENDING THIS
/ INSTITUTION.
/
/^B/^B
V (1/12) {Nn}
Q235UB 2 SDINST - YEAR STARTED ATTENDING INSTITUTION
V (91/"83, U88/90) {NN}
*RANGE CHANGED FROM 86 TO 88
Q236UB 2 EDINST - MONTH STOPPED ATTENDING INSTITUTION
V (1/12, 96) {Nn}
Q237UB 2 EDINST - YEAR STOPPED ATTENDING INSTITUTION
V (93/"83, 96, U90/92) {NN}
J238 234 B235(Q237)+234(GQ236)+233(G0).235(Q237)+237(G0)+234(GQ236)+236(G0)=STA
/RT DATE IS AFTER FINISH DATE
J238 234 B236(96)+237(N96).236(1/12)+237(GQ83).237(Q83)+236(GQ82)=INV
/ALID END DATE
J238 234 B233(G1)+235(LQ240)+235(G0).235(Q240)+234(LQ239)+234(G0)=S
/TART DATE IS BEFORE LAST SPELL'S END DATE
*DELETE PER JEANNETTE
*238 234 B21(6/8)+235(L92)+235(G0).235(Q240)+234(L6)+234(G0)=START DA
/TE BEFORE JUNE 1992
*DELETE PER PAUL
*238 234 B21(1/3)+235(G0)+(235(LQ25).235(Q25)+234(LQ23))=START DATE B
/EFORE RECEIVED HIGH SCHOOL DIPLOMA

A-22
While attending \(^217\), during this period, were you enrolled . . .

~IF 236(96)+237(96)
What is your actual or intended major field of study at \(^217\)?
~ELSE
During your last month of attendance, what was your actual or intended major field of study at \(^217\)?
~END

INTERVIEWER: CODE MAJOR FIELD OF STUDY ON THE NEXT SCREEN

---

**FIELDSTU** - FIELD OF STUDY AT INSTITUTION

**FIELDSTU-MAJOR CODE** | MAJNEWP(G:\,)

**FIELDSTU-VERBATIM** | MAJNEWP(G:\,)

**FIELDSTU-SEARCH** | MAJNEWP(G:\,)

**ELAPSED TIME AFTER FIELDSTU**

*! SKIP [IF VOCATION = 2 THEN GOTO typdegct daterecv]

* SCREEN hrsweekly
* Instruct: IF "EDINST" = 96/96 THEN "INSERT" = "About how many
* Instruct: hours per week are" IF "EDINST" != 96/96 THEN "INSERT" = "During the
* Instruct: last month you attended "INSTNAME2", about how many hours a week
* Instruct: were"

*! About how many hours per week are your classes scheduled to meet?
During the last month you attended about how many hours a week were your classes scheduled to meet?

What type of degree or certificate were you studying for at?

Have you completed the requirements for that degree/certificate? IF YES, When did you receive your degree/certificate?

INTERVIEWER: IF R HAS NOT COMPLETED REQUIREMENTS ENTER "00/00".

SCREEN typdegct

TYPDEGCT - TYPE OF DEGREE/CERTIFICATE STUDYING FOR

WHAT TYPE OF DEGREE OR CERTIFICATE ARE YOU STUDYING FOR AT

WHAT TYPE OF DEGREE OR CERTIFICATE WERE YOU STUDYING FOR AT

HAVE YOU COMPLETED THE REQUIREMENTS FOR THAT DEGREE/CERTIFICATE? IF YES, WHEN DID YOU RECEIVE YOUR DEGREE/CERTIFICATE?

INTERVIEWER: IF R HAS NOT COMPLETED REQUIREMENTS ENTER "00/00".

SCREEN typdegct

TYPDEGCT - TYPE OF DEGREE/CERTIFICATE STUDYING FOR

WHAT TYPE OF DEGREE OR CERTIFICATE ARE YOU STUDYING FOR AT

WHAT TYPE OF DEGREE OR CERTIFICATE WERE YOU STUDYING FOR AT

HAVE YOU COMPLETED THE REQUIREMENTS FOR THAT DEGREE/CERTIFICATE? IF YES, WHEN DID YOU RECEIVE YOUR DEGREE/CERTIFICATE?

INTERVIEWER: IF R HAS NOT COMPLETED REQUIREMENTS ENTER "00/00".

SCREEN typdegct

TYPDEGCT - TYPE OF DEGREE/CERTIFICATE STUDYING FOR

WHAT TYPE OF DEGREE OR CERTIFICATE ARE YOU STUDYING FOR AT

WHAT TYPE OF DEGREE OR CERTIFICATE WERE YOU STUDYING FOR AT

HAVE YOU COMPLETED THE REQUIREMENTS FOR THAT DEGREE/CERTIFICATE? IF YES, WHEN DID YOU RECEIVE YOUR DEGREE/CERTIFICATE?

INTERVIEWER: IF R HAS NOT COMPLETED REQUIREMENTS ENTER "00/00".
*SKIP [IF DATERECV !=MISSING OR 00/00 AND TYPDEGDT=3 AND (EDINST-SDINST)<18
*THEN GOTO typdegct daterecv]
J255 251 B252(G0)+253(G0)+251(3)+242(G0)+242(L18)=SHOULD BE ENROLLED
/AT LEAST 18 MONTHS TO COMPLETE ASSOCIATES
*SKIP [IF DATERECV !=MISSING OR 00/00 AND TYPDEGDT=4 AND (EDINST-SDINST)<36
*THEN GOTO typdegct daterecv]
J255 251 B252(G0)+253(G0)+251(4)+242(G0)+242(L36)=SHOULD BE ENROLLED
/AT LEAST 36 MONTHS TO COMPLETE BACHELORS
Q255UT 2 ELAPSED TIME AFTER DATERECV
****************************************
J256 257 227(G0)+227(N99995)=:/^0=227*3X:
J256 257 227(0)=:30000:
J256 257 227(99995)=:150003:
Q256U 6 MIN FOR AMTAIDYR SOFT CHECK
Q257UT 14 MAX WITHOUT BEEP 256-1X
Q258ET
Q259ET
Q260ET
Q261ET
*! SKIP [IF "DATERECV" = 00/00 OR REF,DK,NA THEN GOTO typfaid]
J262 264 252(0+N")+253(0+N")
*! SKIP [IF ("TYPDEGCT" != 2) AND ("TYPEDECT" != 3) THEN GOTO typfaid]
J262 264 251(N2+N3)+251(A)
* SCREEN jobchnng
* Instruct: LOOP "INSTNAME2" THROUGH "EDRELJOB" "NUMINST" (NUMBER OF INSTITUTION
* Instruct: ATTENDED) TIMES.
Q262FB JOBCHNG - DEGREE/CERTIFICATE RESULT IN JOB CHANGE OR PROMOT
/^C2
/ Did receiving your degree/certificate result in a job change or
/ promotion?
/
/^B
C1 YES
C2 NO
G 2,1
Q263UT 2 ELAPSED TIME AFTER JOBCHNG
****************************************
*! SCREEN typfaid
* Instruct: LOOP "INSTNAME2" THROUGH "EDRELJOB" "NUMINST" (NUMBER OF INSTITUTION
* Instruct: ATTENDED) TIMES.
* ORIG_QTYPE = FIXED, MULTIPLE
Q264FMC 5 TYPFAID - TYPES OF STUDENT FINANCIAL AID RECEIVED
/^C1
/ What types of student financial aid did you receive while attending
/ ^217? Did you receive...
/
/ INTERVIEWER: CODE ALL THAT APPLY.
C1 Grants/scholarships/fellowships
C2 Loans
C3 College work-study
C4 OTHER
C5 NONE
J265 264 B264(5)+264(1/4)=CAN'T CODE NONE WITH OTHER RESPONSES
Q265UT 2 ELAPSED TIME AFTER TYPFAID
****************************************
*! SCREEN amtaidyr
* Instruct: LOOP "INSTNAME2" THROUGH "EDRELJOB" "NUMINST" (NUMBER OF INSTITUTION
* Instruct: ATTENDED) TIMES. IF "EDINST" = 96/96 THEN "INSERT" = "receive" IF
Instruct: "EDINST" ! = 96/96 THEN "INSERT" = "received"

Q268UB  6  AMTAIDYR - TOTAL AMOUNT FINANCIAL AID RECEIVE YEARLY

/*C1
/ ~IF 236(96)+237(96)
/ During your most recent period of enrollment
/ at `217, what is the total amount
/ of financial aid you receive yearly?
/~ELSE
/ During your most recent period of enrollment
/ at `217, what was the total amount
/ of financial aid you received yearly?
/~END
/
/~B
V  (0,100/^257,U^256/999995){Nnnnnn}

* RANGE CHANGE
*269 268            B0(LQ268)+227(G0)+268(N99995)=(227*3X)=AID IS MORE THAN 3 TI
/MES THE TUITION
Q269UT       2       ELAPSED TIME AFTER AMTAIDYR

*****************************************************************************
*!
* SCREEN parnborw jobs
* QUESTION WORDDING TAKEN IN REVISED FORM FROM HS&B SECOND FOLLOW-UP
* 1980 SOPHOMORE COHORT QUESTIONNAIRE Q.31.
* Instruct: LOOP "INSTNAME2" THROUGH "EDRELJOB" "NUMINST" (NUMBER OF INSTITUTION
* Instruct: ATTENDED) TIMES.
Q270FB               CAMPJOB - PAYING JOB ON CAMPUS WHILE ENROLLED

/*C2
/
/ Did you ever have a paying job on campus while enrolled at
/ `217?
/
/~B
/
/
/ While enrolled at `217, did you ever
/ have a job related to your education, such as an apprenticeship,
/ internship, or co-op?
/
/~B
/
/
/ Did your parents take out loans or borrow money to finance your
/ postsecondary schooling at `217?
/
/~B
C1                   YES
C2                   NO
G                    2,1
* Instruct: LOOP "INSTNAME2" THROUGH "EDRELJOB" "NUMINST" (NUMBER OF INSTITUTION
* Instruct: ATTENDED) TIMES.
Q271FB               EDRELJOB - JOB RELATED TO EDUCATION WHILE ENROLLED

/*C1
C2                   NO
G                    2,1
* Instruct: LOOP "INSTNAME2" THROUGH "EDRELJOB" "NUMINST" (NUMBER OF INSTITUTION
* Instruct: ATTENDED) TIMES.
Q272FB               PARNBROW - PARENTAL BORROWING TO FINANCE POSTSEC EDUCATION

/*C1
C2                   NO
G                    2,1
Q273UT       2       ELAPSED TIME AFTER EDRELJOB

*****************************************************************************
5 QUESTIONS TO DETERMINE SCHOOL ATTENDED THE LONGEST
1 QUESTION TO FIND KINDINST FOR SCHOOL ATTENDED THE LONGEST
! ENDLOOP

**SCREEN totlborw**
* Instruct: IF "NUMINST" = 1 THEN "INSERT" = "What" IF "NUMINST" > 1 THEN
* Instruct: "INSERT" = "Thinking about all of the postsecondary institutions you
* Instruct: have attended, what"

**TOLBROW - TOTAL AMOUNT R BORROWED FOR POSTSEC EDUCATION**

**SCREEN courses1**

**REVIEWER: IF NECESSARY, PROBE: "These questions refer only to**
During the past two years, how much of the following services have you received? For each type of service, please tell me if the service was not available, was available but you did not receive it, or you did receive the service.

INTERVIEWER: IF R DID NOT RECEIVE A SERVICE, PROBE TO FIND OUT IF THE SERVICE WAS NOT AVAILABLE, OR IF IT WAS AVAILABLE BUT R DID NOT RECEIVE IT.

INTERVIEWER: USE CODING SCALE DESCRIBED BELOW.

1 = NOT AVAILABLE  2 = AVAILABLE BUT DID NOT RECEIVE  3 = RECEIVED

Formal tutoring (including tutoring by faculty or students)?

Counseling (on personal, academic, financial or job or career choices)?

Special instruction (in areas such as Remedial English, Remedial Mathematics, reading improvement, improving writing skills, how to take
/tests or how to study more efficiently)?                                ^B
V (1/3)(N)
Q300UB 1 COUNSEL - PERSONAL ACADEMIC FINANCIAL CAREER COUNSELLING
V (1/3)(N)
Q301UB 1 SPECINST2 - SPEC INSTRU ENG MATH READ WRITING TESTS STUDYING
V (1/3)(N)
Q302ET FINDJOBS - DELETED
Q303UT 2 ELAPSED TIME AFTER FINDJOBS
**********************************************************************
Q304ET
Q305ET
*! SCREEN activ1
* QUESTION WORDING TAKEN IN REVISED FORM FROM BPS94 (?) DATA ELEMENT
* B6.
* Instruct: "INSERT" = "NAME OF INSTITUTION ATTENDED Longest"
Q306ET TALKFACL - DELETED
Q307ET MEETADVR - DELETED
Q308ET INFRADVR - DELETED
Q309ET STDYGROUP - DELETED
Q310ET ...
Q311ET STNTPRGM - DELETED
Q312ET GOPRND5 - DELETED
Q313ET SCHLCLBS - DELETED
Q314ET CARLECTS - DELETED
Q315ET
**********************************************************************
Q316ET
Q317ET
Q318ET
Q319ET
Q320ET TECHABLY - DELETED
Q321ET INTLGRTH - DELETED
Q322ET COSTATTN - DELETED
Q323ET CRSOFERS - DELETED
Q324ET
**********************************************************************
*! SKIP [IF "VOCATION" OF SCHOOL ATTENDED Longest =1 THEN GOTO othname1]
J324 340 277(1)
* SCREEN aspects2
Q324ET SOCLIFE - DELETED
Q325ET SCHLPRES - DELETED
Q326ET SRTRPROG - DELETED
Q327ET
**********************************************************************
*! SCREEN extracur1
* Instruct: "INSERT" = "NAME OF INSTITUTION ATTENDED Longest"
Q328FB VARATH - HOW OFTEN DO VARSITY INTERCOLLEGIATE ATHLETICS
/The next set of questions are about various extracurricular
/activities at ^276. Please tell me
/if you have ever participated in any of these activities while attending
/^276. ^C2
/
/Varsity intercollegiate athletics? . . . . . . . . . . . . . . . . . . ^B
/Other intercollegiate athletics? . . . . . . . . . . . . . . . . . . ^B
/Intramural athletics? . . . . . . . . . . . . . . . . . . . . . . . . ^B
/Performing arts (such as, music groups, theater, etc.)? ^B
/College newspaper or radio station? . . . . . . . . . . . . . . . . . ^B
/Student government or political groups? . . . . . . . . . . . . ^B
/Social clubs, fraternities/sororities? . . . . . . . . . . . . . . ^B
/Volunteer services to fellow students? . . . . . . . . . . . . ^B
/Volunteer services to community groups? . . . . . . . . . . . . ^B
C1 YES
C2 NO
Q329FB OTHERATH - HOW OFTEN DO OTHER INTERCOLLEGIATE ATHLETICS
C1 YES
C2 NO
G 2,1
Q330FB INTRATH - HOW OFTEN DO INTRAMURAL ATHLETICS
C1 YES
C2 NO
G 2,1
Q331FB PERFARTS - HOW OFTEN DO PERFORMING ARTS
C1 YES
C2 NO
G 2,1
Q332FB NEWSRADI - HOW OFTEN DO COLLEGE NEWSPAPER OR RADIO STATION
C1 YES
C2 NO
G 2,1
Q333FB STDTGOV - HOW OFTEN DO STUDENT GOVERNMENT OR POLITICAL GROU
C1 YES
C2 NO
G 2,1
Q334FB SOCCLUB - HOW OFTEN DO SOCIAL CLUBS, FRATERNITIES/SORORITI
C1 YES
C2 NO
G 2,1
Q335FB VOLUSTDT - HOW OFTEN DO VOLUNTEER SERVICES TO FELLOW STUDEN
C1 YES
C2 NO
G 2,1
Q336FB VOLUCMTY - HOW OFTEN DO VOLUNTEER SERVICES TO COMMUNITY GRO
C1 YES
C2 NO
G 2,1
Q337UT 2 ELAPSED TIME AFTER VOLUCMTY
Q338ET
Q339ET
****************************************
*! SCREEN edexpect
Q340FB EDEXPECT - HIGHEST LEVEL OF EDUCATION EXPECT TO COMPLETE
/^C1
/ What is the highest level of education you ever expect to
/ complete?
/
/ INTERVIEWER: IF NECESSARY, PROBE BY READING RESPONSE CATEGORIES.
/
/^B
C1 SOME HIGH SCHOOL
C2 FINISH HS OR EARN HS EQUIVAENCY DIPLOMA OR CERTIFICATE
C3 VOC/TRADE/BUS SCHOOL AFTER HIGH SCHOOL - LESS THAN 2 YEARS
C4 VOC/TRADE/BUS SCHOOL AFTER HIGH SCHOOL - 2 OR MORE YEARS
C5 COLLEGE PROGRAM - LESS THAN 2 YEARS
C6 COLLEGE PROGRAM - 2 OR MORE YEARS - ASSOCIATE'S DEGREE
C7 COLLEGE PROGRAM - FINISH COLLEGE - BACHELOR'S DEGREE
C8 COLLEGE PROGRAM - MASTER'S DEGREE OR EQUIVALENT
C9 COLLEGE PROGRAM - PH.D. OR EQUIVALENT
C10 COLLEGE PROGRAM - M.D., L.L.B., J.D., D.D.S. OR EQUIVALENT
J341 340 B340(1)+21(1/3)=GRADUATED HIGH SCHOOL ALREADY
J341 340 B340(1/2)+206(G0)=ATTENDED POST SECONDARY SCHOOL ALREADY
Q341UT 2 ELAPSED TIME AFTER EDEXPECT
****************************************
Q342S LOOP COUNTER
C'<=1/30{
*! SKIP [IF LOOFCOUNTER > 1 THEN GOTO labxpart3]
J343 345 342(G1)
* SCREEN labrpart1
* QUESTION WORDING AND RESPONSE CODES TAKEN IN REVISED FORM FROM HS&B
* 4TH FOLLOW-UP CATI INSTRUMENT.
Q343FB  LABRPART1 - LABOR FORCE PARTICIPATION JUNE, 1992 TO TODAY
/ The next section of our interview concerns your employment history from
/ At that time, were you employed, unemployed and receiving unemployment
/ compensation, unemployed and NOT receiving unemployment compensation,
/ or were you out of the labor force (that is, not working, not looking
/ for work AND not receiving unemployment compensation)?
/ INTERVIEWER: IF R WAS UNEMPLOYED PROBE WHETHER OR NOT S/HE RECEIVED
/ UNEMPLOYMENT COMPENSATION. "C1
/ INTERVIEWER: IF R SEEMS UNSURE AS TO WHAT "OUT OF THE LABOR FORCE" MEANS,
/ PROBE BY REPEATING ITS DEFINITION. "Out of the labor force means that
/ you were not working, not looking for work AND not receiving unemployment
/ compensation."
/ ^B
C1 EMPLOYED (WORKING ANY PART OF THE MONTH)
C2 UNEMPLOYED AND RECEIVING UNEMPLOYMENT COMPENSATION
C3 UNEMPLOYED AND NOT RECEIVING UNEMPLOYMENT COMPENSATION
C4 OUT OF THE LABOR FORCE
Q344UT 2 ELAPSED TIME AFTER labrpart1
*****************************************************
*! SKIP [IF LOOP COUNTER =1 THEN GOTO labrpart2]
J345 346 342(1)+343(G0)=:/^0=343:
J345 346 342(1)+343("^m")=:/^86:
J345 346 342(1)+343("^m")=:/^87:
*345 346 342(1)+343("^l")=:/^88:
*345 346 342(1)+343("^l")=:/^90:
*!
* SCREEN labrpart3
* QUESTION WORDING AND RESPONSE CODES TAKEN IN REVISED FORM FROM HS&B
* 4TH FOLLOW-UP CATI INSTRUMENT.
* Instruct: "INSERT" = 1 MONTH PAST "LABRPART2" FOR EXAMPLE, IF "LABRPART2" =
* Instruct: 03/92, "INSERT" = APRIL, 1992. LOOP "LABRPART2" THRU "LABRPART3"
* Instruct: UNTIL "LABRPART2" = 96/96. IF "LABRPART2" = 96/96 THEN GOTO
* Instruct: "NUMJOBS".
Q345FB  LABRPART3 - DATE LABOR FORCE STATUS CHANGED
/^C1/ Then starting in ^355 ^356, were you employed, unemployed and receiving
/ unemployment compensation, unemployed and NOT receiving unemployment
/ compensation or out of the labor force (that is, not working and
/ not looking for work)?
/ INTERVIEWER: IF R WAS UNEMPLOYED PROBE WHETHER OR NOT S/HE RECEIVED
/ UNEMPLOYMENT COMPENSATION.
/ ^B
C1 EMPLOYED (WORKING ANY PART OF THE MONTH)
C2 UNEMPLOYED AND RECEIVING UNEMPLOYMENT COMPENSATION
C3 UNEMPLOYED AND NOT RECEIVING UNEMPLOYMENT COMPENSATION
C4 OUT OF THE LABOR FORCE
J346 347 342(1)
Q346UT 2 ELAPSED TIME AFTER labrpart3
*****************************************************
J347 348 342(G1)=:/^0=349:
J347 348 342(1)=:6:
Q347U 2 MONTH STOPPED-LAST ITERATION
J348 349 342(G1)=:/^0=350:
J348 349 342(1)=:92:
Q348U 2 YEAR STOPPED -LAST ITERATION
*! GEOFF'S PROG
*! SKIP [IF LABRPART1 = REF, DK, N/A THEN GOTO numjobs]
*! SKIP [IF LABRPART3 = REF, DK, N/A THEN GOTO numjobs]
J349 359 343("."."."".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".".
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J354 355 345(1)+(350(96).356(1994))=:1:
J354 355 345(1)+356(1992/1993)+350(94)=:1:
*NEW SKIP - NOT IN FT
J354 355 345(1)+350(94)=:1:

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**PART 3 - MOD 3**

*! SKIP [IF NOT EMPLOYED IN 92 AND 93 AND 94 THEN GOTO hlthprob jobexpect]

J363  452  352(2)+353(2)+354(2)

Q363S

C1  June 1992 through December 1992
C2  January 1993 through December 1993
C3  January 1994 through today

*!

* SCREEN numjobs

*! SKIP [IF LOOPCOUNTER = 1 AND NOT EMPLOYED IN 92 OR LOOPCOUNTER = 2

*! AND NOT EMPLOYED IN 93 OR LOOPCOUNTER=3 AND NOT EMPLOYED IN 94 THEN GOTO text subst q]

J364  404  363(1)+352(2).363(2)+353(2).363(3)+354(2)

**INSERT HERE**

Q364UB  2  NUMJOBS - NUMBER OF JOBS

/\C1

/ How many jobs did you have during the time period of

/ ^363?

/

/ /V

J365  364  B364(0+N"\^m"+N"\^n"+N"\^n"+N"\^n"+N"\^n")+352(1)+M342(1)+349(96)+350(/96)=CONTINUOUSLY EMPLOYED SINCE 6/92-HAD AT LEAST ONE JOB

J365  364  B364(1)+364(0+N"\^m"+N"\^n"+N"\^n"+N"\^n")+M342(1)+349(96)+350(1)=EMPLOYED I

/N 6/92-HAD AT LEAST ONE JOB IN 92

J365  364  B363(3)+364(0+N"\^m"+N"\^n"+N"\^n")+M349(96)+345(1)=CURRENTLY

/ EMPLOYED-HAS AT LEAST ONE JOB IN 1994

J365  364  B363(2)+364(0+N"\^m"+N"\^n"+N"\^n")+M342(1)+343(1)+349(G1)+35

/O(93)=EMPLOYED IN 1993-HAD AT LEAST ONE JOB

J365  364  B363(2)+364(0+N"\^m"+N"\^n"+N"\^n")+M342(1)+343(1)+350(94)=EMPLOYED IN

1993-HAD AT LEAST ONE JOB

J365  364  B363(3)+364(0+N"\^m"+N"\^n"+N"\^n")+M342(1)+343(1)+349(G1)+35

/O(94)=EMPLOYED IN 1994-HAD AT LEAST ONE JOB

Q365UT  2  ELAPSED TIME AFTER numjobs

J366  404  364(0+N"\^n")

*! SKIP [IF "NUMJOBS" = 0 THEN GOTO BOTTOM OF LOOP]

J366  370  363(1)+359(2).363(2)+360(2).363(3)+361(2)

*! SKIP [IF STUDENT IN 92 AND LOOPCOUNTER =1 OR NOT STUDENT IN 93 AND LOOP

* COUNTER =2 OR NOT STUDENT IN 94 AND LOOP COUNTER=3 THEN GOTO text subst q]

Q366FB  PRIMSTDT - PRIMARILY STUDENT IN REF PERIOD

/\C1

/Do you consider yourself to have been primarily a student or primarily

/employed during that time period?

/

/INTERVIEWER: IF R STATES THAT S/HE IS BOTH A STUDENT AND EMPLOYED, ASK

/WHAT IS MOST IMPORTANT TO THE R, HIS/HER SCHOOLING OR JOB.

/ /B

C1  STUDENT
C2  EMPLOYED

Q367UT  2  ELAPSED TIME AFTER primstdt

*! SKIP [IF CURRENTLY EMPLOYED GOTO numjobs]

J368  370  363(1/2).363(3)+366(N1)

Q368FB  RELSCHOOL - CURRENT JOB RELATED TO SCHOOLING

/\C2

/Is your current job related to your schooling?

/ /B

C1  YES
C2  NO
G 2,1
Q369UT 2 ELAPSED TIME AFTER relschol
*******************************
Q370ET
Q371ET
J372 373
Q372X TEXT SUBST FOR TYPEEMPL, HRSWORK, LIKWORK, TWOJOBS

G were
C2 are
C3 did
C4 do
C5 you have liked
C6 you (have) like(d)
C7 have
C8 job
C9 ^364 jobs
C10 have you ever worked
C11 did you ever work
C12 held
C13 held longest
G 1,3,5,11=363(1.2).363(3)+345(2.3.4."r"."_"."!"."")
G 2,4,6,7,10=363(3)+345(1)
G 8,12=364(1)
G 9,13=364(N1)

**! TEXT SUBST FOR TYPEEMPL were/are, HRSWORK did/do,
**! LIKWORK you have liked/you like, TWOJOBS (did)/have
J373 394 366(1)
**! SKIP [IF "PRIMSTDT" = 1 THEN GOTO hrswork]
J373 375 363(1).M363(Q404)+364(0)
J373 375 M363(Q404)+366(1)
**! SKIP [IF "LOOPCOUNTER"=1 OR ("NUMJOBS" = 0 OR SKIP/MISSING OR PRIMSTDT=1)
**! IN THE PREVIOUS ITERATION THEN GOTO nameploy]
Q373FB SAMENAME - LONGEST HELD JOB SAME AS LAST REF PERIOD
/
/*-IF 364(G1)+363(2)
/Is ^375 the company you worked for longest
/during the period of ^363?
/-END
/*-IF 364(1)
/Is ^375 the company you worked for
/during the period of ^363?
/-END
/*-IF 364(G1)+363(3)
/Is ^375 the company you worked for most
/recently (currently) during the period of ^363?
/-END

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/^B
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^363. What was the name of that employer?

/IF 364(1)+363(1)
/What was the name of that employer?
/END

/IF 364(G1)+363(2)
/Think now about the job you held the longest between January 1993 and December 1993. What was the name of that employer?
/END

/IF 364(1)+363(2)+373(0+N"π"+N"π"+N"π"+N"π")
/What was the name of that employer?
/END

/IF 364(1)+363(2)+373(2)
/What was the name of the employer you worked for during the period from ^363?
/END

/IF 363(3)+364(G1)
/Think now about your current job (or the one you held most recently). What was the name of that employer?
/END

/IF 363(3)+364(1)+373(0+N"π"+N"π"+N"π"+N"π")
/What is the name of the employer you worked for during the period from ^363?
/END

/IF 363(3)+364(1)+373(2)
/What is the name of your current (or most recent) employer?
/END

/OT A VALID RESPONSE

J376 375 B375("|N")+375(N"π"+N"π")\cdot 375(" ")+375S(L2)+375(N"π"+N"π")=N

*! SKIP [IF "LOOPCOUNTER"=1 THEN GOTO typemply]

J376 376 373(1)

Q376UT 2 ELAPSED TIME AFTER nameemploy

******************************************************************************

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Q377 379 363(1).373(1).M363(Q404)+364(0)

J377 379 M363(Q404)+366(1)

Q377FB SAMEBUS - NEW BUSINESS OR INDUSTRY

/Is ^375 the same business or industry as ^375M363(Q404)=?

/"^B

C1 YES
C2 NO

G 2,1

* SCREEN typemply

Q378UT 2 ELAPSED TIME AFTER samebus

*/

Q379 379(G0)+(377(1).373(1))=:/^0=379;

J379 380 379("π")=:/^86:

J379 380 379("π")=:/^87:

*379 380 379("π")=:/^88:

*379 380 379("π")=:/^90:

Q379FB TYPEMPLY - TYPE OF EMPLOYEE/EMPLOYER

/"C1

/On your job at ^375, ^372(1/2) you a(n)...?

/"^B

/What type of business or industry is ^375?

/INTERVIEWER: CODE INDUSTRY ON NEXT SCREEN. IF NECESSARY PROBE, "What do they make or do?"
C1 Employee of a private company,
C2 Government employee (federal, state or local),
C3 Self-employed in your own business,
C4 Working without pay on a family business or farm, or
C5 Working without pay in a volunteer job?

Q380 UB  1  BUSINDST - TYPE OF BUSINESS OR INDUSTRY OF LONGEST HELD JOB

J381 382  377(1).373(1)=:/^381:
J381 384  380(*π*)=:/^86:
J381 384  380("π")=:/^87:
*381 384  380("梁")=:/^88:
*381 384  380("π")=:/^90:

Q381 UT  36  BUSINDST-INDUST CODE|INDNEWP(G:\,)

J382 383  377(1).373(1)=:/^382:

Q382 UT  36  BUSINDST-INDUST VERBATIM|INDNEWP(G:\,)

J383 384  377(1).373(1)=:/^383:
J384 385  377(1).373(1)

Q384 UT  2  ELAPSED TIME AFTER typemply

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*! INDUSTRY CODING PROGRAM
*! SKIP [IF "BUSINDST" CODE != 15 THEN GOTO samejob]
*! SKIP OVER BRANCH IF OCCUPATION CODING PROGRAM IS NOT MILITARY

J385 386  385(G0)+381(15)+(377(1).373(1))=:/^0=385:
J385 386  385("π")+381(15)+(377(1).373(1))=:/^86:
J385 386  385("梁")+381(15)+(377(1).373(1))=:/^87:
*385 386  385("梁")+381(15)+(377(1).373(1))=:/^88:
*385 386  385("π")+381(15)+(377(1).373(1))=:/^90:
J385 387  381(N15)

* SCREEN branch
* Instruct: LOOP "NUMJOBS" THROUGH "TOTLEARN" THREE TIMES (FIRST LOOP APPLIES TO
* Instruct: JUNE - DECEMBER, 1991, SECOND LOOP APPLIES TO JANUARY - DECEMBER,
* Instruct: 1992 AND THIRD LOOP APPLIES TO JANUARY - (DATE OF INTERVIEW MONTH),

Q385 FB  BRANCH - BRANCH OF MILITARY

C1 Which branch of the military?
C2 ARMY
C3 NAVY
C4 MARINES
C5 AIR FORCE
C6 COAST GUARD
C7 NATIONAL GUARD
J386 387  381(15)+377(1).381(15)+373(1)

Q386 UT  2  ELAPSED TIME AFTER branch
*! SKIP [IF "LOOPCOUNTER"=1 THEN GOTO jobtype]

J387 389  363(1).M363(Q404)+364(0)
J387 389  363(1).M363(Q404)+366(1)

Q387 FB  SAMEJOB - SAME JOB OR OCCUPATION AS LAST REF PERIOD

* IF 363(2)
* Were you a(n) ^391 while working at ^375 in 1993?

*END
* IF 363(3)
Were you a(n) "while working at in 1994? 

---

C1 YES
C2 NO

**Q388UT 2 ELAPSED TIME AFTER samejob**

*! SKIP [IF "SAMEJOB"=1 THEN GOTO hrswork]

**J389 390 387(1)**

* SCREEN jobtype
* AUTOQUEST PROGRAMMER WILL ENTER TWO "DUMMY QUESTIONS" FOR CODING
* PROGRAM - ONE FOR VERBATIM, ONE FOR CODE.
* Instruct: LOOP "NUMJOBS" THROUGH "TOTLEARN" THREE TIMES (FIRST LOOP APPLIES TO
* Instruct: JUNE - DECEMBER, 1991, SECOND LOOP APPLIES TO JANUARY - DECEMBER,
* Instruct: 1992 AND THIRD LOOP APPLIES TO JANUARY - {DATE OF INTERVIEW MONTH},
* Instruct: 1993). USE MODIFIED SIC/SOC CODING PROGRAM FOR INTERVIEWER TO CODE
* Instruct: VERBATIM.

**Q389UP JOBTYPE - JOB OR OCCUPATION AT LONGEST HELD JOB**

/ Please describe your job or occupation at 
/ during the period (for example, cook, truck driver, cashier, salesman, nurse, school teacher, / etc.). /

/ INTERVIEWER: CODE OCCUPATION ON NEXT SCREEN. IF NECESSARY, PROBE, / "What is (was) your job title?".

**J390 393 389("=")=:/^86:**
**J390 393 389("+")=:/^87:**
**390 393 389("")=:/^88:**
**390 393 389("%")=:/^90:**
**J390 391 387(1)=:/^390:**

**Q390UT 36 JOBTYPE-OCCUPATION CODE|OCCNEWP(G:,,)**

**J391 392 387(1)=:/^391:**

**Q391UT 36 2 JOBTYPE-OCCUPATION VERBATIM|OCCNEWP(G:,,)**

**J392 393 387(1)=:/^392:**

**Q392UT 36 3 JOBTYPE-OCCUPATION SEARCH|OCCNEWP(G:,,)**

**J393 394 387(1)**

**Q393UT 2 ELAPSED TIME AFTER jobtype**

************

* SCREEN hrswork
* Instruct: LOOP "NUMJOBS" THROUGH "TOTLEARN" THREE TIMES (FIRST LOOP APPLIES TO
* Instruct: JUNE - DECEMBER, 1991, SECOND LOOP APPLIES TO JANUARY - DECEMBER,
* Instruct: 1992 AND THIRD LOOP APPLIES TO JANUARY - {DATE OF INTERVIEW MONTH},
* Instruct: 1993). "INSERT" = "did" DURING FIRST TWO LOOPS. "INSERT" = "do"
* Instruct: DURING THIRD LOOP IF "LABRPART" INDICATES R IS CURRENTLY WORKING,
* Instruct: ELSE, "INSERT" ="did".

**Q394UB 3 HRSWORK - AVERAGE HOURS WORKED PER WEEK**

/^-C1
/-IF 366(N1)
/ On average, how many hours per week ^372(3/4) you work on your job at
/ ^375 during the period of ^363?
/-END
/-IF 366(1)+363(1/2)
/ On average, how many hours per week did you work at the job you
/ ^372(12/13) during the period ^363?
/-END
/-IF 366(1)+363(3)
/ On average, how many hours per week ^372(3/4) you work at your current
/ (most recent) job?
/-END

A-38
V
*RANGE CHANGED FROM 1/168
Q395UT  2   ELAPSED TIME AFTER hrswork
*******************************************************************************
*!
*! SKIP [IF "HRSWORK" >= 35 OR REF,DK,N/A THEN GOTO twojobs]
J396 398  394(GE35).394("=*.".".".".")."
*! SKIP [IF PRIMSTDT" =1 THEN GOTO twojobs]
J396 398  366(1)
* SCREEN likework
* Instruct: LOOP "NUMJOBS" THROUGH "TOTLEARN" THREE TIMES (FIRST LOOP APPLIES TO
* Instruct: JUNE - DECEMBER, 1991, SECOND LOOP APPLIES TO JANUARY - DECEMBER,
* Instruct: 1992 AND THIRD LOOP APPLIES TO JANUARY - (DATE OF INTERVIEW MONTH),
* Instruct: 1993). "INSERT" = "you have liked" DURING FIRST TWO LOOPS. "INSERT" /=
* Instruct: "you like" DURING THIRD LOOP IF "LABRPART" INDICATES R IS CURRENTLY
* Instruct: WORKING, ELSE, "INSERT" = "you have liked".
Q396FB  LIKWORK - HOURS PER WEEK DESIRED TO WORK
/C2
/ Would ^372(5/6) to work more hours per week at
/ ^375 during this reference period?
/
/^B
C1  YES
C2  NO
G  2,1
Q397UT  2   ELAPSED TIME AFTER likework
*******************************************************************************
*!
*! SKIP [IF "NUMJOBS" = 1 THEN GOTO totlearn]
J398 400  364(1)
* SCREEN twojobs
* Instruct: LOOP "NUMJOBS" THROUGH "TOTLEARN" THREE TIMES (FIRST LOOP APPLIES TO
* Instruct: JUNE - DECEMBER, 1991, SECOND LOOP APPLIES TO JANUARY - DECEMBER,
* Instruct: 1992 AND THIRD LOOP APPLIES TO JANUARY - (DATE OF INTERVIEW MONTH),
* Instruct: LOOP. "INSERT" = "January, 1992 and December, 1992, did" DURING
* Instruct: SECOND LOOP. "INSERT" = "January, 1993 and (DATE OF INTERVIEW MONTH
* Instruct: AND YEAR), have" DURING THIRD LOOP.
Q398FB  TWOJOBS - EVER WORKED TWO OR MORE JOBS AT SAME TIME
/^C2
/~IF 363(1)
/ Between June 1992 and December 1992, ^372(10/11) two or
/ more jobs at the same time?
/~END
/~IF 363(2)
/ Between January 1993 and December 1993, ^372(10/11) two or
/ more jobs at the same time?
/~END
/~IF 363(3)
/ Between January 1994 and today, ^372(10/11) two or
/ more jobs at the same time?
/~END
/~B
**^C2
/ Between ^363, ^372(10/11) two or
/ more jobs at the same time?
/ ^/ ^B
C1  YES
**SCREEN tolearn**


* Instruct: "INSERT" = "June, 1991 and December, 1991" DURING FIRST LOOP.

* Instruct: "INSERT" = "January, 1992 and December, 1992" DURING SECOND LOOP.

* Instruct: "INSERT" = "January, 1993 and (DATE OF INTERVIEW MONTH AND YEAR)" DURING THIRD LOOP.

What were your total earnings from the all jobs during the period from 

/ \INTERVIEWER: ENTER "0" IF NONE. 

What were your total earnings from the all jobs during the period from 

/ \INTERVIEWER: ENTER "0" IF NONE. 

What were your total monthly earnings from your job at during the period 

/ \INTERVIEWER: ENTER "0" IF NONE. 

What were your total monthly earnings from your current (most recent) job? 

/ \INTERVIEWER: ENTER "0" IF NONE. 

Did you receive any formal training or education from your job at during the period January 1993 through December 1993?
Did you participate in an apprenticeship at
^375M363(2)=?

C1 YES
C2 NO
G 2,1
Q406FB PARTAPPT - PARTICIPATE IN AN APPRENTICESHIP
C1 YES
C2 NO
G 2,1
Q407UT 2 ELAPSED TIME AFTER frmtran partappt

*! SKIP [IF "PARTAPPT" != 1 THEN GOTO empbnft1]
J408 411 406(N1)
* SCREEN forinfap unaprent
Q408FB FORINFAP - FORMAL OR INFORMAL APPRENTICESHIP
C1
C2
C1 FORMAL
C2 INFORMAL
Q409FB UNAPRENT - APPRENTICESHIP UNION SPONSORED
C1 YES
C2 NO
G 2,1
Q410UT 2 ELAPSED TIME AFTER forinfap unaprent

* SCREEN empbnft1
Q411X TEXT SUBST FOR EMPLEAV
C1 Maternity
C2 Paternity
G 1=6(1)
G 2=6(2)
*! TEXT SUBST FOR EMPBLEAV Maternity/Paternity
J411 412
Q411X TEXT SUBST FOR EMPLEAV
C1 Maternity
C2 Paternity
G 1=6(1)
G 2=6(2)
*! TEXT SUBST FOR EMPBLEAV Maternity/Paternity
* SCREEN empbnft1
Q412FB EMPBMED - EMPLOYER PROVIDED MEDICAL BENEFITS
/While working at ^375M363(2)=,
/did your employer make available to you any of the following benefits: ^C2
/
/Medical, surgical, or hospital insurance that covers injuries or
/major illness off the job? ^B
/
/Dental benefits? ^B
/
/Life insurance that would cover your death for reasons not
/connected with your job? ^B
/
/Sick days with pay? ^B
/
/Paid vacation? ^B
/
/Paid maternity or paternity leave that will allow you to go back
/to your old job or one that pays the same as your old job?

A-41
/* Instruct: "INSERT" = "Maternity" if "RSEX" OR "P_SEX" = FEMALE. "INSERT" =
* Instruct: "Paternity" if "RSEX" OR "P_SEX" = MALE.
Q417FB  EMPBLEAV - EMPLOYER PROVIDED MATERNITY/PATERNITY LEAVE-PAID
C1  YES
C2  NO
G  2,1
Q418UT  2  ELAPSED TIME AFTER EMPBLEAV
*/
Q419FB  UNPDLEAV - EMPLOYER PROVIDED MATERNITY/PATERNITY LEAVE-UNPAID
/WHILE WORKING AT ^375M363(2)=, DID YOUR EMPLOYER
/MAKE AVAILABLE TO YOU ANY OF THE FOLLOWING BENEFITS: ^C2
/
/Unpaid maternity or paternity leave that will allow you to go back to your
/old job or one that pays the same as your old job? ^B
/
/A pension plan? ^B
/
/Childcare assistance? ^B
/
/Unpaid leave to care for a parent, spouse, or child with a serious health
-condition, that will allow you to go back to your old job or one that has
/the equivalent pay and benefits as your old job? ^B
/
/Unpaid leave for your own serious health condition? ^B
/
/Intermittent or reduced leave for a serious health condition of yours, a
/parent, a spouse or child, or for the birth, adoption or foster placement
/of a child? ^B
C1  YES
C2  NO
G  2,1
Q420FB  EMPBPENS - EMPLOYER PROVIDED PENSION PLAN
C1  YES
C2  NO
G  2,1
Q421FB  EMPBCHLD - EMPLOYER PROVIDED PENSION PLAN
C1  YES
C2  NO
G  2,1
Q422FB  UNPADOTH - EMPLOYER PROVIDED UNPAID LEAVE TO CARE FOR OTHERS
C1  YES
C2  NO
G  2,1
Q423FB  UNPADOWN - EMP PROV UNPAID LEAVE OWN SERIOUS COND
C1                   YES
C2                   NO
G                    2,1
Q424FB               REDUCELV - EMP PROV INTERMITTENT OR REDUCED LEAVE
C1                   YES
C2                   NO
G                    2,1
Q425UT       2       ELAPSED TIME AFTER empbnft2
Q426ET
* SCREEN emprvtrn
Q427FB               EMPRVTTRN - EMPLOYER PROVIDED TRAINING IN LAST YEAR
/^
Since January 1993, have you received employer-provided training benefits, such as attending an education program, from your job at ^375M363(2)=?
/^
/^
C1                   YES
C2                   NO
G                    2,1
Q428UT       2       ELAPSED TIME AFTER emprvtrn
****************************************
*!
*! SKIP [IF "EMPRVTRN" != 1 THEN GOTO text subst Q before jobsatisfy1]
J429 443             427(N1)
* SCREEN emptrain
* Instruct: "NAMEMPL" REFERS TO EMPLOYER NAME DURING THIRD REFERENCE PERIOD
* Instruct: (JANUARY - (INTERVIEW MONTH), 1993).
* ORIG_QTYPE = FIXED, MULTIPLE
Q429UB       2       TOTLTRAN - NUMBER OF EMPLOYER PROVIDED TRAININGS IN LAST YEAR
/Since January 1993, how many different trainings have you participated in?
/INTERVIEWER: IF NECESSARY PROBE, "Please include only those trainings that were provided by ^375M363(2)=.
/^
/^
/Now I am going to read you a list of types of training or education programs. For each one, please tell me if you have received that type of training since January 1993 from your job at ^375M363(2)=.
/^
/^
/INTERVIEWER: READ LIST AND CODE ALL THAT APPLY.
/Have you received ...
/^
/^
V                    (1/19,U20/95){Nn}
Q430FMB      6       EMPTRAIN - RECEIPT OF EMPLOYER PROVIDED TRAINING.
C1                   On-site formal employer-provided training during working hours?
/urs?
C2                   Informal on-the-job training?
C3                   Off-site formal employer-provided training during working hours?
/ours?
C4                   Tuition aid or financial assistance for attending education institutions?
/ai institutions?
C5                   NONE OF THE ABOVE
C6                                                     EXIT SCREEN
J431 430             430(5)+430(1/4)=CAN'T CODE NONE WITH OTHER RESPONSES
J431 430             430(N1/5)+430(N^P^N+N^P^N+N^P^N)=ENTER A RESPONSE
J431 430             430(N6+N^P^N+N^P^N+N^P)=SELECT "EXIT SCREEN"
Q431UT       2       ELAPSED TIME AFTER EMPTRAIN
*! SKIP [IF "EMPTRAIN" = 5 THEN GOTO text Q before jobsatisfy1]
J432 443             430(5)
*! SKIP [IF "EMPTRAIN" <> AT LEAST ONE OF 1,3 OR 4 THEN GOTO trainexprc]
What was the total number of weeks you attended this training or education program?

INTERVIEWER: IF NECESSARY, PROBE "Please include ALL the training/education you received since January 1993."

How many hours per week did you attend this training or education program?

INTERVIEWER: IF RESPONDENT RECEIVED MORE THAN ONE TYPE OF TRAINING SINCE JANUARY 1993, ASK HOURS PER WEEK FOR THE ONE THAT LASTED THE LONGEST.

Where did you receive this training or education?

INTERVIEWER: IF NECESSARY, PROBE BY READING RESPONSE CATEGORIES.

Where did you receive this training or education?

A HIGH SCHOOL
A VOCATIONAL, TRADE, BUSINESS, OR OTHER CAREER TRAINING SCHOOL
A JUNIOR OR COMMUNITY COLLEGE
A COLLEGE OR UNIVERSITY
AN INDEPENDENT GRADUATE OR PROFESSIONAL SCHOOL
A MILITARY SERVICE
A JOB SITE
OTHER
**SCREEN trainexprc**

* QUESTION WORDING AND RESPONSE CATEGORIES TAKEN IN REVISED FORM FROM
* HS&B 2ND FOLLOW-UP SOPHOMORE COHORT QUESTIONNAIRE, Q.51.B.
* Instruct: "NAMEMPL" REFERS TO EMPLOYER NAME DURING THIRD REFERENCE PERIOD
* Instruct: (JANUARY - {INTERVIEW MONTH}, 1993).
* ORIG_QTYPE = FIXED, MULTIPLE

**Q440UT** 2 ELAPSED TIME AFTER instrecv

* SCREEN jobsatisfy1

* QUESTION WORDING AND RESPONSE CATEGORIES TAKEN IN REVISED FORM FROM
* HS&B 2ND FOLLOW-UP SOPHOMORE COHORT QUESTIONNAIRE, Q.52.
* Instruct: "NAMEMPL" REFERS TO EMPLOYER NAME DURING THIRD REFERENCE PERIOD
* Instruct: (JANUARY - {INTERVIEW MONTH}, 1993). "INSERT" = "are" IF "LABRPART2"
* Instruct: INDICATES R IS CURRENTLY WORKING, ELSE, "INSERT" = "were".

**Q444UB** 1 PAYFRNGE - SATISFACTION WITH JOB'S PAY AND FRINGE BENEFITS

/How satisfied were you with the following aspects of your job at
/ ^375M363(2) = during the period
/of January 1993 through December 1993? Would you say you were
/very satisfied, somewhat satisfied, or dissatisfied with . . .
/
/INTERVIEWER: USE SCALE DESCRIBED BELOW
/
/1 = VERY SATISFIED 2 = SOMEWHAT SATISFIED 3 = DISSATISFIED
/
/the job's pay and fringe benefits? ^B
/
/its importance and challenge? ^B
/
/its working conditions? ^B
/
/the opportunity for promotion and advancement? ^B
/
/the opportunity to use past training and education? ^B
its security and permanence?

the opportunity to further your education?

* QUESTION WORDING AND RESPONSE CATEGORIES TAKEN IN REVISED FORM FROM
* HS&B 2ND FOLLOW-UP SOPHOMORE COHORT QUESTIONNAIRE, Q.52.

Q445UB 1 IMPRTCHAL - SATISFACTION WITH JOB’S IMPORTANCE AND CHALLENGE
V (1/3)(N)
Q446UB 1 WRKCNDT - SATISFACTION WITH JOB’S WORKING CONDITIONS
V (1/3)(N)
Q447UB 1 OPROMOT - SATISFACTION WITH OPPORTUNITY FOR PROMOTION/ADVANCEMENT
V (1/3)(N)
Q448UB 1 OUSTRAIN - SATISFACTION OPPORTUNITY TO USE PAST TRAINING/EDUCATION
V (1/3)(N)
Q449UB 1 JOBSECCTY - SATISFACTION WITH JOB SECURITY AND PERMANENCE
V (1/3)(N)
Q450UB 1 FURTHED - SATISFACTION OPPORTUNITY TO FURTHER EDUCATION
V (1/3)(N)
Q451UT 2 ELAPSED TIME AFTER jobsatisfy2

* SCREEN hlthprob jobexpect
* AUTOQUEST PROGRAMMER WILL ENTER TWO "DUMMY QUESTIONS" FOR CODING
* PROGRAM - ONE FOR VERBATIM, ONE FOR CODE. QUESTION WORDING TAKEN IN
* REVISED FORM FROM HS&B SECOND FOLLOW-UP SOPHOMORE QUESTIONNAIRE,
* Q.54.
* Instruct: USE MODIFIED SIC/SOC CODING PROGRAM FOR INTERVIEWER TO CODE VERBATIM /

Q452FB 1 HLTHPROB - HEALTH PROBLEMS LIMITING TYPE JOB OR AMOUNT WORK
I have a couple of questions for you about your future job expectations.
Are you limited in the kind of job or amount of work you can do because
of any impairment or health problem?

C1 YES
C2 NO
G 2,1
Q453FB OVERSEAS - PLAN TO WORK OVERSEAS
C1 YES
C2 NO
G 2,1
Q454UB 1 JOBEXPCT - JOB EXPECT/PLAN HAVING AT AGE 30
J455 458 454("\"p\"")=://86:
J455 458 454("\"l\"")=://87:
*455 458 454("\"l\"")=://88:
*455 458 454("\"l\"")=://90:
Q455UT 36 JOBEXPCT-OCCUP CODE|OCCNEWP(G:\,)
Q456UT 36 2 JOBEXPCT-OCCUP VERBATIM|OCCNEWP(G:\,)
What was YOUR total income from all sources, before taxes, in 1993? This figure should include salaries, wages, pensions, dividends, interest, unemployment compensation, grants, financial aid, scholarships, government assistance (AFDC), and all other income.

INTERVIEWER: ENTER "0" IF NO INCOME.

What do you expect your total annual income to be when you are 30 years old?

INTERVIEWER: ENTER "0" IF RESPONDENT EXPECTS TO HAVE NO INCOME.

What was your and your joint total JOINT INCOME from all sources, before taxes, in 1992? Again, this figure should include salaries, wages, pensions, dividends, interest, unemployment compensation, grants, financial aid, scholarships, government assistance (AFDC), and all other income.

INTERVIEWER: ENTER "0" IF NO INCOME.

What are your current monthly payments for the following? Home mortgage or rent for your primary residence?

INTERVIEWER: CODE "0" IF NONE.

Automobile loans?

INTERVIEWER: CODE "0" IF NONE.
Other debts?

INTERVIEWER: CODE "0" IF NONE.

Do you contribute to anyone else's support, such as grandparents, aunts, or other relatives, regardless of whether or not they currently live with you?

V

* RANGE CHANGED

Q465UB 4 AUTOLOAN - MONTHLY AUTO LOANS

* RANGE CHANGED

Q466UB 4 OTHRDEBT - OTHER MONTHLY DEBTS

* RANGE CHANGED

Q467FB CNTRBUTE - CONTRIBUTE TO ANYONE ELSE'S SUPPORT

C1 YES

C2 NO

G 2,1

*!

Q468UT 2 ELAPSED TIME AFTER cntrbute

*! SKIP [IF "CNTRBUTE" = 2 (NO) OR REF, DK, NA THEN GOTO tvwatch]

J469 471 (467(2."π"."π"."π"."π")

* SCREEN amtsuprt

* QUESTION WORDING TAKEN FROM HS&B 4TH FOLLOW-UP SAQ, Q.57.

Q469UB 5 AMTSUPRT - ANNUAL SUPPORT OF OTHER PERSON(S)

/^C1

How much would you estimate you spend annually for this (these) person's support?

V

*! SKIP [IF "CNTRBUTE" = 2 (NO) OR REF, DK, NA THEN GOTO tvwatch]

J469 471 (467(2."π"."π"."π"."π")

* SCREEN amtsuprt

* SCREEN ernlicrt

Q471FB ERNLICRT - LICENSES EARNED SINCE HIGH SCHOOL

/^C2

Since the time you left high school, have you earned any type of license (such as, broadcasting, hairdresser, real estate, etc.)?

/^B

C1 YES

C2 NO

G 2,1

Q472UT 2 ELAPSED TIME AFTER ernlicrt

* SCREEN ernlicrt

Q473UB 2 NUMLICRT - NUMBER OF LICENSES EARNED SINCE HIGH SCHOOL

/^C1
How many licenses have you earned since leaving high school?

^B (1/4,95,U5/20)(Nn)
Q474UT 2 ELAPSED TIME AFTER numlicrt
*****************************************************************************
*!
*! SKIP [IF "NUMLICRT" != VALID THEN GOTO rincome]
J475 480 473(0)
Q475S A loop Q...
C1 first
C2 next
C3 next
C4 next
C5 next
*! LOOP MARKERS 1=first,2=second...
* SCREEN kindlicrt
* USE UNCODED VERBATIM FORMAT DURING PRETEST AND FIELD TEST TO
* DETERMINE CODED RESPONSE CATEGORIES FOR MAIN STUDY.
* Instruct: LOOP "KINDLCRT" THROUGH "DATEREC" RESPONSE TO "NUMLICRT" TIMES.
* Instruct: "INSERT" = "did you earn" if "NUMLICRT" = 1. "INSERT" = "did you ear
*/n
* Instruct: first" IF "NUMLICRT" > 1 AND THIS IS FIRST TIME THROUGH LOOP.
* Instruct: "INSERT" = "did you earn next" IF "NUMLICRT" > 1 AND THIS IS NOT
* Instruct: FIRST TIME THROUGH LOOP.
Q476UB 80 KINDLCRT - TYPE OF LICENSE
/^C1
/-IF 473(1)
/ What type of license did you earn?
/-ELSE
/ What type of license did you earn ^475?
/-END
/ /
/ When did you receive this license?
/ /
/^B/^B
M
* Instruct: LOOP "KINDLCRT" THROUGH "DATEREC" RESPONSE TO "NUMLICRT" TIMES.
Q477UB 2 DATEREC - DATE RECEIVED LICENSE-MONTH
V (1/12)(Nn)
Q478UB 2 DATEREC - DATE RECEIVED LICENSE-YEAR
V (87/83)(NN)
J479 476 B476("|N")+476(N"n"+N"n")..476(" ")+476S(L2)+476(N"n"+N"n")=N
/OT A VALID RESPONSE
J479 477 B478(Q83)+477(GQ82)=DATE IS AFTER CURRENT DATE
J479 477 B478(G0)+25(QG478).25(Q478)+23(GQ477)+478(G0)+23(G0)=DATE IS
/ BEFORE GRADUATION FROM HIGH SCHOOL
J479 477 B478(G0)+477(G0)+(480(GQ478).478(Q480)+479(GQ477))=DATE IS B
/EFOR PREVIOUSLY ENTERED DATE
J479 480 477(G0)=:/^477:
J479 480 477(0)
Q479U INSERT DATERECM
J480 481 478(G0)=:/^478:
J480 481 478(0)
Q480U INSERT DATERECY
Q481UT 2 ELAPSED TIME AFTER kindlicrt
*! SKIP [IF "NUMLICRT" = LOOP COUNTER THEN GOTO aeversex]
J475 482 475(Q473)
R475 481
Q482ET
Q483ET
* SCREEN tvwatch
Q484FB   TVWATCH - NUMBERS HOURS WATCH TV WEEKDAYS
/^C1
/ During weekdays, that is, Monday through Friday, about how many hours
/ per day do you watch TV?
/
/ INTERVIEWER: IF NECESSARY, PROBE BY READING RESPONSE CATEGORIES.
/
/^B
C1                   DON'T WATCH TV DURING WEEKDAYS
C2                   LESS THAN 1 HOUR
C3                   1 HOUR OR MORE, LESS THAN 2
C4                   2 HOURS OR MORE, LESS THAN 3
C5                   3 HOURS OR MORE, LESS THAN 4
C6                   4 HOURS OR MORE, LESS THAN 5
C7                   5 HOURS OR MORE, LESS THAN 6
C8                   6 HOURS OR MORE, LESS THAN 7
C9                   7 HOURS OR MORE, LESS THAN 8
C10                  8 HOURS OR MORE
Q485UT       2       ELAPSED TIME AFTER liveprnts tvwatch
****************************************
*!
* SCREEN leisure1
* QUESTION WORDING AND RESPONSE CATEGORIES TAKEN IN REVISED FORM FROM
* NELS 2ND FOLLOW-UP STUDENT QUESTIONNAIRE, Q. 33.
Q486FB   HOBBIES - TIME SPENT WORKING ON HOBBIES, ARTS, OR CRAFTS
/Now I'm going to ask you about various leisure activities. For each
/activity I mention, please tell me if, during an average week, you
/participate in that activity one or more times per week. ^C2
/
/working on hobbies, arts, or crafts on your own? . . . . . ^B
/participating in religious activities? . . . . . . . . . . . . . . . . ^B
/participating in sports (not sponsored by your school)? ^B
/reading for pleasure? . . . . . . . . . . . . . . . . . . . . . . . . . . . . . ^B
/
/I am now going to read you several statements. Please tell me how
/important each is to your life: very important, somewhat important, or not
/important. INTERVIEWER: USE SCALE DESCRIBED BELOW:
/
/1 = VERY IMPORTANT 2 = SOMewhat IMPORTANT 3 = NOT IMPORTANT
/
/Being successful in your line of work? . . . . . . . . . . . . . . . . . . . . . . . . ^B
/Having lots of money? . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . ^B
/Having strong friendships? . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . ^B
/Being able to find steady work? . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . ^B
/Being able to give your children better opportunities than you've had? ^B
C1                   YES
C2                   NO
G                    2,1
Q487FB   RELIGION - TIME SPENT PARTICIPATING IN RELIGIOUS ACTIVITIES
C1                   YES
C2                   NO
G                    2,1
Q488FB   TALKPARENTS - TIME SPENT TALKING OF DOING THINGS WITH YOUR MOTHER
/OR FATHER
C1                   YES
C2                   NO
G                    2,1
Q489FB   PARSPORTS - TIME SPENT PARTICIPATING IN SPORTS (NOT SPONSORED BY
SCHOOL
C1                   YES
C2                   NO
G                    2,1
**READING - TIME SPENT READING FOR PLEASURE**

C1

C2

G

2,1

**SUCLSWRK - IMPORTANCE OF SUCCESS IN WORK**

V

(1/3){N}

* QUESTION WORDING AND RESPONSE CATEGORIES TAKEN IN REVISED FORM FROM
* HS&B 2ND FOLLOW-UP SOPHOMORE COHORT QUESTIONNAIRE, Q. 71 AND NELS 2ND
* FOLLOW-UP STUDENT QUESTIONNAIRE, Q.40.

**LOTSMONY - IMPORTANCE OF HAVING LOTS MONEY**

V

(1/3){N}

**STRGPRND - IMPORTANCE OF STRONG FRIENDSHIPS**

V

(1/3){N}

**STDYWORK - IMPORTANCE OF ABLE FIND STEADY WORK**

V

(1/3){N}

**CHLDOPTY - IMPORTANCE OF BETTER OPPORTUNITIES FOR CHILDREN**

V

(1/3){N}

**ELAPSED TIME AFTER leisure important1**

**VOLUNTEER - VOLUNTEER WORK IN PAST 12 MONTHS**

/Our next few questions are about unpaid volunteer or community service work.
/Please tell me which organizations (if any) you have worked with during the
/past 12 months. Examples of such organizations include youth organizations
/like Little League, political clubs or organizations, organized volunteer
/work, such as in a hospital, etc.

/INTERVIEWER: CODE ALL THAT APPLY. ^C1

C1

YOUTH ORGANIZATIONS—I.E., LITTLE LEAGUE COACH, SCOUT LEADER
/, ETC.?

C2

A UNION, FARM, TRADE OR PROFESSIONAL ASSOCIATION?

C3

POLITICAL CLUBS OR ORGANIZATIONS?

C4

A CHURCH OR CHURCH-RELATED ACTIVITIES (NOT INCLUDING WORSHI
/P SERVICES)?

C5

ORGANIZED VOLUNTEER WORK—SUCH AS IN A HOSPITAL?

C6

SPORTS TEAMS OR SPORTS CLUBS?

C7

EDUCATIONAL ORGANIZATIONS—SUCH AS AN ACADEMIC GROUP?

C8

OTHER

C9

NONE

**ELAPSED TIME AFTER volunteer**

********************************************************************

*! SKIP [IF "VOLUNTEER" = 9 (NONE) THEN GOTO voting]

********************************************************************

*! DELETE SCREEN othrvlnt

********************************************************************

*! SKIP [IF 1 CATEGORY CODED IN "VOLUNTEER"

*! THEN GOTO whyvolt1]
0(L2)=508(U(1/8)=
*/SCREEN frqvlnt
Q512FB FRQVLNTR - VOLUNTEER ORG PARTICIPATE MOST FREQUENTLY
/^C1
/ Which one do (did) you participate in most frequently?
/
/ INTERVIEWER: IF NECESSARY, PROBE BY READING LIST OF VOLUNTEER ORGANIZATIONS.
/
/^B
C1 YOUTH ORGANIZATIONS--(LITTLE LEAGUE COACH, SCOUT LEADER, ETC
/,)
C2 A UNION, FARM, TRADE OR PROFESSIONAL ASSOCIATION
C3 POLITICAL CLUBS OR ORGANIZATIONS
C4 A CHURCH OR CHURCH-RELATED ACTIVITIES
C5 ORGANIZED VOLUNTEER WORK--SUCH AS IN A HOSPITAL
C6 SPORTS TEAMS OR SPORTS CLUBS
C7 EDUCATIONAL ORGANIZATIONS--SUCH AS AN ACADEMIC GROUP
C8 OTHER
G '<1/8(=508('<1/8()
Q513UT 2 ELAPSED TIME AFTER frqvlnt
****************************************
*!
*/SCREEN hrsvlntr
Q514UB HRSVLNTR - HRS PER WEEK R DID VOLUNTEER WORK
/^C1
/ During the past 12 months, how many hours per week did you do
/ volunteer work?
/
/^B
V (1/45,95,U46/60){Nn}
*RANGE CHANGE
Q515UT 2 ELAPSED TIME AFTER hrsvlntr
J516 517
Q516X TEXT SUBST QUESTION FOR RACEWORK
C1 present
C2 most recent
C3 are
C4 were
G 1,3=345(1)
G 2,4=345(2.3.4."","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","","",%
Q517ET
Q518ET
Q519ET
Q520ET
Q521ET
*!
*/SCREEN voting
Q522FB REGVOTE - REGISTERED TO VOTE
/^C2
/ Are you currently registered to vote?
/
/^B
/
/ During the past 12 months, have you voted in a local, state, or
/ national election?
/
/^B
/
/
/ Did you vote in the 1992 Presidential election?
/
/^B
C1 YES
C2
NO
G 2,1
Q523FB
NATELEC - PAST 12 MONTHS VOTE LOCAL/STATE NATIONAL ELECTION
C1 YES
C2 NO
G 2,1
Q524FB
VOTEPRES - VOTE IN 1992 PRESIDENTIAL ELECTION
C1 YES
C2 NO
G 2,1
Q525UT 2 ELAPSED TIME AFTER voting
*********************************************************
*!
* SCREEN strsevnts
* QUESTION WORDING AND RESPONSE CATEGORIES TAKEN IN REVISED FORM FROM
* NELS 2ND FOLLOW-UP STUDENT QUESTIONNAIRE, Q.96.
* ORIG_QTYPE = FIXED, MULTIPLE
Q526FB STRSEVNT1 - R/FAMILY ARRESTED OR INCARCERATED
/Lots of things happen to individuals or to their families that may ^C2
/affect young people's lives. I will now read you a list of such things.
/For each item I read, please tell me if that event has happened to you
/or a family member. These questions are voluntary and you may refuse to
//answer any or all of them.
//
//You or a close friend were arrested or incarcerated? ^B
//
//You or a family member became seriously ill or disabled? ^B
//
//You or a family member were a victim of a serious crime? ^B
//
//There was a death in your family? ^B
C1 YES
C2 NO
G 2,1
Q527FB ILLDISBL - R/FAMILY SERIOUSLY ILL
C1 YES
C2 NO
G 2,1
Q528FB CRIME - R/FAMILY VICTIM OF CRIME
C1 YES
C2 NO
G 2,1
Q529FB DEATH - DEATH IN FAMILY
C1 YES
C2 NO
G 2,1
Q530UT 2 TIME ELAPSED AFTER strsevnt1
*********************************************************
*!
* SCREEN 1stsex
* QUESTION WORDING TAKEN FROM NATIONAL SURVEY OF FAMILY GROWTH (NSFG
* B-27).
Q531UB 2 FIRSTSEX - MONTH OF FIRST SEX
/ Now I would like to ask you about your sexual activity. Let me remind you
//that all the information you provide is kept strictly confidential.
/
//Have you ever had sexual intercourse?
//IF NO, CODE "00/00".
//IF YES, "When did you have sexual intercourse for the first time? In what
//month and year was that?"
//INTERVIEWER: IF R DOES NOT REMEMBER, PROBE, "How old were you at the
"time?" ASK FOR SEASON IF R DOES NOT REMEMBER THE MONTH. PROBE FOR A BEST ESTIMATE IF R DOES NOT REMEMBER YEAR.

V (0/12)(Nn)

Q532UB 2 FIRSTSEX - YEAR OF FIRST SEX
V (0,88/^83,95,U84/87)(NN)

*RANGE CHANGED FROM 80/CURRENT
*533 531 B531(95)+532(N95).531(N95)+532(95)=INVALID DATE
J533 531 B532(Q83)+531(G0)+531(GQ82)=DATE AFTER CURRENT DATE
J533 531 B531(0+N"π"+N"π")+(532(G0).532("π"."π"))=IF NO, ENTER 0 IN B
/OTH FIELDS
J533 531 B532(0+N"π"+N"π")+(531(G0).531("π"."π"))=IF NO, ENTER 0 IN B
/OTH FIELDS

Q533UT 2 ELAPSED TIME AFTER 1stsex
* QUESTION WORDING TAKEN FROM NATIONAL SURVEY OF FAMILY GROWTH (NSFG * C-1A).
* ! SKIP [IF "1STSEX" = 00/00 THEN GOTO rdobssn]
* ! SKIP [IF "1STSEX" = REF OR N/A THEN GOTO rdobssn]
J534 542 531(0+N"π"+N"π")+(532(G0)+N"π")=DATE AFTER CURRENT DATE
Q534FB USEBIRCN - BIRTH CONTROL 1ST SEX INTERCOURSE

C1 YES
C2 NO
G 2,1

Q535UT 2 ELAPSED TIME AFTER 1stsex
****************************************************************************************
* ! SKIP [IF "MARSTAT" = 2 THEN GOTO rincome]
J536 542 99(2)
* SCREEN freqsex
* QUESTION WORDING TAKEN FROM NATIONAL SURVEY OF FAMILY GROWTH (NSFG * B-11).
Q536FB FREQSEX - FREQUENCY OF SEX IN LAST MONTH
/^C1
/ In the last month, how often did you have intercourse?
/
/ INTERVIEWER: IF R IS UNABLE TO RESPOND, PROBE, "Would you say, three or more times, two times, once, or not at all?"
/
/^B
C1 THREE OR MORE TIMES
C2 TWO TIMES
C3 ONCE
C4 NOT AT ALL
G 4,3,2,1

* QUESTION WORDING TAKEN FROM NATIONAL SURVEY OF FAMILY GROWTH (NSFG * 9-15).
Q537UT 2 ELAPSED TIME AFTER freqsex
****************************************************************************************
* ! SCREEN bcmethod1
* ! QUESTION WORDING TAKEN FROM NATIONAL SURVEY OF FAMILY GROWTH (NSFG * C-3 - Version 2).
Q538FMC 7 BCMETHOD1 - TYPE BIRTH CONTROL USED LAST TIME HAD SEX -CODED
/^C1
/ The last time you had intercourse, did you and your partner use any method of birth control to prevent pregnancy or sexually transmitted disease?
/ IF "NO", CODE "NONE".
/ IF "YES", "What method was that?"
/ INTERVIEWER: CODE ALL THAT APPLY.
C1           NONE
C2           PILL
C3           CONDOM
C4           STERILIZATION
C5           WITHDRAWAL
C6           DIAPHRAGM
C7           SOME OTHER METHOD
J539 538     B538(1)+538(2/7)=CAN'T CODE NONE WITH OTHER RESPONSES
* QUESTION WORDING TAKEN FROM NATIONAL SURVEY OF FAMILY GROWTH (NSFG
* C-3 - Version 2).  LIST TAKEN FROM LIST OF METHODS TO BE CODED IN
* NSFG, CYCLE V)
Q539UT       2       ELAPSED TIME AFTER bcmethod1
* SKIP [IF "BCMETHOD1" != 7 THEN GOTO rdobssn]
J540 542     538(N7)
Q540UB       80      BCMETHOD2 - TYPE BIRTH CONTROL USED LAST TIME HAD SEX -VERBATIM
/ INTERVIEWER: CODE "OTHER METHOD" HERE.
/ ^B
J541 540     B540( " ")+540S(L2)=DON'T LEAVE VERBATIM BLANK
J541 540     B540("**"."**"."**")=NOT A VALID FUNCTION KEY
Q541UT       2       ELAPSED TIME AFTER bcmethod2

****************************************
* SCREEN rdobssn
* Instruct: MONTH, DAY AND YEAR SHOULD BE STORED AS THREE SEPARATE VARIABLES.
Q542UB          RDOB - RESPONDENT DOB
/ ^C1
/ OK, I have just a few more questions for you.
/ INTERVIEWER: VERIFY AND/OR CORRECT RESPONDENT'S DATE OF BIRTH AND SOCIAL
/ SECURITY NUMBER.
/ DATE OF BIRTH: ^E5/^E6/^E7  (MM/DD/YY)
/ SOCIAL SECURITY NUMBER: ^E10^-E11^-E12
J543 542     B5(2)+6(G29).5(9.4.6.11)+6(GE31)=INVALID DATE
J543 542     B5(G12).5(0+N"p"+N"p") 6(0+N"p"+N"p") 7(0+N"p"+N"p") 6(G31)=
/ INVALID DATE
J543 542     B7(G0)+7(L70).7(G79)=YEAR IS NOT BETWEEN 70 AND 79
*FIELD TEST CHECKS
J543 542     B10(N"p"+N"p")+10S(L3)+10(" ").11(N"p"+N"p")+11S(L2)+11(" ")
/.12(N"p"+N"p")+12S(L4)+12(" ")=INVALID RESPONSE
J543 542     B10("N")+10(0+N"p"+N"p")+11("N")+11(0+N"p"+N"p")+12("N")+
/12(0+N"p"+N"p")=SOCIAL SECURITY NUMBER CANNOT BE EQUAL TO ZERO
J543 542     B10(G0)+10S(L3).11(G0)+11S(L2).12(G0)+12S(L4)=ENTER ALL 9 DIGITS
*EXTRA
J543 542     B10("|N")+10(0+N"000"+N"p"+N"p").11("|N")+11(0+N"00"+N"p"+N"p")
/.12("|N")+12(0+N"0000"+N"p"+N"p")=SOCIAL SECURITY NUMBER SHOULD NOT INCLUDE
/BLANKS
J543 542     B10("|p")+(11(N"p").12(N"p")).11("|p")+(10(N"p").12(N"p")).12(
/"|p")+(10(N"p").11(N"p")).11("|p")=IF DONT KNOW SSN, USE F8 ON ALL 3 PARTS OF SSN
J543 542     B10("|p")+(11(N"p").12(N"p")).11("|p")+(10(N"p").12(N"p")).12(
/"|p")+(10(N"p").11(N"p")).11("|p")=IF REFUSED SSN, USE F7 ON ALL 3 PARTS OF SSN
*543 542     B10("|l")+(11(N"l").12(N"l")).11("|l")+(10(N"l").12(N"l")).12(
/"|l")+(10(N"l").11(N"l")).11("|l")=IF MISSING SSN, USE F9 ON ALL 3 PARTS OF SSN
Q543UT       2       ELAPSED TIME AFTER rdob

****************************************
*
*! SKIP [IF "P_SEX" = VALID THEN GOTO race]
J544 546 16(2)
* SCREEN sex
Q544UP RSEX - RESPONDENT'S SEX
/^C1
/ INTERVIEWER: CODE RESPONDENT'S SEX. VERIFY IF YOU ARE UNSURE.
/
/^E8
Q545UT 2 ELAPSED TIME AFTER sex
* !
* ! SKIP [IF "P_RACE" = VALID THEN GOTO raddress1]
J546 548 17(2)
* SCREEN race
* RESPONSE CATEGORIES TAKEN FROM NELS SECOND FOLLOW-UP.
Q546UP RACE - RESPONDENT RACE
/^C1
/ What is your racial or ethnic background?
/
/ INTERVIEWER: IF NECESSARY, PROBE BY READING RESPONSE CATEGORIES.
/
/^E9
Q547UT 2 ELAPSED TIME AFTER race
**************************************************
* !
* ! SKIP [IF "RACE" = 2 THEN GOTO racehisp]
* ! DELETED- SKIP [IF "RACE" = 1 THEN GOTO raceapi]
* ! SKIP [IF "RACE" != 1 OR 2 THEN GOTO raddress1]
*PER PAUL AND JEANNETTE - ASK RACEHISP AND RACEAPI OF ALL
J548 552 9(2)
*548 550 9(1)
J548 554 9(N1+N2)
*DELETED - SKIP OVER OTHRRACE IF PRELOADED WITH OTHER
*548 554 17(2)
Q548ET
/^C1
/ INTERVIEWER: TYPE RESPONDENT'S DEFINITION OF HER/HIS RACE.
/
/^B
*549 548 B548("|N")+548(N"="+N"π"+N"]+=N"&")+.548("-"+548S(L2)+548(N"/
+/"+N")+548(N"|"+N")=NOT A VALID RESPONSE
*! backward skip
*!DELETED SKIP [IF "OTHRRACE" = NUMERIC OR "OTHRRACE"=MISSING AND NOT REFUSED
*! AND NOT DON'T KNOW THEN GOTO othrrace]
Q549ET
**************************************************
* !
* ! DELETED SKIP [IF "RACE" = 6 THEN GOTO racialcomp]
*550 554 9(6)
* SCREEN raceapi
* QUESTION WORDING AND RESPONSE CATEGORIES TAKEN FROM NELS 2ND
* FOLLOW-UP PARENT QUESTIONNAIRE.
Q550FB RACEAPI - RESPONDENT RACE, API
/^C1
/ Which of the following best describes your background?
/
/ INTERVIEWER: READ RESPONSE CATEGORIES.
/
/^B
C1 Chinese
C2 Filipino
C3 Japanese
C4 Korean
C5 Southeast Asian, such as Vietnamese, Laotian, Cambodian/Kauchuan, Thai, etc.
C6 Pacific Islander, such as Samoan, Guamanian, etc.
C7 South Asian, such as Asian Indian, Pakistani, etc.
C8 Other Asian

Q551UT 2 ELAPSED TIME AFTER raceapi
************************************************
*! SKIP [IF "RACE" = 1 THEN GOTO racialcomp]
J552 554 9(1)
* SCREEN racehisp
* QUESTION WORDING AND RESPONSE CATEGORIES TAKEN FROM NELS 2ND
* FOLLOW-UP PARENT QUESTIONNAIRE.
Q552FB RACEHISP - RESPONDENT RACE, HISPANIC
/^C1
/ Which of the following best describes your background?
/
/ INTERVIEWER: READ RESPONSE CATEGORIES.
/
/^B
C1 Mexican, Mexican-American, Chicano
C2 Cuban
C3 Puerto Rican
C4 Dominican
C5 Ecuadorian
C6 Salvadorian
C7 Colombian
C8 Other Hispanic

Q553UT 2 TIME ELAPSED AFTER RACEHISP
* screen racialcomp
Q554UB 3 RACEGREW - PERC RACE NEIGHBORHOOD GREW UP IN
/
/ The next questions ask about the racial and ethnic composition of places
/ where you have spent time.
/
/ What percentage of the people in the neighborhood where you grew up
/ were of the same race and ethnicity as you?
/
/^B%
/
/
/ What percentage of the people in your present neighborhood are
/ of the same race and ethnicity as you?
/
/^B%
/
/
/ What percentage of the people in your ^516(1/2) workplace ^516(3/4)
/ of the same race and ethnicity as you?
/
/^B%
/
/
V (0/100) {Nnn}
Q555UB 3 RACEPRES - PREC RACE IN CURRENT NEIGHBORHOOD
V (0/100) {Nnn}
Q556UB 3 RACEWORK - PERC RACE AT (LAST) JOB
V (0/100) {Nnn}
Q557UT 2 ELAPSED TIME AFTER RACEWORK
Appendix B

Interviewer Training--Trainer's Agenda
**NELS:88/94 Main Study**  
**Interviewer Training--Trainer's Agenda**

**Pre-training:** Read Interviewer Manual 1.0 hours

**Day One--Monday, February 7, 1994**

<table>
<thead>
<tr>
<th>Training Module</th>
<th>Length</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Introduction/Overview</td>
<td>0.25</td>
<td>10:00 - 10:15</td>
</tr>
<tr>
<td>B. Confidentiality Procedures</td>
<td>0.25</td>
<td>10:15 - 10:30</td>
</tr>
<tr>
<td>C. Conversational Interviewing</td>
<td>0.50</td>
<td>10:30 - 11:00</td>
</tr>
<tr>
<td>Q. On-line Coding Systems Overview</td>
<td>0.25</td>
<td>11:00 - 11:15</td>
</tr>
<tr>
<td>D. Occupation/Industry Coding</td>
<td>1.50</td>
<td>11:15 - 12:45</td>
</tr>
<tr>
<td>Break</td>
<td>0.50</td>
<td>12:45 - 01:15</td>
</tr>
<tr>
<td>E. IPEDES Coding</td>
<td>1.00</td>
<td>01:15 - 02:15</td>
</tr>
<tr>
<td>L. Locating</td>
<td>0.50</td>
<td>02:15 - 02:45</td>
</tr>
<tr>
<td>M. Mock #1: Easy Round Robin</td>
<td>2.00</td>
<td>02:45 - 04:45</td>
</tr>
<tr>
<td>(w/o CATI)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Training Time</strong></td>
<td><strong>6.75</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Homework Exercise:** Exercise H 0.50 hours

**Day Two--Tuesday, February 8, 1994**

| Practice SIC/SOC, IPEDES           | 1.00    | 10:00 - 11:00 |
| H. Day One Homework Review         | 0.25    | 11:00 - 11:15 |
| I. TNMS Part 1                     | 0.75    | 11:15 - 12:00 |
| G. Gaining Cooperation             | 1.00    | 12:00 - 01:00 |
| Break                               | 0.50    | 01:00 - 01:30 |
| G. Gaining Cooperation Continued   | 0.50    | 01:30 - 02:00 |
| F. CCM Coding                      | 0.50    | 02:00 - 02:30 |
| N. Mock #2: More Difficult Round   | 1.75    | 02:30 - 04:15 |
| Robin (w/CATI)                     |         |               |
| **Total Training Time**            | **6.25**|               |

**Homework Exercise:** Exercise K 0.50 hours
# NELS:88/94 Main Study

## Interviewer's Training--Trainer's Agenda

**Day Three--Wednesday, February 9, 1994**

<table>
<thead>
<tr>
<th>Training Module</th>
<th>Length</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice CCM, SIC/SOC, IPEDS</td>
<td>1.00 hours</td>
<td>10:00 - 11:00</td>
</tr>
<tr>
<td>K. Day 2 Homework Review</td>
<td>0.25 hours</td>
<td>11:00 - 11:15</td>
</tr>
<tr>
<td>J. Quality Control</td>
<td>0.25 hours</td>
<td>11:15 - 11:30</td>
</tr>
<tr>
<td>I. TNMS Part 2</td>
<td>1.50 hours</td>
<td>11:30 - 01:00</td>
</tr>
<tr>
<td>Break</td>
<td>0.50 hours</td>
<td>01:00 - 01:30</td>
</tr>
<tr>
<td>O. Mock #3: CATI Dyad</td>
<td>1.50 hours</td>
<td>01:30 - 03:00</td>
</tr>
<tr>
<td>O. Mock #4: CATI Dyad</td>
<td>1.50 hours</td>
<td>03:00 - 04:30</td>
</tr>
<tr>
<td>Total Training Time</td>
<td>6.50 hours</td>
<td></td>
</tr>
</tbody>
</table>
Appendix C

Locator Training--Trainer's Agenda
NELS:88/94
Locator Training--Trainer's Agenda

Monday, February 7, 1994

<table>
<thead>
<tr>
<th>Training Module</th>
<th>Length</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Introduction/Overview</td>
<td>0.25 hours</td>
<td>3:30 - 3:45</td>
</tr>
<tr>
<td>B. Confidentiality Procedures</td>
<td>0.25 hours</td>
<td>3:45 - 4:00</td>
</tr>
<tr>
<td>C. Locating Overview</td>
<td>0.25 hours</td>
<td>4:00 - 4:15</td>
</tr>
<tr>
<td>D. Locating Resources</td>
<td>0.50 hours</td>
<td>4:15 - 4:45</td>
</tr>
<tr>
<td>E. Contacting</td>
<td>1.00 hours</td>
<td>4:45 - 5:45</td>
</tr>
<tr>
<td>Break</td>
<td>0.50 hours</td>
<td>5:45 - 6:15</td>
</tr>
<tr>
<td>F. CMS Overview</td>
<td>0.25 hours</td>
<td>6:15 - 6:30</td>
</tr>
<tr>
<td>G. CMS Locating Software</td>
<td>3.00 hours</td>
<td>6:30 - 9:00</td>
</tr>
<tr>
<td>G. CMS Practice</td>
<td>0.50 hours</td>
<td>9:00 - 9:30</td>
</tr>
<tr>
<td>Total Training Time</td>
<td>5.50 hours</td>
<td></td>
</tr>
</tbody>
</table>

Pre-Training: Read Locator Manual 1.00 hour
Homework: Review CMS Tutorial 1.00 hour

Tuesday, February 8, 1994

<table>
<thead>
<tr>
<th>Training Module</th>
<th>Length</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. Gaining Cooperation</td>
<td>1.50 hours</td>
<td>3:30 - 5:00</td>
</tr>
<tr>
<td>K. What If Scenarios</td>
<td>1.50 hours</td>
<td>5:00 - 6:00</td>
</tr>
<tr>
<td>Break</td>
<td>0.50 hour</td>
<td>7:00 - 7:30</td>
</tr>
<tr>
<td>L. What If Scenarios (Cont.)</td>
<td>2.00 hours</td>
<td>7:30 - 9:00</td>
</tr>
<tr>
<td>Total Training Time</td>
<td>5.50 hours</td>
<td></td>
</tr>
</tbody>
</table>