DOCUMENT RESUME

ED 152 788 TM 006 852

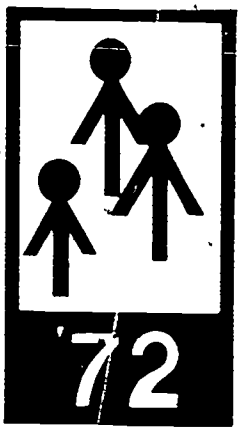
AUTHOR Bailey, J. P., Jr.
TITLE National Longitudinal Study of the High School Class of 1972: Second Follow-up Survey. Final Methodological Report.
INSTITUTION Research Triangle Inst., Durham, N.C. Center for Educational Research and Evaluation.
SPONS AGENCY National Center for Education Statistics (DHEW), Washington, D.C.
REPORT NO OEC-0-73-6666
PUB DATE Oct 76
NOTE 146p.; For related documents, see ED 120 251 and 139 826 ; Parts of appendixes may be marginally legible

EDRS PRICE MF-$0.83 HC-$7.35 Plus Postage.
DESCRIPTORS Attendance; Data Analysis; Data Bases; *Data Collection; Employment Experience; *Followup Studies; *Graduate Surveys; *High School Graduates; *Longitudinal Studies; National Surveys; Participant Characteristics; Post Secondary Education; Questionnaires; Reliability; *Research Methodology; Sampling; Secondary Education; Statistical Data; Test Construction; Weighted Scores
IDENTIFIERS *National Longitudinal Study High School Class 1972

ABSTRACT

The status of the high school class of 1972, as it was two years after graduation in October 1974, is described in terms of questionnaire survey responses. Students from 1,153 high schools participated and 20,872 students responded to the questionnaire out of the total group of 23,451. The development, administration, and reliability of the survey are described, and copies of questionnaire forms are included. The results of the questionnaire include the following: 23% were attending 4-year colleges, 9% were attending 2-year colleges, 6% were looking for work, most of the rest were employed, 17% of the males and 32% of the females were married, and half of the married persons had children. The purposes of the follow-up study were to identify the major decision points that affect the educational and life patterns in the intermediate postsecondary period, and to provide insight into the relative importance of factors which determine probabilities at these choice points. (Author/CTM)

NATIONAL LONGITUDINAL STUDY of the High School Class of 1972



SECOND FOLLOW-UP SURVEY FINAL METHODOLOGICAL REPORT

J. P. Bailey, Jr., Project Director

Prepared for the

National Center for Education Statistics
Office of the Assistant Secretary for Education
Department of Health, Education, and Welfare

Contract No. OEC-0-73-6666

by

Center for Educational Research and Evaluation
Research Triangle Institute
Research Triangle Park, North Carolina 27709

October 1976

Center for Educational Research and Evaluation

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Foreword

The National Longitudinal Study of the High School Class of 1972 continues to be unusually important and significant among current social science research projects in the nation. There remains the balanced and interested support from a number of different federal agencies, including some which were only peripherally involved prior to the second follow-up, whose staffs exhibit professional respect for the validity of differing points of view and of policy information needs. Further advances in monitoring and operational procedures, ranging from refinements of the computer-based survey support system to more efficient handling of the questionnaires themselves from receipt to final disposition, made this survey remarkably smooth in operation.

Perhaps most important, however, is the continued cooperation and interest of the respondents themselves. While the sample retention rate in the first follow-up survey was 93.7 percent, this was exceeded in the second follow-up survey: over 94 percent of those who responded in 1973 also responded in 1974. This unusual degree of success in maintaining the sample sets a high standard for future surveys. Research Triangle Institute is proud to be a key participant in this project.

This document is the formal report of activities during the second follow-up survey. As with the prior first follow-up survey report, it is methodological, historical, and descriptive in nature, rather than analytical. The several reports of a more technical nature produced in conjunction with the survey, as well as major revisions of previous reports, are listed and abstracted in Appendix A.

J.P. Bailey, Jr.
Director, National Longitudinal Study
Research Triangle Institute

Acknowledgment

The principal credit for the success of this study must go to the more than 20,000 Class of 1972 respondents who have continued to participate in this mammoth effort. These respondents deserve and have received the very best efforts of many dedicated individuals at NCES and RTI to turn their answers into a sound data base for the hundreds of policymakers and researchers who will be needing and using it to revise current programs and develop new approaches to helping young adults realize their full potential.

At the National Center for Education Statistics, Mr. Elmer Collins provided the collaborative encouragement, support, and leadership as the second follow-up project officer to make the survey a success. Bill Fetters and Ken Tabler also gave substantial operational and technical assistance.

Among the many consultants whose ideas have permeated the study, Bruce Eckland, professor of sociology, University of North Carolina at Chapel Hill, has been most insightful and knowledgeable in his continuing involvement. At Measurement Research Center, John O'Neill lent his expertise in coordinating materials production and mailouts. At the Bureau of the Census, Bob Mangold and Greg Russell were most helpful in planning for field interview operations.

At Research Triangle Institute, particular thanks go to Dr. J.A. Davis, who as director for the Center for Educational Research and Evaluation and as the first NLS project director provided the leadership to weld together the follow-up NLS team. Key leaders in that team included Bob Thornton (computer support), Don Bates and Don King (survey operations), Babu Shah and Ralph Folsom (sampling), and George Dunteman (analysis).

This final methodological report is not authored in its entirety by any one person. It is a compilation of reports, papers, and memoranda growing out of the study over a period of years. Special thanks are due to Dr. J.A. Riccobono for gathering these materials together and editing the resulting document, to Linda Hoffman for typing the manuscript, to Robin Talbert for acting as the project assistant over its many and complex facets, and to Frances Heald for her dedication to the NLS as the project secretary since its beginning.

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1: OVERVIEW: THE NATIONAL LONGITUDINAL STUDY OF THE CLASS OF 1972

A. Data Needs of Policymakers and Researchers

In 1968 the National Center for Education Statistics (NCES) conducted a survey to determine the data needs of educational policymakers and researchers. Survey responses indicated needs for data that would allow student educational-vocational experiences to be compared with later educational-occupational outcomes. This finding provided the impetus for NCES to begin planning the first of a series of national longitudinal studies.

Although the educational-vocational development of young people after high school has been studied, necessary information is lacking for at least three reasons. First, social and economic factors change over time and affect drastically the educational-vocational progress of young people. For example, the Project Talent[1] longitudinal survey of the early 1960's is not relatable to the open-door colleges, modal proportions of minorities entering colleges, and so forth, of the 1970's. Second, many studies are concerned with only one class of antecedent variables for explaining later development, and thus fail to take account of interventions emanating from current federal priorities and to include representative samples with sufficient numbers of important subgroups (e.g., racial-ethnic minorities). Third, many studies are primarily concerned with developing models or theories of behavior (e.g., Donald Super's Career Pattern Study)[2]—an objective not alien to but insufficient for the objectives of the National Longitudinal Study of the Class of 1972 (NLS). Behavioral studies have given, however, an excellent basis for perfecting the NLS design. For indeed, the continuing planning has relied considerably on the review and synthesis of the findings of studies, such as the one by UCLA's Evaluation Center for USOE[3] that apply to educational-vocational development.

In April 1970, educational researchers and administrators met with federal officials in Washington, D.C. The NLS reflects their guidance and the data needs of NCES and several USOE agencies: the Office of Planning, Budgeting, and Evaluation; the Bureau of Postsecondary Education; the Bureau of Occupational and Adult Education; and the Bureau of Education for the Handicapped. Three advisory committees guided the NLS planning. One committee was composed of research experts and representatives of educational organizations; one other was made up of officials of state education agencies; and the third, an internal USOE users committee, represented offices and bureaus of the Department of Health, Education, and Welfare (DHEW).

Later in 1970, the basic survey planning was contracted to RTI and the sample planning and design to WESTAT, Inc.[4] After extensive planning, which included the design and field testing of survey instrumentation and procedures, the first full-scale NLS survey was initiated in the spring of 1972.

B. Data Collections, 1972-75

In 1972, a national probability sample of more than 18,000 seniors from 1,070 public, private, and church-affiliated high schools participated in the base-year survey conducted by Educational Testing Service (ETS).[5]

1. Base-Year Student Survey Instruments

Each student in the sample was asked to complete a Student Questionnaire containing 104 questions distributed over 11 sections. The questions relate to personal-family background, educational and work experiences, plans, aspirations, attitudes, and opinions. Students were given the option of completing the questionnaire in school or taking it home to get assistance from their parents. Those selected for the survey were informed in the questionnaire and in a newsletter of the voluntary nature of participation, of their prerogative to skip questions they considered personally sensitive, and of the objectives and importance of the study for future educational benefits. Participants were assured that their responses would be treated as confidential, that they would remain anonymous, and that data collected by the survey would be published only in aggregate form.

Each student was also asked to complete a 69-minute Test Book designed to measure both verbal and nonverbal abilities. The book contained six tests which are described briefly below in the order of administration.

Vocabulary. A brief test using synonym format. The items were selected to avoid academic or collegiate bias and to be on an appropriate level of difficulty for the 12th grade population. (15 items, 5 minutes)

Picture Number. A test of associative memory consisting of drawings of familiar objects, each paired with a number. The student, after studying the picture-number pairs, was asked to recall the number associated with each object. (30 items, 10 minutes)

Reading. A test based on 100- to 200-word passages with questions concerning various reading skills (analysis, interpretation) and focused on straightforward comprehension. With the vocabulary test, it provides a means to derive a verbal score which can allow links to the normative data available for SAT. (20 items, 15 minutes)

Letter Groups. A test of inductive reasoning requiring the student to draw general concepts from sets of data or to form and try out hypotheses in a nonverbal context. The items have five groups of letters; four groups share a common characteristic. The student indicates which group differs from the others. (25 items, 15 minutes)

Mathematics. Quantitative comparisons requiring the student either to indicate which of two quantities is greater or to assert equality or the lack of data for comparing. This item is relatively quickly answered and provides measures of basic competence in mathematics. (25 items, 15 minutes)

Mosaic Comparisons. A test of perceptual speed and accuracy with items requiring that small differences be detected between pairs of otherwise identical mosaics or tile-like patterns. A deliberately speeded test, it has three separately timed sections of increasingly complex patterns. (116 items, 9 minutes)

From each student's School Record Information Form (SRIF), data were obtained on the high school curriculum, grade point average, credit hours in major courses, and position in ability groupings (if applicable), remedial-instruction record, involvement in certain federally supported programs, and scores on standardized tests.

2. School and Counselor Survey Instruments

Two other data collection instruments were the School Questionnaire and the Counselor Questionnaire. Survey administrators completed the School Questionnaire, which provided information on:

Programs and students. Grade structure, enrollment by curriculum, programs for the handicapped and disadvantaged, teaching, absence and dropout rates, racial-ethnic makeup, college recruitment efforts;

Resources. Participation in federal programs, teacher turnover, percentage of teachers with advanced degrees, library and other facilities, ages of buildings, nearness to postsecondary institutions; and

Grading systems. Form of the system in use, plus a table of grade equivalents.

A maximum of two counselors in each school filled in the Counselor Questionnaire with data on training, experience, activities, assignments, methods, workload, and resources.

3. Follow-Up Surveys

In the summer of 1973, 4,439 students who did not participate in 1972 were contacted ("resurveyed") to be added to the planned first follow-up sample.

The first follow-up survey was begun by RTI in October 1973, with data collection completed in April of 1974. Two forms (A and B) of a First Follow-Up Questionnaire were developed and designed for self-administration by the student. Form A was mailed to each sample member who responded to the base-year Student Questionnaire. Seniors from the high school class of 1972 who were unable to participate in the base-year survey (usually because of time and scheduling considerations) were mailed Form B of the questionnaire. Questions 1 through

85 were identical on both questionnaire forms. The questionnaire was organized into sections. Form A contained five sections: General, Education and Training, Work Experience, Military Service, and Background Information. These questions dealt with information concerning the respondent's activity state (education, work, etc.) in October 1972 and October 1973; his or her socioeconomic status; work and educational experiences since leaving high school; and future educational and career plans, aspirations, and expectations. Form B of the First Follow-Up Questionnaire contained an additional 14 questions to supplement missing base-year information. (Content of the First Follow-Up Questionnaire as well as first follow-up data collection activities are described in the First Follow-Up Survey Final Methodological Report.[6]) Of the 22,654 young adults expected to participate, 94.2 percent (21,350) completed the first follow-up instruments—of which 65.7 percent (14,019) were by mail and 34.3 percent (7,331) were by personal interview. Moreover, of the 16,683 seniors who completed a base-year Student Questionnaire, 15,635 took part in the first follow-up survey—a sample retention rate of 93.7 percent.

In October of 1974, the second follow-up survey was begun by RTI. The Second Follow-Up Questionnaire was similar in format and purpose to the forms used in the first follow-up survey. It contains over 150 questions distributed over seven major sections: General Information, Education and Training, Work Experience, Family Status, Military Service, Activities and Opinions, and Background Information. The second follow-up data collection was completed, in April of 1975, by which time 20,872 instruments had been completed, for an overall response rate of 93.3 percent. Of these, 72.1 percent (15,058) responded by mail and 27.9 percent (5,814) by personal interview. In terms of sample retention, 20,194 (or 94.6 percent) of the 21,350 first follow-up respondents also participated in the second follow-up survey. (Content of the Second Follow-Up Questionnaire is covered in detail in Chapter III of this report; second follow-up data collection activities are discussed in Chapter IV.)

The third follow-up survey was begun by RTI in October 1976, with data collection scheduled for completion in April of 1977. Current plans call for a fourth follow-up survey of the class of 1972 to be conducted in the fall of 1979.

C. Uses for NLS Data

Periodically, data are being obtained from members of the class of 1972 and added to their individual histories—that is, to their experiences, activities, attitudes, satisfactions, environments, and plans—as they move into the critical years of early adulthood. These data will fill widespread needs of the educational community—researchers and administrators in the elementary, secondary, and postsecondary educational-occupational systems. The data will provide insights into identifying and understanding the major branching or decision points that affect the educational and life patterns in the immediate postsecondary period. Significant linkages of path choices can be traced; associated transition probabilities can be estimated; and insight into the relative importance of factors which determine these probabilities can be realized.

1. To Clarify Choices and Alternatives

Collectively, the individual histories should provide quantitative data for policymakers, planners, and researchers about various issues:

- The demands for postsecondary education and training, including vocational/technical education;
- The abilities and characteristics of actual and potential users of postsecondary education;
- The extents to which earlier plans and aspirations persist over time and are eventually fulfilled;
- The reasons why young adults change their plans and fail to accomplish earlier objectives;
- The impacts of federally funded postsecondary programs on initial choices and later activities and plans;
- The factors influencing young people in choosing their lifework and in

determining success and satisfaction in this work;

- The extents to which educational experiences have prepared them for their work;
- The characteristics and abilities of those making occupational choices and the reasons why choices are made;
- The impacts of high school experiences, curricula, peer-group aspirations, guidance counseling, and so forth, on initial educational and occupational plans and on perseverance and success in achieving them;
- Young adults' awareness of educational and occupational alternatives, their perceptions of options open to them, and the extent to which they have been limited by lack of information; and
- Financial considerations in setting low-aspiration goals and in failing to meet high-aspiration goals.

2. To Trace Progress

The primary NLS purpose is to discover what happens to young people after they leave high school and to relate this information to their prior educational experiences and their personal and biographical characteristics. Ultimately, the study will lead to a better understanding of the developments of students as they pass through the American educational system and of the complex factors associated with individual educational and career outcomes. Such information is essential as a basis for effective planning, implementation, and evaluation of federal policies and programs designed to enhance educational opportunities and achievements and to upgrade occupational attainments and career outcomes.

3. To Provide a Data Base

The major NLS objectives are to provide a data base for policy decisions that may guide federal contributions through the nation's educational system to the fullest development of human and material resources and to provide social scientists and scholars with a rapidly enriching data base that none individually could afford to develop but which all can use in pursuit of professional interests. The data base itself, as it now exists and as it is updated, will be available to interested researchers for their own studies.

4. To Disseminate Information

Summaries and analyses of data are being written up in periodic reports which will relate and expound on the concepts of the objectives here described. They will be issued by DHEW and made available to the educational community. Reports focused on single issues targeted for specific groups will be designed for rapid dissemination. Appendix A to this final report lists reports prepared by the contractor which relate to the second follow-up (First Follow-Up Survey Final Methodological Report). Appendix A contains a similar listing of first follow-up reports.) Chapter VIII summarizes some of the most salient findings of the second follow-up.

D. Objectives of the Second Follow-Up

The 1974-76 second follow-up survey included data collection, data transformation, preliminary data analysis and interpretation, and the making of survey recommendations for the 1976-77 third follow-up. The overall aim of these activities was to satisfy the broad, long-range NLS objectives:

1. To assess the demands for post-secondary education, including adult, vocational, and technical; the characteristics of students going on; where they go; the factors inhibiting the realization of educational aspirations; and the characteristics of and alternatives pursued by those who do not go on.
2. To determine what types of students make what educational and/or occupational choices—for the purpose of establishing meaningful flow data; understanding the chain of decisions that shape an individual's education, training, and launching of a career; and establishing the relationships needed for predictions.
3. To develop means for assessing how educational experiences, personal influences, and social attitudes have led the graduated student to the point at which he finds himself and for evaluating the extent to which these

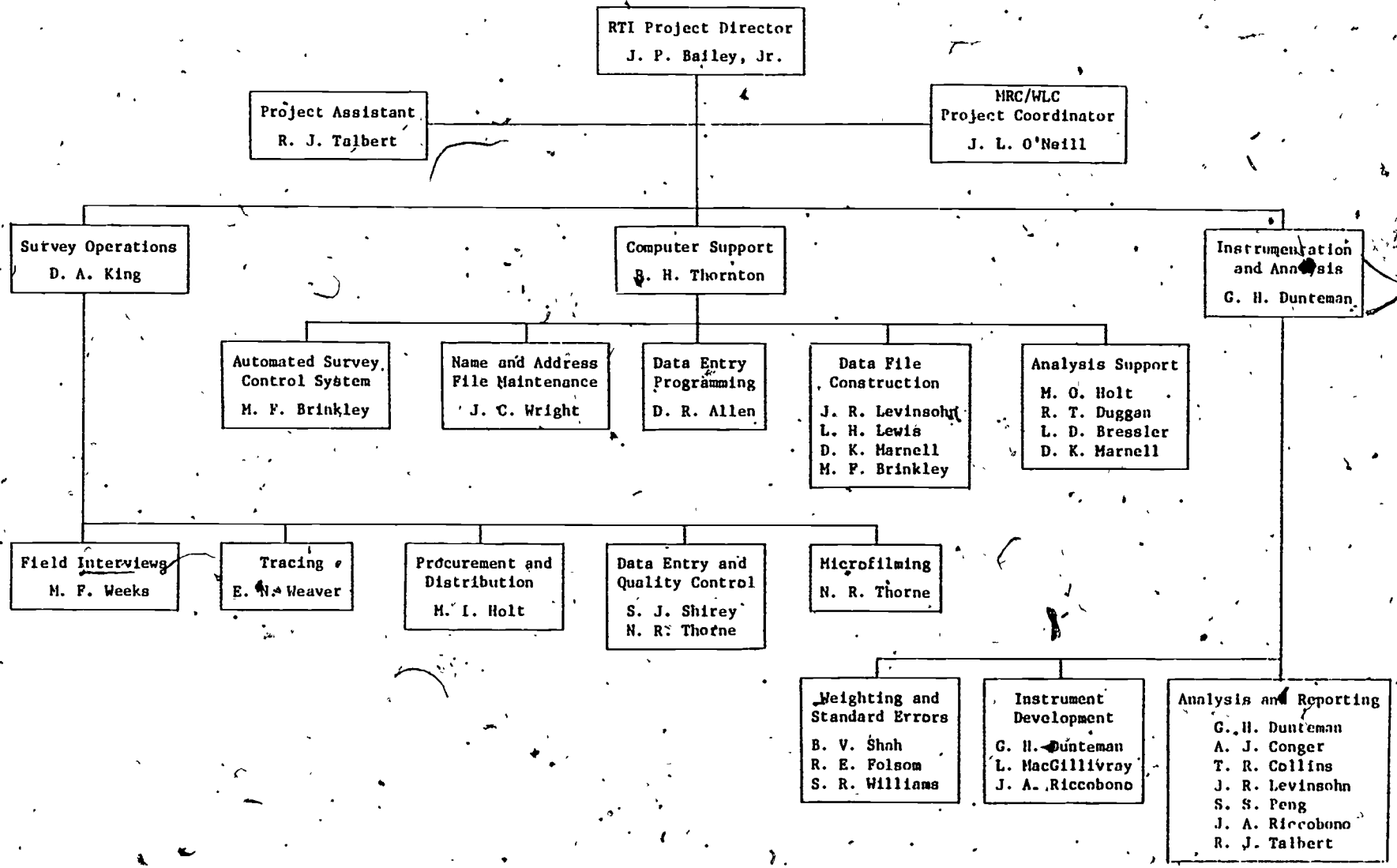

Figure 1-1. Organization and Staffing for the Second Follow-Up Survey

are related to his decisions about occupational choice, military service, and vocational, technical, and higher education.

4. To determine how aware students are of postsecondary education and employment alternatives and the options still open to them; how these were influenced by counseling; to what extent institutional and federally funded recruiting projects affected postsecondary school choices and retention; how employment opportunities can influence their effectiveness; and to what extent the lack of information about postsecondary opportunities (either educational or occupational) limits their aspirations.
5. To determine the influence of student ability on postsecondary choices and to associate the choices with test scores, the student's perception of his own abilities, and his class standings.
6. To relate low-aspiration choices for postsecondary education to the principal obstacles perceived by the student, especially financial obstacles, and to determine profiles of the student's knowledge of programs of financial aid, their applicability to his situation, and his intention to take advantage of them.
7. To follow the educational progress of students and those terminating early to see how high school experiences, curriculum patterns, and financial and other factors are associated with postsecondary career choices and perseverance and success in them, and to identify the factors associated with "dropping out" and changing jobs after different intervals.
8. To provide from the cohort study identifications of subpopulations—such as high achievers with limited financial resources, disadvantaged minority groups, and students in junior colleges and vocational and technical schools—and to investigate interactions and influences between and among individuals that will shape their future.
9. To refine the means and methods of assembling, merging, and maintaining data on large, diverse samples of highly mobile populations and to relate these techniques to other fields.
10. To investigate the consistency of patterns apparent in the analysis of base-year data; identify new patterns and/or changes in established patterns for further investigative emphases; and define areas for emphasis in subsequent follow-ups.

E. Coordination of Second Follow-Up Activities

The RTI staff assigned to NLS for the second follow-up activities of 1974-76 was under the leadership of the project director, Dr. J.P. Bailey, Jr., who was also responsible for the day-to-day coordination of all phases of the study.

The NLS tasks described in the second follow-up proposal were grouped by RTI into three components—survey operations, computer support, and instrumentation and analysis—with experienced senior personnel in charge of each. Figure 1-1 shows the organization and the staffing.

Coordination and communication were maintained by regularly scheduled staff meetings; task leaders reported progress and problems, and the project director set objectives and resolved difficulties and conflicts. To maximize responsiveness, all communications with NCES (especially those by telephone) were made the subject of NLS contact reports, which were immediately distributed internally.

Measurement Research Center (MRC) at Iowa City, Iowa, a division of Westinghouse Learning Corporation, was the subcontractor for the printing and distributing of study materials. Mr. John O'Neill, the MRC/WLC project coordinator, worked closely with the RTI project director on the instrument format and design and with the task leader for survey operations, Mr. D.A. King, on distribution (e.g., quantities, dates, and mailing lists).

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4. WESTAT, Inc., *Sample Design for the Selection of a Sample of Schools With Twelfth-Graders for a Longitudinal Study*, Rockville, Maryland, 1972.
5. Educational Testing Service, *The Base-Year Survey of the National Longitudinal Study of the High School Class of 1972—Final Report*, Princeton, New Jersey, 1973.
6. Research Triangle Institute, *Longitudinal Studies of Educational Effects, National Longitudinal Study of the High School Class of 1972: First Follow-Up Survey, Final Methodological Report*, North Carolina: Research Triangle Park, 1976.

II. SAMPLE DESIGN AND SURVEY PARTICIPATION

A. Basic Sample Design

The sample design is a deeply stratified, two-stage probability sample with schools as first-stage sampling units and students as second-stage units. The sample was designed and selected by WESTAT, Inc.[1] The population sampled consisted of all eligible 1972 twelfth graders enrolled in all public, private, and church-affiliated high schools in the 50 states and District of Columbia.

The school sampling frame, constructed from computerized school files maintained by USOE and by the National Catholic Education Association, was stratified into 600 final strata based on the following variables:

- Type of control (public or nonpublic),
- Geographic region (Northeast, North Central, South, and West),
- Grade 12 enrollment (< 300; 300-599; ≥ 600),
- Proximity to institutions of higher learning (3 levels),
- Percentage minority group enrollment (8 levels),
- Income level of the community (2 levels), and
- Degree of urbanization (10 levels).

Schools in low-income communities and schools with high proportions of minority group enrollments were selected and assigned probabilities twice as large as those used for the other schools to increase the numbers of disadvantaged students in the sample. Schools in the smallest grade 12 enrollment strata (< 300 seniors) were selected with probabilities proportional to their estimated numbers of seniors and without replacement; schools in the remaining grade 12 enrollment strata were selected with equal probabilities and without replacement. Within each of the 600 strata, four schools were selected; then two of the four were designated as the primary selections ($2 \times 600 = 1{,}200$) and the other two were retained as backups (1,200) to be used in the sample if one or both of the primary schools did not cooperate (e.g., refused, ineligible). From each school, up to 18 students and 5 alternate students were sampled with equal probabilities and without replacement.

B. Survey Participation

The basic sample design involved 1,200 primary sample schools and a target sample of 21,600 students (18 per school). The task of collecting base-year data was contracted by NCES to Educational Testing Service (ETS) of Princeton, New Jersey.[2] Of the 1,200 primary sample schools, 948 participated in the base-year survey, 21 had no senior students enrolled, and the other 231 either refused to participate or could not participate because the request was received too late in the school year. A participating school was defined as one in which at least one Student Questionnaire, Test Book, or student's School Record Information Form (SRIF) was completed.

Due to the large school nonresponse in the base-year (1972) survey, further attempts were made to secure participation of the 231 nonparticipant primary sample schools and replacements for the 21 schools that had no seniors. This "resurvey" activity, initiated by NCES prior to the first follow-up survey, involved securing school cooperation and selecting random samples of up to 18 former students (1972 seniors) per school. The resurvey activities were successful in 205 of the 231 primary sample schools; thus, students from 1,153 of the 1,200 primary sample schools were included in the first follow-up survey.

Students selected from backup or substitute schools were also included in the base-year, first follow-up, and second follow-up surveys. In the base-year survey, 122 backup schools participated—including 26 schools which were "extra" in their final stratum. A backup school was termed extra if both primary sample schools from that stratum participated. Students from the 26 extra schools were not included in the first follow-up survey, but additional backup schools were included so as to obtain at least two participating schools in the first follow-up survey from each of the 600 final strata. In the second follow-up survey, 18 of the extra schools were used to include cases with complete base-year data.

Former 1972 senior students were also selected from 16 sample augmentation

schools; these schools were selected from those identified in 200 sample school districts canvassed to identify public schools not included in the school sampling frame. Samples of students selected from the 16 augmentation schools were not included in the base-year survey but were included on subsequent surveys.

Table 2-1 provides a summary of the sample school participation for each survey effort. As can be seen, data were collected from students representing 1,070 participating schools in the base-year survey, 256 schools in the resurvey effort, 1,300 schools in the first follow-up survey, and 1,318 schools in the second follow-up survey.

Table 2-2 shows the composition of the final student sample and questionnaire returns for the base-year, first follow-up, and second follow-up surveys, by major category of sample school. Note that the final NLS sample of 23,451 contains 19,012 base-year participants and 4,439 resurvey members. As will be seen in Chapter VI, nonresponse-adjusted student weights were computed based on this total sample size. Response rates may also be computed on this basis, though this is certainly a conservative, if not misleading, approach. We have chosen instead to use the "targeted sample size" for each survey—i.e., the total sample minus all pre-survey removals—as the denominator in computing response rates.

Table 2-1

NUMBER OF PARTICIPATING SCHOOLS, BY SURVEY

School Sample	Base-Year	Resurvey	First Follow-Up	Second Follow-Up
Primary sample	948	205	1,153	1,153
Backup sample:				
"Extra" in base-year	26	–	–	18
Other	96*	35	131	131
Augmentation sample	–	16	16	16
Total	1,070	256	1,300	1,318

* Includes one school previously classified incorrectly as a primary sample school for resurvey.

Table 2-2

SAMPLE COMPOSITION AND NUMBER OF RESPONDENTS FOR BASE-YEAR, FIRST, AND SECOND FOLLOW-UP SURVEYS

School Sample	Number of Schools	Number of Students Sampled	Number of Questionnaires Returned		
			Base-Year	First Follow-Up	Second Follow-Up
Primary sample in base year	948	16,968	15,563	15,748	15,258
Backup sample in base year	96	1,715	846	1,551	1,509
Extra in base-year	18*	329	274	0†	293
Resurvey primary and backup sample	240	4,161	0	3,795	3,566
Resurvey augmentation sample	16	278	0	256	246
Total	1,318	23,451	16,683	21,350	20,872

* Eight of the 26 extra schools (containing 143 students) have been deleted from the NLS sample. No student data were collected from these eight schools in any of the survey efforts.

† Students from extra schools were not surveyed in the first follow-up.

References

1. WESTAT, Inc., *Sample Design for the Selection of a Sample of Schools with Twelfth-Graders for a Longitudinal Study*, Rockville, Maryland, 1972.
2. Educational Testing Service, *The Base-Year Survey of the National Longitudinal Study of the High School Class of 1972—Final Report*, Princeton, New Jersey, 1973.

III. DEVELOPMENT OF THE SECOND FOLLOW-UP QUESTIONNAIRE

A. Conceptual Model for the NLS

The first step in the development of the NLS survey instrumentation involved the construction of a framework within which items, or variables, could be generated. It was decided that the overall structure and content of the instruments should conform to the conception of the educational process as an input-output system which acts upon individual student attributes attempting to transform them into prescribed outcomes. The basic conceptual framework shown in Figure 3-1 represents a modification of the General Educational Development Model developed by UCLA's Center for the Study of Evaluation.[1] (The numbers in the boxes in Figure 3-1 refer to the numbers of the variables in the UCLA model; numbers outside are used in describing the model for NLS.) The RTI modification excludes some classes of variables (e.g., psychological climate and socialization in the home) since they were not considered amenable to adequate measurement by the mail survey questionnaire. Other classes (e.g., personal, intellectual, and educational satisfactions) explicitly included in UCLA's model were considered by RTI to be best measured in future follow-ups. Others were combined; for example, goal orientation in the RTI model encompasses expectations and aspirations in UCLA's model. Still others (e.g., community environment) not explicitly included in the UCLA model became key to the RTI model.

As depicted in Figure 3-1, students come into the school system with a set of predetermined characteristics (boxes 1-7) such as race, sex, and socioeconomic status. During their years in high school, the students have certain kinds of experiences and interact with various "significant others" (boxes 8-11), which in conjunction with the predetermined variables have important effects on the NLS base-year outcomes, including self-esteem, grade performance, and college plans (boxes 12-14).

Moving to the second stage in the diagram (the first follow-up), these high school outputs, along with their antecedents, now become "inputs" or determinants of postsecondary schooling and work careers (boxes 21-24) and a variety of intervening variables (boxes 15-20). The latter, sometimes called "mediator" or "moderator" variables, are similar in form and function to the school process variables (boxes 8-11) in the first stage.

The third stage in the diagram (labeled "Future Follow-Ups") is essentially a replication and extension of the same developmental process, and does not require further elaboration, except perhaps to note that several new measures of "satisfaction" are indicated among the final outcome variables, some of which were included in the second follow-up survey.

The model allows one to examine numerous important and interesting questions. For example, one can assess the total effects of college or work aspirations, grades, or noncognitive traits on various attainments or outcomes at some given point in time *net* of all antecedent and intervening variables. The extent to which these effects are mediated by the intervening variables can also be assessed. Or the extent to which any of the variables in boxes 8-11 operate to mediate the effects of the predetermined variables on these outcomes can be estimated. Certainly it is relevant to know, for example, whether or not the hypothesized depressant effects of being black, of being female, or of being poor are largely exhausted before a student leaves high school, as against the independent, or direct, influence of these predetermined variables on early postsecondary school careers.

B. Considerations Guiding the Development of the Second Follow-Up Questionnaire

At the point in time of the second follow-up survey (October 1974), approximately two and one-half years had elapsed since the initial contact with the NLS sample; the first follow-up effort, principally to establish activity states of all respondents in October 1972 and in October 1973, had been completed. Thus, a number of pathways, defined by the successive activity states, could be established in the developing personal histories of the young people in the sample.

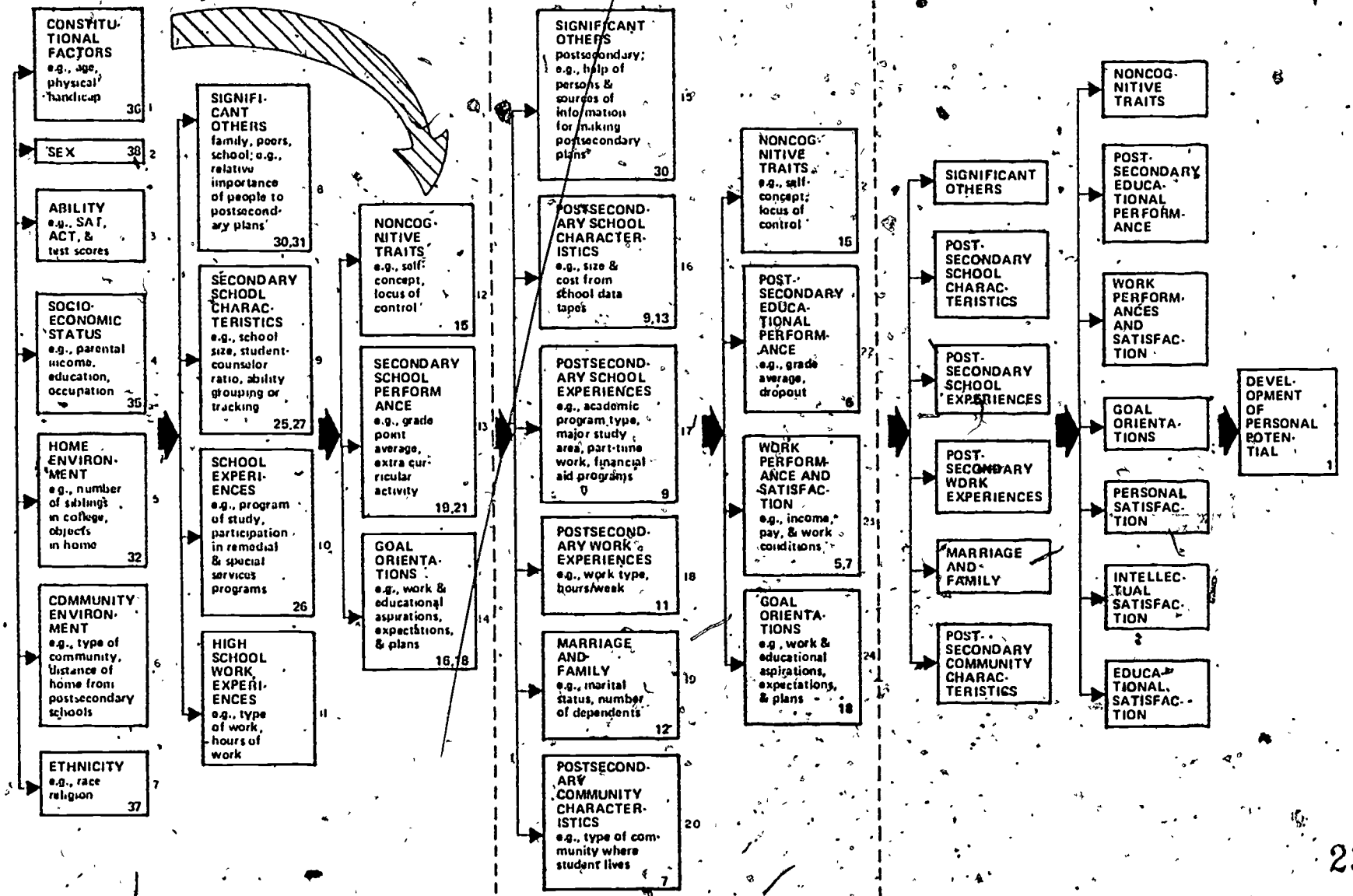


Figure 3-1. Paradigm for the NLS Instruments

With regard to the activity states of interest in 1974, the more important pathways were identified as follows:

1. *Path A:* uninterrupted full-time continuance in a college or university or vocational training program since fall 1972;
2. *Path B:* uninterrupted full-time continuance in education or training beyond high school, but with transfer from one institution to another;
3. *Path C:* delayed entrance (until 1973 or 1974) into higher or further education, with work, military service, or another activity state intervening since high school graduation;
4. *Path D:* uninterrupted continuance in full-time occupational activity, with progression or stabilization in a company, vocational field, or occupational family;
5. *Path E:* continuance in full-time occupational activity, but with moves from one unrelated job to another, possibly interspersed with periods of inactivity;
6. *Path F:* interspersion of work and further education, over the period from 1972 to 1974, through fairly continuous devotion of a portion of time to each activity state;
7. *Path G:* discontinuance in higher education, with or prior to completion of a program of studies begun in 1972;
8. *Path H:* reentry (sustained) into full- or part-time further education, after at least six months following spring 1972, in some activity state other than further education;
9. *Path I:* intermittent (October 1972-October 1973-October 1974) education—other activity—education or other activity—full-time education—other activity;
10. *Path J:* (females only) work or educational past terminated by marriage and consequent full-time activity of homemaking (pregnancy) or child care at time of second follow-up.

Beyond the establishment of these and other paths through successive activity states, prior data had been collected on a number of major and minor personal, institutional, social, and societal factors of presumed relevance to the educational, vocational, and personal development of the individual.

Thus, the second follow-up survey would seek to assess respondent activity characteristics at a particularly critical time in the career decision process. Students at junior colleges would have chosen further education, entry into the labor force, or some combination of both. Students who attended post-high school vocational or trade schools were likely to have moved into the labor force while those who worked immediately after high school would have had sufficient time to evaluate their educational needs and occupational opportunities. Four-year college students, on the other hand, were demonstrating a persistence in their intention to get a college education.

The major work of the second follow-up study was to document respondent activity states, to understand the factors that have resulted in these activity states, and to assess the quality of a respondent's performance and his or her satisfaction with these activity states. While it was assumed that ability, family background, race, and sex would prove to be major determinants of these decisions, it seemed crucial to elaborate and specify these relationships by considering the economics of the respondents' educational and work experiences, their progress in the life cycle with marriage and family formation, and their personal growth processes. While the experience was close at hand, moreover, this phase of the study could gather a first evaluation of the effectiveness of on-the-job training, apprenticeship, and vocational and technical school programs in preparing students to find a job and to perform well in their work. A similar assessment could be made of the college experience as a preparation for later vocational and civic activity.

With these considerations in mind, three critical requirements for the content of the second follow-up were identified:

1. Information that would permit the identification of the activity state in October 1974, and of significant interruptions in activity states between October 1973 and October 1974;
2. Information that would indicate the quality of performance in and level of satisfaction with the October 1974 activity state;
3. Information regarding current-time-bound conditions necessary to understand or explicate the significant aspects of the current environment and the individual's place therein (i.e., source and extent of financial support, perception of problems that interrupt or threaten continuance as planned, facilitating forces or interventions, etc.). This category also includes plans and aspirations, or other information that may predict future dispositions.

C. Designing the Questionnaire

As implied in the sections above, the design of the Second Follow-Up Questionnaire was dictated by a number of considerations: (1) The basic longitudinal study items should remain unchanged in order to insure comparability in the cross-time analyses. (2) The timing of the questionnaire should focus particular attention on the transition of respondents from vocational, technical, and junior college programs into either the labor force or further training. (3) There was a need to gather data to complete the data base for the general educational development model, as adapted by RTI, on which the analyses would be based. (As shown in Figure 3.1, this model includes, in addition to the information asked in the two prior surveys, respondents' social, citizenship, and consumer activities.) (4) There was a need for data on which to base programmatic policy decisions. (5) It was discovered that respondents were having several difficulties in answering the First Follow-Up Questionnaire. Each of these points will be discussed separately in the paragraphs which follow.

1. Continuity with First Follow-Up

The major concern of the entire National Longitudinal Study is to identify and understand the major sequences of events for post-secondary students from high school graduation to established location in the labor force. Beyond the work and educational decisions themselves, respondent's personal, family, social, political, and consumer decisions affect this process of moving into the labor force. The Second Follow-Up Questionnaire reflects this breadth of life roles and incorporates items to estimate the respondent's performance and satisfaction with each aspect of his or her life. The questionnaire also monitors the respondent's plans and aspirations in each area of life as well as the values on which these plans depend.

Most of the items measuring work and educational goals, performance, satisfaction, plans, and aspirations are taken directly from the First Follow-Up Questionnaire, changing only such wording as dates or directions for answering. Some additional items on personal history, finances, work and school satisfaction, and values are also brought forward from the previous survey instrument. In some instances, additional items have been added to clusters of first follow-up items to include new options (e.g., in reasons for not working, an item was added to include the possibility that the respondent was not working because there were no jobs in the area for which he or she was trained). Each question in these sets, however, is answered independently.

2. Special Transition Concerns of the Second Follow-Up

Questions about the transition of the students from vocational, technical, community, and junior colleges into new schools or into the labor force focus particularly on their choice of field of study and on their method of finding a job.

If the student chooses to go to a four-year college, he or she is asked all the questions about field choice that are presented to the other college students. Those choosing to go into the labor force, however, are a special concern. It is not known how or what these students know of the labor force requirements or conditions and of effective ways to locate work. Information is also lacking on the extent to which their training is useful in their work or even whether these students will continue to look for work, including moving to another part of the country to find work

related to their training. Items regarding relocation reasons, local job market conditions, length of job search, etc., were taken from the Current Population Survey in order to resolve some of these issues.

3. Completing Elements of the Model

There are several new activities included in the activity items of the Second Follow-Up Questionnaire. These fall most simply into studying the respondent as a consumer, a citizen, and as a person in the process of building a new family unit. An important question here is how finances may affect educational progress by enhancing, preventing, or postponing it. A question included in the second follow-up instrument attempts to identify the transition of economic dependence from parents to one's own consumer level; it is an extension of the base-year question item 94 about the parental home. A new item measuring quality of consumer behavior is also included.

Several items included in the second follow-up to measure the performance, satisfaction, and values of the respondents as citizens were drawn from pretested scales reported in the literature.[2] The importance of these items stems from the traditional concern attached to education as a preparation for good citizenship. One scale, a measure of political participation, investigates the kinds of civic organizations the respondent belongs to and the extent of his or her efforts to participate in the civic forum, from talking about issues to running for office. A measure of political efficacy, or the degree to which the respondent feels that voting and other civic participation makes a difference in how events turn out, is also included. The latter measure is viewed as one way to judge the respondent's satisfaction with his new citizenship role. The final aspect of the conceptual model (see Figure 3.1) that should be completed by the second follow-up focuses on the personal development of the respondent. One facet of this is the spare time activity of the respondent, i.e., the voluntary organizations and hobbies in which he or she is interested and the amount of time invested in them. The organizations listed in this new second follow-up question are taken from the Survey Research Center "Quality of Life" Questionnaire.[3] Two short items on hobbies are also included.

Another dimension of personal development, self-esteem and locus of control, was measured in both the base-year and first follow-up instruments and is repeated again in the second follow-up instrument. In addition, a shortened version of a measure of social maturity is included.[4] Finally, much had been written of the emphasis on quality of life among Americans, but especially as a value of young Americans. No single and well-defined measure of this life value had been developed. Consequently, a new multi-dimensional attitude measure of quality of life was constructed, tested in a field test, and included in the Second Follow-Up Questionnaire. The elements for the items are drawn from the topical contents of the Survey Research Center's "Quality of Life" Questionnaire and the developmental characteristics of late adolescents.

4. Programmatic Interests

Several items are included in the Second Follow-Up Questionnaire because they relate to policy concerns of the Office of Education and/or other agencies of the federal government. These questions particularly involve postsecondary educational experiences—such as the employment of students by the schools they are attending and the importance of the school in finding jobs for graduates and in preparing students for the jobs they do get. Current questions about rates of college completion and withdrawal also fall within this category. Items regarding accelerated programs and the questions already referred to regarding working students were included because of this concern. Items were also included to allow an investigator to discriminate among "dropouts" (those withdrawing from school prior to completing their program with no plans to return), "stopouts" (those stopping their college program but planning to return), and transfer students, who are usually reported only as dropouts by their schools of origin.

5. Rewording Considerations Based on the First Follow-Up

Two types of errors among respondents in the first follow-up had created some concern in the design for the second follow-up. For

the sets of questions in which the respondent was asked to answer "yes" or "no" (or some variation of these responses) to every item in a cluster, many respondents only circled a few yes responses and completely ignored the no option. While one might assume that not circling yes was equivalent to responding no in such cases, there is no clear way to tell. Consequently, it was decided to investigate different ways of answering these questions in the second follow-up field test and to use the format that elicited the most complete response in the full-scale second follow-up instrument.

The second problem area involved the questions asking for a report of income and its sources, particularly sources of student financial aid. The itemized amounts in the first follow-up did not coincide with the totals, and there was an excessively high nonresponse rate to these items. Since these questions are of particular concern for the Office of Education, alternative wording and format was suggested, field tested, and included in the Second Follow-Up Questionnaire, even considering the comparability problem. These reworded questions in their new form provide essentially the same information as do those which were employed in the first follow-up instrument.

D. Field Test of Survey Questionnaire

RTI conducted a major field test effort with an initial version of the Second Follow-Up Questionnaire. This field test took place during April-June 1974, using a probability sample of 903 seniors from the high school class of 1971. This was the same sample selected and used by RTI (under contract to USOE) in 1971 to pretest the NLS base-year Student Questionnaire and by the U.S. Bureau of the Census in May 1973 to pretest the First Follow-Up Questionnaire for the high school class of 1972.

While the full-scale second follow-up survey would investigate a number of hypotheses and questions pertaining to the educational, work, social, and personal activities of the study population, the field test focused primarily on the methodological and measurement properties of the survey instrument and the effectiveness and feasibility of alternative field procedures. That is, the primary purpose of the second follow-up field test was to investigate certain variations in item and instrument format (two forms of the questionnaire were field tested) which might improve on the first follow-up item and instrument response rates. Additionally, as noted above, a number of new items were employed in the field test to obtain information not covered by the first follow-up or base-year instruments (e.g., political participation, consumer behavior, social maturity, job awareness) but deemed important at this point in time in the lives of these respondents.

Following the field test, and other reviews of the results by RTI and representatives of several federal agencies, a final revised version of the survey questionnaire for the second follow-up was prepared and approved in September 1974 (O.M.B. No. 51-S-74032).

E. Structure of the Questionnaire

The Second Follow-Up Questionnaire is a 153-item, 28-page booklet designed for self-administration by the respondent. Most of the second follow-up questions are of the fixed-choice (closed-response) types. Open-response questions were limited to dates, income, number of hours or weeks worked, and the like. All questions were constructed and formatted by specialists in instrument design.

The items in the Second Follow-Up Questionnaire are organized into major sections and subsections as shown in Table 3-1. As can be seen, the major sections of the second follow-up instrument are identical to those of the first follow-up, except that a separate family status section (reflecting an expanded interest in this area) has been added. Certain other sections have been considerably expanded to cover new emphases on respondents as citizens and consumers and as individuals in transition from two-year to four-year colleges or into the labor market. A complete copy of the Second Follow-Up Questionnaire is provided in Appendix B.

F. Selection of Key Response and Supporting Items

Many considerations went into deciding whether a returned Second Follow-Up Questionnaire contained adequate information for acceptance, editing, and entry into the data

Table 3-1

MAJOR SECTIONS AND SUBSECTIONS OF THE SECOND FOLLOW-UP QUESTIONNAIRE

Section A: General Information
- Facts in October 1974 (1-8)

Section B: Education and Training
- School attendance from October 1973-October 1974 (9-31)
- Attendance at other schools from October 1973-October 1974 (32-43)
- School finances from fall 1973-summer 1974 (44-57)
- Other training (58-66)
- Using training since leaving high school (67-73)

Section C: Work Experience (74-99)
- Looking for work (100a-104)

Section D: Family Status (105-120)

Section E: Military Service (121-130)

Section F: Activities and Opinions (131-138)
- Opinions about the future (139-148)
- Information about the past (149-152)
- Self-insight (153)

Section G: Background Information

file. The general requirement was to obtain a certain required minimum of data on respondent activities since surveyed in the first follow-up, rather than to get complete data on all items. The following items were designated as crucial to the acceptability of the questionnaire.

General Information

1 What were you doing the *first week of October 1974?*

8 Ethnicity

Education and Training

9 *From October 1973 through October 1974*, attend any school? If "yes," 10 should be answered.

10 Attend school in *first week of October 1974*? If "yes," 11, 12, 15, 16, 19, and 28 should be answered. After checking 19, the following supporting items were checked for consistent response: 20, 21, 24, 26, and 27. After checking 28, the following supporting items were checked: 29, 30, and 31.

32 Attend any OTHER schools *from October 1973 to October 1974*? If "yes," 33 and 34 should be answered.

58 *From October 1973 to October 1974*, participate in any training program (other than regular school or college program)? If "yes," 59 should be answered, and the following supporting questions were checked for consistent response: 60, 61, 62, 63, 64, and 65.

66 *From October 1973 to October 1974*, earn any certificate, license, diploma, or degree?

Work Experience

74 Holding a job from *October 1973 through October 1974*? If "yes," 75 should be answered.

75 Working during the *first week of October 1974*? If "yes," 76a-d and 88 should be answered, and the following supporting items were checked for consistent response: 76e, 76f, 76g, 77, 89, and 90.

92 Working at any OTHER job *between October 1973 and October 1974*? If "yes," 93a-d should be answered, and supporting items 93e, 93f, 93g, and 94 were checked for consistent response.

Military Service

121 Since *October 1973*, served in the Armed Forces? If "yes, active duty," 128 should be answered.

Background Information

Names, addresses, and telephone numbers of respondent *and* his parents, sex, and, if respondent is female and married, spouse's name.

Immediately after receipt and check-in of a mail-returned questionnaire, it was routed to a manual premachine edit section where responses to the above key and supporting items were verified for presence and consistency. (Cost restraints and questionnaire complexity limited the editing to these items.) Failures were noted on an Edit Problem Sheet, which was routed with the questionnaire to the Telephone Tracing Department. The respondent was telephoned if possible so that inconsistencies could be clarified or corrected and missing data could be supplied.

References

1. Trent, James W., Claire Rose, Ann Salyard, Judd Adams, Alfred C. Marcus, J. Ward Keesling, and Arthur Gerst, *An Analytical Review of Longitudinal and Related Studies as They Apply to the Educational Process*, Los Angeles: Center for the Study of Evaluation, UCLA, 1972.
2. Robinson, J., et al., *Measures of Political Attitudes*, Ann Arbor, Michigan: Institute for Social Research, 1968.
3. Heath, Douglas, *Growing Up in College*, San Francisco: Jossey Bass, Inc., 1968.
4. Heath, Douglas, *Explorations of Maturity*, New York: Appleton-Century-Crofts.

IV. MAXIMIZING PARTICIPATION AND RESPONSE

A. Introduction

The NLS population is young, highly mobile, and involved in decisions about future work and life patterns. Continued participation in NLS depends largely on the success of the contractor in keeping in touch with, motivating, and developing rapport with individuals in the survey population. Materials used by RTI and NCES to enhance the willingness and to increase the response included newsletters, parent advisory letters, thank-you letters, prompting "blue fliers," mailgrams, and reminder postcards. Copies of these are in Appendix C. Additional methods involved telephone tracing of sample members whose newsletters and/or questionnaires were returned as undeliverable, prompting telephone calls to nonrespondents, and field interviews with mail nonrespondents. Several recommendations for maintaining cooperation and improving response were outgrowths of the second follow-up survey; these recommendations are given in section G of this chapter.

Response to the mail questionnaire will become more crucial and costly each year with each survey. For this second follow-up, the letter, postcard, and telephone contacts were designed to produce a mail response rate of at least 60 percent, within resource and cost considerations. The remaining 40 percent were to be individually interviewed by RTI field personnel.

B. Newsletters

In July 1974, RTI sent newsletters to the 20,059 study participants with good addresses on file. The newsletters reviewed the purpose of NLS, described student participation levels, announced that the second follow-up survey was underway, stated that a questionnaire would be mailed in about three weeks, stressed the importance of continued participation, and requested that the respondent return an enclosed postcard verifying current address or showing the needed corrections. One of the benefits of a newsletter (demonstrated previously in the first follow-up) is valuable leadtime in locating respondents for whom addresses had changed and being able to update the addresses prior to the questionnaire mailout. Thus, in the current survey, 2,692 sample members returned the newsletter postcard indicating changes in name and/or address. In addition, the postal service returned 917 newsletters as "undeliverable," and these were sent to RTI's Telephone Tracing Department for follow-up action.

In late August 1974, 229 NLS sample members were randomly selected to be telephoned as part of an effort to determine the impact and effectiveness of the OPERATION FOLLOW-UP newsletter. Those contacted were asked to comment on the newsletter and their participation in the study. Although it received mixed reviews, the general feeling among these sample members was that a newsletter should continue to be sent at least once a year and that it should include more results or highlights of the study findings.

C. Tracing Activities

Activities of the Telephone Tracing Department during the second follow-up are summarized in Table 4-1. Tracing activities began in late July 1974 with 1,279 sample members who did not respond to the first follow-up effort; it continued through January 1975 as the postal service returned undeliverable newsletters and Second Follow-Up Questionnaires. Tracing information types and sources were:

1. Name, address, and telephone of parents, guardians, or relatives.
2. Names, addresses, and telephones of two people who would always know how to get in touch with the individual.
3. Name and location of postsecondary school the individual attended or planned to attend.
4. Name and location of the individual's employer.
5. Neighbors of the individual or his parents.
6. Principal or other contact at the secondary school attended.
7. State or registration and identification number of driver's license.

Table 4-1

TELEPHONE TRACING CASES, 1974-75

Reason for Tracing	Cases				
		Completed		Unsuccessful	
	Traced	Number	Percent	Number	Percent
Undeliverable ID/COA*	711	681	95.8	30	4.2
Nonrespondents to first followup	1,279	883	69.0	396	31.0
Newsletter undeliverable	911†	873	95.8	38	4.2
Questionnaire undeliverable	989	848	85.7	141	14.3
Undeliverable letters to "alternate sample members" *	16	2	12.5	14	87.4
Total	3,906	3,287	84.2	619	15.8

* ID/COA stands for identification/change of address cards sent to all sample members.

† Six undeliverable newsletters were received after the questionnaire mailout and were not traced.

* This group includes 329 students who were selected as alternates, or extras, in the base-year study but had not been participants since. They were sent letters advising that the field interviewing staff would contact them.

8. Local government agencies.
9. Armed Forces locator services or DOD rosters.
10. Institutional records (i.e., prison, police, mental).
11. Local credit bureau or a similar organization.

As new addresses were obtained from tracing activities, returned mail, or other sources, the computer file of names and addresses was updated.

Of the 1,279 nonrespondents to first follow-up, 883 (69 percent) were successfully traced. Telephone tracing began in early August on the 911 undeliverable newsletters, and current addresses were obtained for 873 (96 percent) of these cases. Work began on tracing returned undeliverable Second Follow-Up Questionnaires in mid-October, and 848 out of 989 cases (86 percent) were successfully traced. As shown in Table 4-1, a total of 3,906 cases were traced during the second follow-up; 3,287 cases (84 percent) were traced successfully. Of the 619 cases unsuccessfully traced, no address was obtained for 346 cases (9 percent); and 273 cases (7 percent) were removed from the active file due to refusals, duplicate ID's, deaths, and mental or physical handicaps.

D. Data Collection Activities

1. Mail-Return Responses

Questionnaires were mailed by the Measurement Research Center (MRC) using certified first class mail beginning on 7 October 1974 to 22,035* individuals in the second follow-up sample. This mailing was followed a week later by an additional 323 questionnaires mailed from RTI to 51 sample members living abroad, 260 members whose addresses were updated by the telephone tracing staff, and 12 other individuals who

* Note that this figure does not include 329 base-year "extras," i.e., base-year respondents from backup schools who were to be included in the NLS second follow-up effort in January 1975 and were scheduled for personal interview in the second follow-up survey. One was removed before field work.

required special handling after the creation of the initial mailout file. As shown in Table 4-2, events following this mailout ultimately resulted in 15,197 returns and a 69.0 percent mail response rate by 1 May 1975.*

* Questionnaires returned by mail for 139 of these respondents were subsequently deleted since these data were also obtained by personal interview. Thus, the actual number of mail returns is 15,058 (15,197 - 139), and the final mail response rate is 68.3 percent.

Figure 4-1 shows cumulative response rates to all mailouts. As in the first follow-up, the bulk of the mail responses (62 percent) was received at RTI in the first eight weeks after the initial questionnaire mailout, after which the mail return rate began to level off. Additional questionnaires were received later, however, and by the first week of January 1975, a total of 14,918 questionnaires had been received. This is a 68 percent mail return rate, and represents a substantial increase over the 60 percent return for the same number of elapsed days for the first follow-up.

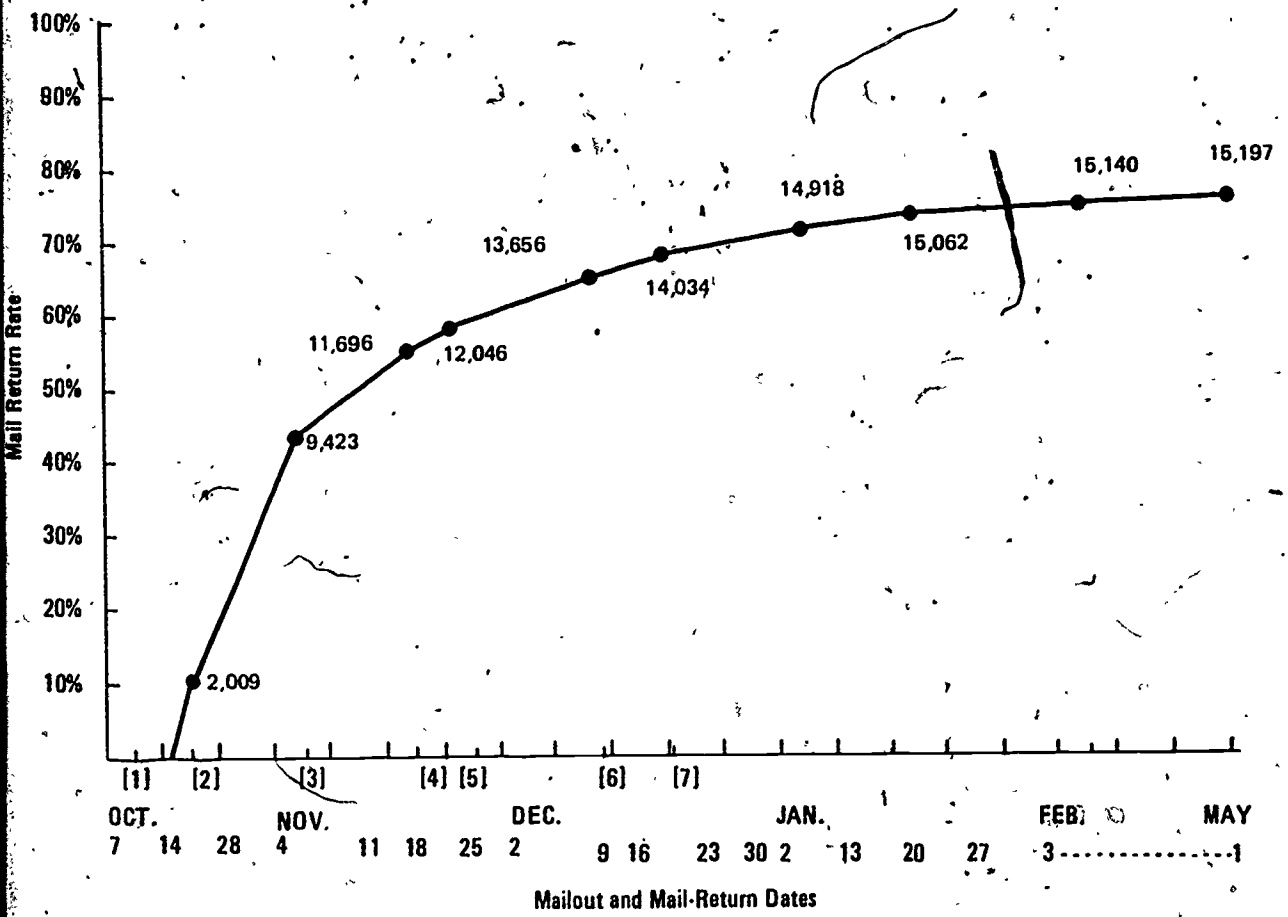
Table 4-2

OVERALL MAIL RETURNS AND RESPONSE RATES, 1974-75

Date	Event	Number Mailed	Days Elapsed*	Questionnaire Responses		
				Number Returned	Cumulative Total†	Overall Response Rate (%)
October 7	1st questionnaire mailout (from MRC)	22,035	–	–	–	–
October 14	1st questionnaire mailout (from RTI)	323	7	–	–	–
October 16	Reminder/thank-you postcard	21,712	9	2,009	2,009	9.1
October 30	1st prompting postcard/mailgram	13,660	23	7,414	9,423	42.8
November 13	2nd questionnaire mailout	9,768	37	2,273	11,696	53.1
November 18	2nd prompting postcard/mailgram	9,468	42	350	12,046	54.7
December 3	Prompting blue flier	7,563	57	1,610	13,656	61.7
December 11	.....	6,597	65	378	14,034	63.7
January 2	Prompting mailgrams	–	87	884	14,918	67.7
January 20	.....	–	107	144	15,062	68.4
February 3	.....	–	114	78	15,140	68.7
March 3	.....	–	139	41	15,181	68.9
April 1	.....	–	167	12	15,193	68.9
May 1	.....	–	198	4	15,197	69.0

* Days since the 1st questionnaire mailout of October 7, 1974. See Figure 4-1.

† Cumulative totals do not reflect 60 duplicate questionnaires which were logged in as received but subsequently removed in the edit process. Included in the final cumulative total, however, are 139 respondents who also completed a personal interview and whose mailed questionnaires were therefore deleted.



Mailout and Mail-Return Dates

Mailout Events:

[1] — 1st Questionnaire Mailout, 10/7
[2] — Thank-You/Reminder Postcards, 10/16
[3] — Prompting Postcards/Mailgrams, 10/30
[4] — 2nd Questionnaire Mailout, 11/13
[5] — Prompting Postcards/Mailgrams, 11/18
[6] — Prompting Blue Flier, 12/3
[7] — Prompting Mailgrams, 12/11

NOTE: Final cumulative total includes 139 duplicates which were later removed.

Figure 4-1. Cumulative Response to All Mailout Types, 1974-75

2. Effects of Mailouts

The schedule and results of NLS second follow-up survey mailout and prompting activities were detailed in Table 4-2 above. As can be seen in that table, a thank-you/reminder postcard was sent to all sample members nine days after the first questionnaire mailout. Two weeks later, on 30 October, a prompting postcard or mailgram was sent to all nonrespondents—half the nonrespondents were sent a postcard and the other half were sent a mailgram with the same text. On 13 November a second questionnaire, along with a special cover letter, was mailed (using first class air mail) to the 9,768 nonresponding sample members. A second prompting postcard or mailgram was sent to all nonrespondents as of 18 November, reversing the previous (30 October) postcard/mailgram allocation (i.e., nonrespondents who were sent mailgrams on 30 October were sent postcards on 18 November, and those who had been sent postcards on 30 October were sent mailgrams on 18 November). The purpose of this variation was to compare the relative effectiveness of mailgrams and postcards in terms of increasing response. Final mail follow-up actions occurred on 3 December with the mailing of 7,563 prompting blue fliers and on 11 December when prompting mailgrams were sent to 6,597 remaining nonrespondents.

Table 4-3 indicates the estimated effect of the various nonrespondent follow-up activities on response and the cost of each activity. Care should be exercised in assessing these actions, as true effectiveness is difficult to determine precisely and the cumulative effect of several mailings cannot be measured accurately. Note, however, that mailgram response rates are consistently higher than those from postcard reminders. The response rates shown in Table 4-3 were computed by assuming that the returns from any given follow-up action would commence five days after the action was initiated and would

Table 4-3

ESTIMATED EFFECT AND COST OF PROMPTING ACTIONS/EVENTS: NLS SECOND FOLLOW-UP SURVEY

Action/Event	Number Mailed	Estimated Cost Per Item ($)	Total Cost ($)	Number Returned	Cost Per Return ($)	Response Rate (%)
1st questionnaire mailout (from MRC)	22,035	1.10	NA	NA	NA	NA
1st questionnaire mailout (from RTI)	323	NA	NA	NA	NA	NA
Reminder/thank-you postcard	21,712	.20	NA	NA	NA	NA
1st prompting postcard	7,306	.20	1,461	881	1.66	12.1
1st prompting mailgram	6,354	1.00	6,354	1,175	5.41	18.5
2nd questionnaire mailout	9,768	1.10	10,745	627	17.14	6.4
2nd prompting postcard	4,548	.20	910	498	1.83	11.0
2nd prompting mailgram	4,920	1.00	4,920	672	7.32	13.7
Blue flier	7,563	.25	1,891	430	4.40	5.7
Final mailgram	6,597	1.00	6,597	906*	7.28	13.7

* The number of responses credited to the "final mailgram" includes all responses received from December 16 through May 1. An undetermined number of these respondents are sample members who returned to their homes for Christmas and found the questionnaire waiting there.

continue until five days after the next follow-up action. Based on the information available, it appears reasonable to assume that the type and number of follow-ups employed were quite effective and have resulted in a surprisingly high response to the mail effort, especially considering the length and complexity of the Second Follow-Up Questionnaire and considering that no monetary incentive was offered.

3. Personal Interviews

Fieldwork for the second follow-up began in January 1975, but preparation for this work actually began four months earlier. The first major activity involved a briefing of 12 RTI off-site field supervisors, as part of a general training session held at RTI from 19 through 25 September 1974. Topics relating to NLS included the purpose and history of the study, an overview of RTI's data collection plans for the field interview phase, and a review of specific field procedures used by RTI in its studies.

Based upon the number and distribution of nonrespondents to the first follow-up mail survey, a projection of interviewer staff requirements and a schedule of recruiting visits for interviewers was also prepared for each field supervisor. It appeared that about 175 field interviewers would be required for assignment in accordance with the geographic pattern of nonresponse. Immediately following the initial briefing sessions, the field supervisors began recruiting within their respective geographic areas. Recruiting activities continued through November in preparation for the interviewer training sessions held on 2 December.

A variety of training aids, including a field interviewer's NLS manual, a field supervisor's NLS manual, and a self-study questionnaire were developed by RTI central staff and distributed to the field staff. Supervisor and interviewer field training was conducted during the first three weeks in December 1974. There were 12 supervisor/interviewer training sessions; four each week during the three-week training session period.

Second Follow-Up Questionnaires to be used in fieldwork were bound with an extra cover which provided space for information needed by interviewers and supervisors. During the third week of December, these questionnaires for field interviewers were labeled, sorted by field supervisor area, and shipped to the supervisors for sorting and assignment to interviewers.

Questionnaires for 228 sample members who were believed to be stationed abroad in the military or living outside of the coterminous United States were not immediately assigned to the field supervisors. Since 36 of these cases had Hawaii addresses, it was decided to recruit an interviewer there to work on these cases. The remaining 192 cases were routed to RTI's Telephone Tracing Department for address verification via telephone contacts with parents and other tracing sources. As a result, new U.S. addresses were obtained for 75 sample members. The RTI tracing operation administered the Second Follow-Up Questionnaire to 21 of these sample members over the telephone; the other 54 cases were mailed to the appropriate field supervisor for field interview.

In January 1975, 328 questionnaires for base-year "extras" were sent to the field for follow-up. These were respondents from back-up sample schools in the base-year study who had not been included in the first follow-up survey or in the questionnaire mail-out for the second follow-up survey. It was decided, however, to include them in the field interview phase of the second follow-up survey.

Data collection was completed in early April. The results of the field interview phase of the second follow-up survey are summarized in Table 4-4. This table shows summary results for base-year "extras," no-address cases, and regular cases. For each type of case the table shows two response rates: the "overall" response rate was computed as the percentage of all completed cases interviewed, while the "chargeable" response rate exludes the nonchargeable noninterviews from this consumption.

As Table 4-4 shows, RTI was successful in obtaining interviews with 293 of the 328 base-year extra cases assigned, for an overall response rate for this group of 89.3 percent. Excluding the 12 cases which were designated as "nonchargeable noninterviews," the chargeable response rate for the base-year extra cases was 92.7 percent.

Table 4-4

RESULTS OF FIELD INTERVIEW PHASE OF NLS SECOND FOLLOW-UP SURVEY

	Regular	Base-Year "Extras"	No-Address Cases*	Total
Cases Assigned †	6,382	328	118	6,828
Interviewed				
Interviewed in person	4,209	250	58	4,517
Interviewed via phone	1,233	43	18	1,294
Total interviewed	5,445	293	76	5,814
Chargeable Noninterviews				
Refused	319	6	2	327
Unable to contact	314	17	33	364
Total chargeable noninterviews	633	23	35	691
Percent of assigned cases	9.9%	7.2%	29.7%	10.1%
Nonchargeable Noninterviews				
Out of country	256	9	6	271
Deceased	2	1	0	3
Institutionalized	9	1	0	10
Handicapped	7	1	0	8
Phone case—no phone	31	0	1	32
Phone case—unlisted number	1	0	0	1
Total nonchargeable noninterviews*	306	12	7	325
Percent of assigned cases	4.1%	3.7%	5.9%	4.8%
Response Rate				
Overall (percent of completed cases interviewed)	85.3%	89.3%	64.4%	85.2%
Chargeable*	89.6%	92.7%	68.5%	89.4%

• These were cases returned to RTI by the Postal Service as undeliverable and for whom RTI's Telephone Tracing Department was unable to determine an address.

† After deletion of late mail return.

* Nonchargeable noninterview cases were excluded in computing the chargeable response rate.

The no-address cases were those whose questionnaires were returned to RTI by the postal service as undeliverable and for whom RTI's Telephone Tracing Department was unable to determine an address. It was decided to send these cases to the field in an effort to have them located by the field interviewer. The field staff was successful in locating and interviewing 76 of the 118 cases in this category, for an overall response rate of 64.4 percent. Excluding nonchargeable noninterviews, the chargeable response rate for no-address cases was 68.5 percent.

As Table 4-4 indicates, of the 6,382 regular cases, 5,445 were interviewed, for an overall response rate of 85.3 percent and a chargeable response rate of 89.6 percent. The combined results for all three types of cases are also summarized in the table. Of a total of 6,828 field interview cases (after deletion of late mail returns), 5,814 were interviewed, for an overall field response rate of 85.2 percent and a chargeable field response rate of 89.4 percent.

4. Checks on Data Quality

Each returned second follow-up survey instrument was scan-edited page by page to detect critical omissions and inconsistencies. The scan-edit averaged roughly 20 minutes per questionnaire. This review was designed to verify—

- That, in general, the respondent had understood and followed the instructions (i.e., had not given obviously false or capricious responses or in some other way shown an insincere effort in completing the questionnaire);
- That the major critical skip patterns were correctly interpreted and that no block of applicable items was omitted;
- That each instrument was properly identified and all items required for tracing were completed;* and
- That questions deemed critical for minimal analyses relevant to survey objectives were answered adequately and consistently.

Items selected for review included up to 58 key and supporting questions, depending on skip patterns; these covered:

- current activities and plans,
- education and training since high school,
- civilian work experience since high school,
- military service, and
- background (tracing) information.

The list of key and supporting items is presented in Chapter III. Only these questions were examined for clarification or correction by the respondent, although other steps were taken to prepare the data for entry (see Chapter V for a more detailed discussion of this process). The goals were not only to obtain answers to key questions but also to insure that the answers were consistent among themselves. Table 4-5 shows the results of the premachine (manual) edit for mail and field interview completions. Slightly over 41 percent of the questionnaires received by mail failed edit as compared to a 28 percent fail-edit rate for the first follow-up. This increase is largely due to the increase in number of key questions from 27 in the first follow-up to 58 in the second follow-up.

If a questionnaire failed the edit checks, its problems were noted on an Edit Problem Sheet; the sheet and the questionnaire were routed to the Telephone Tracing Department and that staff (also trained editors and interviewers) telephoned the respondents. A total of 7,236 questionnaires (mail-returns and personal interviews) failed to meet the minimum requirements established and were turned over to the Tracing Department for telephone follow-up; of these, 6,808 or 94.1 percent were completed successfully (see Table 4-6).

* This verification was used in the check-in process and in the data quality checks because the critical nature of these items justified the added cost.

Table 4-5

RESULTS OF PREMACHINE EDITING OF SECOND FOLLOW-UP QUESTIONNAIRES

	Mail Response		Personal Interview		Total Response	
Event Category	N	%	N	%	N	%
Passed edit	8,728	57.2	4,890	83.5	13,618	64.5
Failed edit	6,315	41.4	921	15.7	7,236	34.3
Duplicate questionnaires removed from edit process	60	0.4	44	0.8	104	0.5
Other removals (blanks, ineligibles, etc.)	154	1.4	–	–	154	0.7
Total	15,257	100.0	5,855	100.0	21,112	100.0

Table 4-6

TELEPHONE FOLLOW-UPS OF SECOND FOLLOW-UP QUESTIONNAIRES THAT FAILED PREMACHINE EDITING

Response Category	Number	Percent
All key items completed	6,788	93.8
Partial information obtained (but some key items not completed)	20	0.3
Refusal	41	0.6
Unable to contact respondents	387	5.3
Total	7,236	100.0

E. Special Activity State Survey

Concurrent with second follow-up data collection activities, a special survey operation was also undertaken. This special activity state survey was initiated in response to analysis of base-year and first follow-up data. Specifically, as the first follow-up data were being analyzed during the summer and fall of 1974, it became evident that about 3,100 respondents could not be classified into an activity state for October 1972, over 2,400 could not be so classified for October 1974, and over 3,500 could not be classified into the activity state transition matrices. There was considerable overlap among these groups. Furthermore, these unclassifiables were more heavily represented by low SES and low aptitude respondents, thus introducing a potential bias for certain analyses. It was therefore decided to conduct a special activity state survey to collect these important missing data.

The number of sample members to be recontacted for participation in this special survey was determined to be 3,904, among whom 218 have since been removed from active NLS participation. The remaining 3,686 sample members to be contacted had the following second follow-up status at the beginning of the field interview phase of the survey:

1. 1,580 mail nonrespondents, subject to field interview;
2. 739 fail-edit respondents, subject to telephone call;
3. 1,367 passed edit, or in the process of being edited, subject to telephone call.

The supplementary information questionnaire, or Activity State Questionnaire (ASQ), contained only questions which had previously been asked as a part of the NLS first follow-up survey (see Appendix D). Data were collected by telephone or by personal interview only. All questions were asked of all target individuals.

A total of 3,088 Activity State Questionnaires were completed, representing a completion rate of 83.8 percent. RTI staff were unable to contact or get cooperation from the remaining 598 sample members scheduled for participation in this special survey.

The activity state survey data were treated as a separate entity in data processing. Separate coding, keying, and editing operations were designed and implemented. The resulting edited data served to update all 1972 and 1973 activity states and compute various composite values (i.e., father's occupation, high school program, mother's and father's education level). Since the ASQ survey was an additional survey, conducted at a point in time one or two years removed from the initial surveys, these data were not used to replace existing data for corresponding base-year or first follow-up items. This information was used solely to compute updated activity states or updated composite scores which are distinct variables in the NLS data files.

F. Reliability Study

This study was conducted concurrently with the full-scale second follow-up survey in order to determine the reliability, or temporal stability, of responses to selected NLS questionnaire items. The general purpose of the reliability study was to provide information on the quality of NLS questionnaire data; however, a more general discussion of the findings includes guidelines for analyzing survey data and for improving the quality of data in survey studies.

While an empirical analysis of validity would have been desirable, such a study was not undertaken because of concerns about

federal policies and pending legislation concerning informed consent and the invasion of privacy. Some concern also existed about the possibility of respondent attrition in reaction to a validity check. In lieu of an empirical analysis of validity, RTI and NCES jointly agreed to an investigation of validity based on a literature review focusing on NLS types of items. This investigation, like the reliability study, considers data collection procedures, item characteristics, respondent characteristics, and their interactions.

A probability sample of 600 NLS sample members was selected for the reliability study. A subset of 17 questions was extracted from the Second Follow-Up Questionnaire and compiled into a separate "short-form" questionnaire for use in the reliability study.

Data were collected for this study, and for NLS as a whole, through a combination of mail, field interview, and telephone efforts. Data collection activity for the reliability study actually began the second week of October 1974 with the initial mailing of Second Follow-Up Questionnaires to all NLS sample members.

Short-form questionnaires were mailed to all reliability study members who returned their long-form questionnaires by mail, no earlier than ten days after the completion date denoted on the background information page of the Second Follow-Up Questionnaire. Two weeks after the mailing of the short-form questionnaire, a prompting telephone call was made to the nonrespondent encouraging him or her to return the questionnaire. If the nonrespondent indicated that he or she had either lost or had never received a short-form questionnaire, or if the nonrespondent could not be contacted for prompting, then a second mailout occurred immediately. No further attempts were made to obtain a response.

Reliability sample members who completed a long-form questionnaire by personal interview were recontacted two weeks after the first interview, at which time an interview with the short-form questionnaire was completed. All data collection activities for the reliability study were completed by the end of April 1975. The procedures and results of the reliability study are discussed in detail in Chapter VII of this report.

G. Second Follow-Up Data Collection Summary

The target population for the second follow-up survey consisted of 22,364 sample members. Data collection activities took place from July 1974 through April 1975. Newsletters were developed and mailed to all sample members with good addresses on file not only to encourage participation but also to use as a vehicle for updating names and addresses. When mail was returned by the postal service as undeliverable, telephone tracing procedures were employed to obtain current addresses where possible.

During 7-14 October 1974, Second Follow-Up Questionnaires were mailed to the last known addresses of 22,035 NLS sample members (the target sample minus the 329 base-year extras scheduled for personal interview). This was followed by a planned sequence of thank-you/reminder postcards, prompting postcards or mailgrams, additional questionnaire mailings, and prompting blue fliers. Active mail-return efforts continued through December 1974; by early January 1975, the questionnaire return rate by mail was 68 percent. Questionnaires continued to arrive through the mail during the field interview phase of the survey.

In January 1975, the names and addresses of 6,828 sample members who failed to mail back their questionnaires were turned over to the RTI field staff for personal interview. This personal interview phase of second follow-up data collection continued through March 1975, at which time the overall response rate had been increased to 93.3 percent, 20,872 respondents out of 22,364 targeted sample members.

H. Recommendations for Third Follow-Up

In view of the high mail and overall response rates obtained in the second follow-up and the high quality of the data processing activities, it does not appear that major changes in survey operations are needed. The results of the special newsletter telephone survey indicate that a newsletter mailout to NLS sample members in the fall of 1975—i.e., the intervening year between the second and third follow-up—would be desirable, and that

this newsletter should contain highlights of analytic findings to date.

There are also some minor refinements in the mail data collection procedures that could be implemented in the third follow-up to improve mail response and lower costs. One of these changes relates to the problem of participating sample members who continue to receive mail at the home of their parents when they reside elsewhere. RTI suggests reviewing the name and address file and, in those cases where both parents and the sample member's addresses are identical, to send a lead letter to the parents requesting that they advise us of the correct address of their child (if different from theirs) and, where necessary, to forward the questionnaire. This action should improve the name and address file data and thereby increase the mail response rate.

RTI also suggests that in the third follow-up the initial questionnaire mailout be sent via air mail and the second questionnaire mailout via certified mail, rather than vice versa. RTI also suggests a slightly more extensive use of mailgrams. These changes would not appreciably affect costs but would likely further improve the response rate.

V. PREPARATION OF THE NLS DATA FILES*

A. Background

In the spring of 1975 a subset of the NLS data base was released for public use.[2] At that time it contained the data from two waves of survey data collection conducted during spring 1972 and fall 1973. Given the timing and schedule of the sequential releases and collection of NLS data, it was decided to provide a second level of edit for the 1975 data base concurrent with the first level of edit of the second follow-up (1976) data. The edit tasks and additions of new data to the base-year and first follow-up data base (1975 data base) defined the scope of the second level of edit activities, and are described in detail elsewhere.[3] The second level of edit activities were specific file editing tasks related to reformatting, recoding, or adding to certain sections of the 1975 NLS data base. The new data came from data collection and data processing activities that continued beyond the first follow-up cutoff dates. This consisted of the special activity state survey described earlier (see Chapter IV, section E, of this report), processing additional School Record Information Forms (SRIF) and additional School Questionnaires (SQ) which were completed after the 1975 data base was released, and creating new composite variables.

B. Overview

Questionnaires returned by mail, either from individual sample members or from field interviewers, were routed on a flow basis to a central check-in point. First, each respondent's ID number and batch number were transmitted to the data processing section for a daily count of the questionnaires received. Then, batches were routed to the premachine (manual) editing section to see if each questionnaire contained the minimum set of key data. Questionnaires which passed this check were transmitted to the direct data entry section to be transformed into machine readable form. Questionnaires which failed the check were routed to the Telephone Tracing Department for contacts with the respondents to resolve problems uncovered in manual edit; after resolution, the questionnaires were transmitted to the direct data entry section for encoding. At each point along the route, events were entered into the automated survey support system so there would be constant monitoring of the location of all questionnaires in the document flow process.

After data were encoded, questionnaires were placed in temporary secure storage prior to microfilming and eventual destruction. The microfilming was initiated to provide greater assurance of confidentiality, to simplify accessibility of original data, to reduce storage costs (several tons of hard copy were transferred to microfiche), and to insure against loss by separate storage of a second filmed copy.

C. Premachine Editing

The premachine editing centered around the following ideas: if "key" questions were answered or could be presumed by responses to related items, a questionnaire would be accepted—no matter how little other information was given; however, if any key data (described in Chapter III) were missing, the respondent would be telephoned to complete the record.

After a questionnaire had passed the editing requirements, the alphabetic data in a few parts of the questionnaire were manually coded into numeric form before transformation into machine readable form. Questions about job area or occupation were transformed into the corresponding 3-digit codes specified in the Census Occupational Classification System; questions pertaining to parental or spouse's occupation were likewise coded (codes are in Appendix C of the *Users Manual*). Postsecondary school identification (college, university, vocational/technical) was transformed into 6-digit FICE† or vendor codes by using a master index provided by

* The content of this chapter was extracted, in part, from the *Base-Year, First, and Second Follow-Up Users Manual*, listed in Appendix A of this report, and hereafter referred to as the *Users Manual*.[1]

† FICE codes are 6-digit serial numbers used to identify U.S. institutions of higher education (those offering two or more years of college); these codes are available in NCES directories and from the OE computerized Vendor's File.

USOE. For fields of study, both the 4-digit academic subdivisions provided by the HEGIS (Higher Education General Information Survey) taxonomy and the 6-digit HEGIS technological and occupational schemes were used (Appendix D.1, *Users Manual*). Finally, the responses to certain questions were coded numerically to indicate type of license, certificate, or diploma earned (Appendix D.2, *Users Manual*).

There were a number of questions in both the First and Second Follow-Up Questionnaires for which respondents could select either fixed-choice (closed-response) answers or write-in answers for the "other" option. In every case possible, the "other" option was reclassified by the manual editors into the fixed-choice options; when reclassification was not obvious or logical, the "other" was retained in the coding, but the alphabetic description was not included on the data file. There were, however, a few questions in both questionnaires that were not numerically coded (i.e., they were coded as written on the questionnaire).

Various specific questions in the Second Follow-Up Questionnaire were given special editing or coding. This consisted of special editing instructions for alphabetic data, for resolving inappropriate multiple responses, for contextual cross-checking of some answers, and for coding combined answers to some groups of items. Complete lists of the second follow-up items treated in this manner and a description of the special editing procedures employed are provided in the *Users Manual*.

NLS follow-up data were transformed to machine readable form by using direct data entry programmable terminals. Major advantages of this procedure were higher speed, fewer processing steps, and lower transcription error rate. The overall error rate was less than 0.3 percent. The terminals were programmed to accept a specific range of values for most of the data and specific field widths for all data. Response ranges for fixed-format variables decided upon prior to data entry were programmed for the terminals; other responses were coded to indicate they were outside of the specified ranges.

D. Error Coding

A set of "error" codes was applied uniformly across the file to indicate classes of erroneous or missing data. The codes are explained below:

93 *Partial response*. Used for questions in the First Follow-Up Questionnaire with the two-column response format to indicate whether each subitem applies or not. If at least one was answered, the unanswered subitems were coded 93.

94 *Don't know*. Used when there was a written response by the respondent indicating that he or she did not know the answer to the question.

95 *Out-of-range response*. Used when a response or transcription exceeded an acceptable range or specified field width (described more fully in the next section).

96 *Multiple response*. Used when there were several answers to a question when the directions call for only one, and the multiple response could not otherwise be resolved.

97 *Refusal*. Used when the respondent refused to answer an item either by written statement or in the personal interview.

98 *Blank, or nonresponse*. Used for nonresponse cases not identified as legitimate nonresponse (see code 99 and section E.3 below).

99 *Legitimate nonresponse*. Used when the respondent should not and did not answer the question (i.e., he was routed around it) or did not answer an entire instrument. In the latter case, all fields were coded 99 (see section E.3 below).

The above error codes were applied to items with 2-digit fields only; these are by far the most common type in the file. For items with 3-digit fields, the error codes have two leading nines followed by the digit indicating the error class—that is, 993 through 999. For 4-,

5-, and 6-digit fields, the number of leading nines was increased accordingly.

E. Machine Editing

Preparing the NLS data tapes for public release required "hard copy" (source document) spot checks and machine editing to recode all uninterpretable responses and some logical recoding of the responses. Thus, the final data file contains only valid response codes, erroneous or missing data codes, and "logically recoded values" with indicators for the reason for recoding (section E.3 below).

Three machine-editing programs—range checks, consistency checks, and routing checks—were used sequentially for the follow-up data. These programs were not applied to the NLS base-year data; these data, edited by the previous contractor, were either reformatted or recorded to achieve consistency with the follow-up data on file.

1. Range Checks

The first program checked the responses to each fixed-choice item against a range of acceptable values and "flagged" and recoded with 95 any value outside of the range. Acceptable ranges for 71 numerically coded first follow-up free-response items are shown in Table 5-1. In almost all cases, some responses were outside of these ranges. In general, these responses were logically possible but highly improbable. It was felt that some outlying responses could provide additional data and that it was best to leave them in the field to provide as faithful a transcription of the original records as possible.

In the second follow-up range editing, acceptable ranges were defined for 60 items. The ranges for these items are presented in Table 5-2. The second follow-up range editing was somewhat different than first follow-up in that values observed outside these specified ranges were recoded to an error code (95). The ranges specified for second follow-up items were considerably wider than those used in the first follow-up (compare Tables 5-1 and 5-2). The exclusion of values outside the defined second follow-up ranges was considered to be reasonable since values beyond these bounds were highly suspect.

2. Consistency Checks

The second program checked the consistency of an individual's responses over the entire questionnaire against a set of internal checks (or response comparisons) selected a priori. In the second follow-up instrument, two sets of consistency checks were defined: one set for manually edited questionnaire items (key items), the other set for items not subjected to manual edits. The consistency check program read the responses comprising each individual's record and flagged those consistency checks which were failed; then indices were computed for each record (based on the number of consistency checks failed by the individual) to indicate

Table 5-1

ACCEPTABLE RANGES FOR FIRST FOLLOW-UP FREE-RESPONSE QUESTIONS CALLING FOR NUMERIC ANSWERS

Free-Response Question Number	Range of Acceptable Values	Free-Response Question Number	Range of Acceptable Values
3A	1-12	47BB	0-9,000
3B	71-73	47CB	0-9,000
7B	1-12	47DB	0-9,000
7C	67-74	47EB	0-9,000
8B	1-4	47FB	0-9,000
11A	0-20,000	47GB	0-9,000
11B	0-20,000	49FA	1-12
11C	0-20,000	49FB	63-74
11D	0-20,000	50A	1-50
11E	0-6,000	50B	0-1,000
11F	0-6,000	55FA	1-12
11G	0-10,000	55FB	63-72
11H	0-10,000	55GB	1-12
27AA	1-12	55GC	72-74
27AB	68-73	56A	1-50
27C	0-50	56B	0-1,000
33AA	1-12	58A	0-52
33AB	68-72	58B	0-52
33C	0-50	58C	0-92
40CA	1-12	66B	1-12
40CB	68-74	66C	68-74
40DB	1-12	66D	1-12
40DC	68-74	66E	69-72
41CA	0-92	67A	1-12
41CB	0-92	67B	72-74
41CC	0-120	74B	1-12
46AA	0-9,000	74C	68-74
46AB	0-12	82DA	0-9,000
46BA	0-5,000	82DB	0-9,000
46BB	0-2,000	82DC	0-9,000
46BC	0-1,000	83DA	0-9,000
46BD	0-1,000	83DB	0-9,000
46BE	0-1,000	83DC	0-9,000
46BF	0-9,993	84DA	0-9,000
46BG	0-4,000	84DB	0-9,000
47AB	0-9,000	84DC	0-9,000

the internal consistency and to provide the user with a rough indication of the quality of each respondent's data.

3. Routing Checks

The First Follow-Up Questionnaire contains 33 routing questions and the Second Follow-Up Questionnaire contains 52 routing questions. A routing question is one that either implicitly or explicitly directs a respondent around those questions that do not apply. To determine if the respondent correctly followed the routing patterns, a routing-check program was developed and implemented for both first and second follow-up data. It read each record and flagged responses that were inconsistent with the subsequent pattern of response. The flags indicated both "type" and "level" of inconsistency detected. Three types of inconsistency were identified:

a. Inconsistency occurring when the response to a routing item indicates that the questions within the routing pattern should have been skipped but were not. These were recoded by adding 20 to the original response code.

b. Inconsistency occurring when the response to the routing item indicates that the questions should have been answered but were not. Recoding added 40 to the original response code.

c. Inconsistency occurring as a combination of the first two types when the response to the routing item indicates that certain questions which should have been skipped were not (type a) and others should have been answered and were not (type b). Recoding added 60 (20 + 40) to the original response codes.

Examples in the *Users Manual* clarify the testing and recoding procedures employed by the routing-check edit program, and Appendixes E.1-E.4 of the manual list codes for consistent and inconsistent responses to the routing questions.

The routing-check program also differentiated between legitimate nonresponse (code 99) and illegitimate nonresponse (code 98). Legitimate nonresponse pertains to questions that the respondent was routed around. If a respondent was routed into a block, any nonresponse to those items is illegitimate; if the routing pattern was answered inconsistently (20, 40, or 60 added to it) with the routing instructions, any nonresponse to those items is illegitimate. The only time that a nonresponse was coded 99 was when there was an unflagged response to the question that routed the respondent around a group of questions. If a response pattern did not clearly indicate which questions the respondent should have answered, the nonresponse was coded 98. In some of the more complex routing patterns, nonresponse was coded 98 for a

Table 5-2

ACCEPTABLE RANGES FOR SECOND FOLLOW-UP FREE-RESPONSE QUESTIONS CALLING FOR NUMERIC ANSWERS

Free-Response Question Number	Range of Acceptable Values	Free-Response Question Number	Range of Acceptable Values
14A	1-12	76FA	1-12
14B	65-74	76FB	65-74
15B	1-12	76GB	1-12
15C	73-75	76GC	73-75
17	0-50	77	0-96
23BC	74-80	78	0-3,700
23CC	74-80	89	0-60
23DB	74-80	90	0-900
23EB	74-80	93EA	1-12
23FB	74-80	93EB	65-75
23GC	74-80	93FA	1-12
35AA	1-12	93FB	73-75
35AB	66-74	94	0-96
35BB	1-12	95	0-3,200
35BC	73-74	97	0-52
42A	0-160	98	0-52
42B	0-130	99	0-52
42C	0-130	106A	1-12
44A	0-6,000	106B	65-75
44B	0-2,000	113A	0-250,000
44C	0-4,000	113B	0-100,000
44D	0-5,000	113C	0-100,000
44E	0-6,000	113DB	0-450,000
44FB	0-20,000	114	0-450,000
44FC	0-23,000	123A	1-12
45	0-12	123B	68-75
48	0-25,000	128B	1-12
51	0-15,000	128C	73-75
54	0-30,250	146A	1-12
57	0-50,550	146B	70-77

large section of items due to one inconsistency. The user should be careful in interpreting the 98 and 99 codes to avoid overestimating the number of illegitimate nonresponses.

The second routing error flag dealt with the consistency or inconsistency of a given item, regardless of whether it was a routing item or not, with respect to all routing items that controlled it. But prior to discussing this "level" of routing error codes, it is necessary to describe and define the structural relations that exist in the NLS routing patterns. In general, a routing pattern consists of the routing item, the items internal to the routing item, and the range of items that can be skipped. An example will illustrate these terms. In Figure 5-1, items A and E are routing items; items B, C, D, E, F, G, H, and I are internal items; item E is both a routing item and an internal item. The range of routing item A is items B through I, and the range of routing item E is F through G. The definitions of external and internal are a function of the range of the routing item. A routing item is external to some other item if and only if the other item is within the range of items that the routing item controls. In Figure 5-1, routing item A is external to items B through I, and routing item E is external to items F and G. Conversely, items B through I are internal to A and items F and G are internal to both E and A.

Given these definitions, a second set of coding rules was developed and implemented. It did not seem reasonable to attempt to code the full complex of information about all the possible patterns of responses leading up to a given item. Instead, it was decided to use a leading digit for coding each item or items external to it. The extra digit (the left-most) was either a 0, 1, or 2. A zero indicated that the datum was consistent with all external routing items; a 1 indicated that a response was inconsistent with one external routing item; and a code of 2 indicated inconsistency with two or more external routing items.

Thus, the routing check program provided two levels of codes. It flagged (0, 1, 2) all first and second follow-up items as to their consistency or level of inconsistency with the routing patterns to which they were internal, and it provided special codes (20, 40, 60) for the routing items to give partial information concerning the nature and type of the routing violations, if any existed.

F. The NLS Data File Indices

Two kinds of composite indices—quality and analytic—were developed and placed in the NLS data file. The quality indices quantify the amount and quality of data in an individual record. The analytic indices

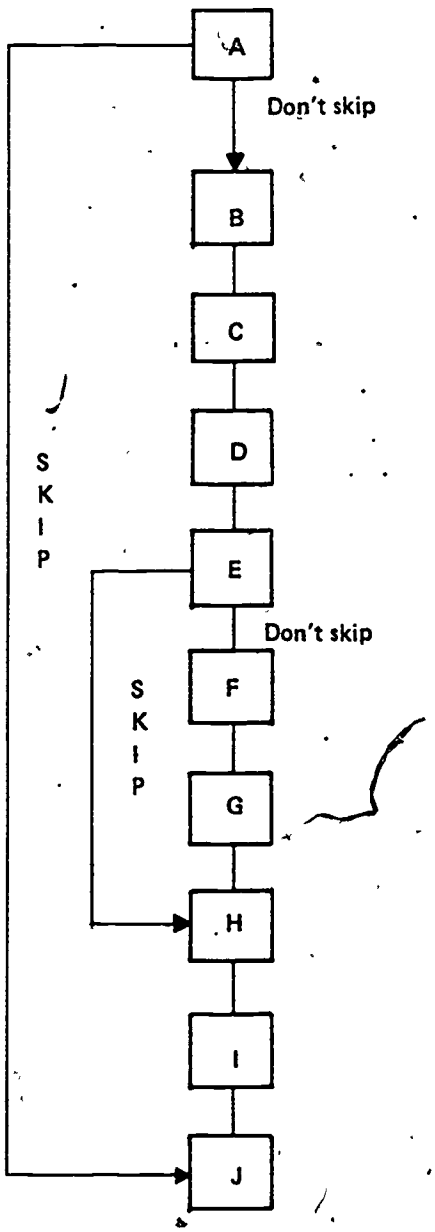


Figure 5-1. A Doubly Nested Routing Pattern

(derived from global considerations of the entire file) are classification variables used to group the individual records.

1. Quality Indices

Four quality indices were developed to quantify the amount and quality of First Follow-Up Questionnaire data in each record. For Second Follow-Up Questionnaire data, five quality indices were similarly computed. Each index was allocated a 3-digit field on each record. A summary of these quality indices for first and second follow-up data is presented in Tables 5-3 and 5-4, respectively.

Table 5-3

QUALITY OF INDIVIDUAL RESPONSES TO FIRST FOLLOW-UP QUESTIONNAIRE

Quality Indices	Data File Code	Questionnaire Responses N	Questionnaire Responses %
1. Consistency Index	0*	9,574	44.84
	1	5,781	27.07
	2	3,204	15.00
	3	1,321	6.19
	4	670	3.14
	5	323	1.51
	6-100	477	2.23
2. Out-of-Range Index	0†	20,673	96.83
	1	443	2.07
	2	101	0.47
	3	30	0.14
	4	31	0.15
	5	12	0.06
	6-100	60	0.28
3. Routing Error Index	0‡	12,144	56.88
	3-5	4,420	20.70
	6-10	3,292	15.42
	11-15	884	4.14
	16-25	499	2.34
	26-35	81	0.38
	36-100	30	0.14

4. Completion Index %	Questionnaire Responses A N	A %	B N	B %	C N	C %	D N	D %	E N	E %
100-91§	10,150	47.54	10,031	46.98	16,213	75.94	20,716	97.03	16,519	77.37
90-81	6,127	28.70	3,171	14.85	781	3.66	103	0.48	995	4.66
80-71	2,354	11.03	1,679	7.86	856	4.01	83	0.39	1,062	4.97
70-61	1,226	5.74	1,256	5.88	766	3.59	48	0.22	484	2.27
60-51	285	1.33	943	4.42	395	1.85	22	0.10	287	1.34
50-41	76	0.36	586	2.74	463	2.17	10	0.05	479	2.24
40-0	1,132	5.30	3,684	17.26	1,876	8.79	368	1.72	1,524	7.14

* 0 means no consistency checks failed.
† 0 means no out-of-range numeric responses.
‡ 0 means no routing questions answered ambiguously
§ 100% means all items completed.

Table 5-4

QUALITY OF INDIVIDUAL RESPONSES TO SECOND FOLLOW-UP QUESTIONNAIRE

Quality Indices	Data File Code	Questionnaire Responses N	Questionnaire Responses %
1. Consistency Index 1	0*	18,878	90.45
	2	1,583	7.58
	5	311	1.49
	6-100	100	0.48
2. Consistency Index 2	0*	14,446	69.21
	4	3,978	19.06
	9	1,468	7.03
	14	519	2.49
	19	243	1.16
	23-100	218	1.04
3. Out-of-Range Index	0†	20,608	98.74
	1	195	0.93
	2	45	0.22
	3	11	0.05
	4	4	0.02
	5	3	0.01
	6-100	6	0.03
4. Routing Error Index	0*	12,316	59.01
	2-5	5,745	27.52
	6-10	2,052	9.83
	11-15	514	2.46
	16-25	170	0.81
	26-35	60	0.29
	36-100	15	0.07

5. Completion Index %	Questionnaire Responses A N	A %	B N	B %	C N	C %	D N	D %	E N	E %	F N	F %
100-91§	18,449	88.39	13,863	66.42	14,044	67.29	15,586	74.67	20,107	96.33	17,915	85.83
90-81	818	3.92	1,254	6.01	601	2.88	1,882	9.02	197	0.94	1,218	5.84
80-71	111	0.53	929	4.45	888	4.25	1,312	6.29	35	0.17	189	0.91
70-61	145	0.69	923	4.42	1,574	7.54	416	1.99	135	0.65	75	0.36
60-51	19	0.09	673	3.22	663	3.18	123	0.59	106	0.51	27	0.13
50-41	51	0.24	403	1.93	618	2.96	74	0.35	13	0.06	28	0.13
40-0	1,279	6.13	2,827	13.54	2,484	11.90	1,479	7.09	279	1.34	1,420	6.80

* 0 means no consistency checks failed.
† 0 means no out-of-range numeric responses.
‡ 0 means no routing questions answered ambiguously.
§ 100% means all items completed.

Consistency Index (CS) represents the percentage (truncated set of N checks) failed by an individual. The index was computed as

$$CS = \left(\frac{\sum_{i=1,n} X_i}{n} \right) \cdot 100$$

where $X_i = \begin{cases} 0 \text{ if respondent passed check i;} \\ 1 \text{ if failed check i.} \end{cases}$

For the First Follow-Up Questionnaire consistency index, n (the number of consistency checks) was 94, and this did not include manual premachine edit checks.

Two consistency indices were developed for Second Follow-Up Questionnaire data. SFU Consistency Index 1 was calculated from

manually edited data and represented the percentage of a set of 36 consistency checks failed by an individual. SFU Consistency Index 2 was computed from data not manually edited and represented the percentage of a second set of 21 consistency checks that were failed. It is evident from the results in Table 5-4 that responses were considerably more consistent for manually edited data than for data which received no manual edit checks.

Out-of-Range Index (OR) represents the percentage of out-of-range responses for an individual. It was computed as

$$OR = N/D \cdot 100$$

where N = the number of items coded 95 (out-of-range); and
D = the number with response other than 99 (legitimate skip).

Routing Error Index (RE) represents the percentage of routing questions ambiguously answered (i.e., unanswered or answered inconsistently with the subsequent response pattern). The index was computed as

$$RE = N/D \cdot 100$$

where N = the number of flagged routing questions; and
D = the number of routing questions with responses other than 99.

Completeness Index (CP) represents the percentage of items with valid responses (i.e., responses not coded 93-98) for each section in the questionnaire. The index was computed as follows

$$CP_x = N/D \cdot 100$$

where
x = the particular section (A, B, C, D, E or F);
N = the number of items with valid responses; and
D = the number of items with responses other than 99.

Table 5-3 indicates lower completion rates for sections A and B as compared to other sections of the first follow-up instrument. Similarly, the completion rates displayed in Table 5-4 for sections B and C of the Second Follow-Up Questionnaire are lower than for the other sections of the instrument. However, these results are artifactual and may be misleading. The major utility of this index is in judging the completeness of an individual's responses within a section, not among sections, because the sections vary in complexity, number of routing patterns, and types of information elicited. Section A of the First Follow-Up Questionnaire contains fewer routing patterns than other sections, but contains some items (e.g., 1G, 16F) for which one may expect larger nonresponse; also, for example, the routing check rules for item 11 specify code 98 for all nonresponses, and thus inflate the nonresponse. Similarly, section B of the Second Follow-Up Questionnaire contains some items (e.g., 18, 25J, 37) for which a larger nonresponse might be expected. Review of the indices within a section will illustrate the typical completion rate and identify outlying individuals.

The utility of quality indices is in judging the credibility of individual records. They are of no use in judging data over respondents such as item responses, since the real test of item response quality is the over-subjects distribution. It is recommended that these indices not be used for discarding subjects unless one's concern is with either the entire instrument or subsection.

2. Analytic Indices

The composite indices—an ability index and a socioeconomic status (SES) index—involved several components each and required several steps during derivation. (Both are described in more detail in Chapter VIII of the First Follow-Up Final Methodological Report).[4] Since other components and procedures may be used in deriving such indices, users are encouraged to decide whether the indices included here are appropriate for their needs.

Ability Index. Each NLS participant's code of 1, 2, or 3 indicates an ability composite score in the lower, middle two, or upper quartile:

3 = upper quartile if > 225.7497,
2 = middle two quartiles if ≤ 225.7497 and ≥ 181.5461,
1 = lower quartile if < 181.5461.

These were derived from vocabulary, reading, letter group, and mathematics test scores. A simple sum over the four scores (each with a mean of 50 and a standard deviation of 10) was accepted as the general ability index, because an analysis yielded a first principal component with essentially equal weights for the four, and a rotated factor which explained the most common variance gave essentially the same result.

Table 5-5

NUMBER OF RESPONSES BY SUBPOPULATION TO SURVEY INSTRUMENTS
(N = 22,532)

	Survey Instrument											
Subpopulation	TB	SRIF	BSYR	FFU	SFU	BSYR & FFU	BSYR & SFU	FFU & SFU	BSYR FFU & SFU	BSYR only	FFU only	SFU only
Sex:												
Male	7,898	10,719	8,279	10,484	10,237	422	344	2,581	7,243	270	238	69
Female	7,956	10,889	8,397	10,858	10,619	311	200	2,713	7,657	229	177	49
Unclassifiable	6	17	7	8	16	2	0	0	0	5	6	16
Race:												
White	12,301	16,511	12,847	16,376	16,095	501	394	4,000	11,632	320	243	69
Black	1,952	2,951	2,127	2,913	2,860	128	93	894	1,833	73	58	40
Other	1,549	2,010	1,648	1,940	1,897	77	57	399	1,433	81	31	8
Unclassifiable	58	153	61	121	20	29	0	1	2	30	89	17
H.S. Program:												
Academic	6,537	8,626	6,812	8,520	8,434	206	191	1,936	6,263	152	115	44
General	5,370	7,753	5,673	7,640	7,422	309	226	2,215	4,932	206	184	49
Voc-Tech	3,952	5,229	4,197	5,151	4,994	219	127	1,133	3,705	146	94	29
Unclassifiable	1	17	1	39	22	1	0	10	0	0	28	12
Region:												
North	3,521	4,465	3,618	4,483	4,322	188	93	977	3,232	105	86	20
Central	4,122	5,668	4,568	5,541	5,445	178	148	1,151	4,114	128	98	32
South	5,382	7,703	5,513	7,691	7,541	228	178	2,345	4,958	149	160	60
West	2,835	3,789	2,984	3,635	3,564	141	125	821	2,596	122	77	22
Ability:												
Low	4,798	4,783	4,788	4,392	4,256	327	191	10	4,055	215	0	0
Medium	7,008	6,997	7,000	6,600	6,534	270	204	8	6,322	204	0	0
High	4,054	4,053	4,052	3,896	3,896	96	101	1	3,793	62	0	1
Unclassifiable	0	5,792	843	6,468	6,186	42	48	5,275	730	23	421	133
SES:												
Low	4,531	6,172	4,827	6,117	5,962	245	181	1,533	4,248	153	91	0
Medium	7,562	10,226	7,927	10,157	9,910	330	258	2,552	7,100	239	175	0
High	3,707	4,924	3,863	4,911	4,794	147	96	1,158	3,540	80	66	0
Unclassifiable	60	303	66	165	206	13	9	51	12	32	89	134
TOTAL	15,860	21,625	16,683	21,350	20,872	735	544	5,294	14,900	504	421	134

NOTE: The abbreviations for the instruments are as follows:

TB = Test Book
SRIF = School Record Information Form
BSYR = Base-Year Student Questionnaire
FFU = First Follow-Up Questionnaire
SFU = Second Follow-Up Questionnaire

SES Index. Each NLS participant was also assigned 1, 2, or 3, indicating an SES composite score in the lower, middle two, or upper quartile:

3 = upper quartile if > +0.4409,
2 = middle quartiles if ≤ +0.4409, and ≥ -0.4975,
1 = lower quartile if < -0.4975.

The composite had five components: father's education, mother's education, parent's income, father's occupation, and household items. Factor analysis of the five revealed a common factor with approximately equal weights for each. Then each was standardized. An equally weighted combination of the five standard scores yielded the SES composite scores.

G. Other Composite Measures

There are several composite variables in the data file. These composites represent classifier information pooled over the several instruments, or scales created by averaging several subitems within a questionnaire. The classifier composites are race, sex, father's education, mother's education, and father's occupation. These variables used information from all instruments to arrive at a "best" estimate of these classifiers. The other group of composites consists of scale scores computed as the average of several subitems. These composites are: locus of control (1972, 1973, 1974), self-concept (1972, 1973, 1974), and three life goals scales (1972, 1973) concerning work, community, and family.

H. The NLS Data Files

Two basic data files were developed and derived: the NLS master file and the NLS release file. In addition, the 1976 master file[5] (unlike the 1975 version) is a student-based file and does not contain the school information formerly a part of the 1975 master data file. A separate school file is available, with documentation.[6] Each of them has a computer-generated NLS variable list and NLS response list to provide details of the data stored in each record of the file. The variable list contains the name and description of each variable and the field or character positions containing each variable. A set of item frequency counts is also provided for each file.

The variable lists reveal that a number of the NLS variables (items) from the base-year, first, and second follow-up were deleted from the master file to create the release file, primarily to protect the confidentiality of individual data. Others were deleted or modified due to excessive prior editing or poor response. The complete computer data file, or master file, for which general release was not contemplated, contains all data collected.

The variable list shows that the data in each record are, in general, grouped and ordered by identification codes, data indicators, Test Book data, SRIF data, base-year Student Questionnaire data, First Follow-Up Questionnaire data, Second Follow-Up Questionnaire data, quality indices, sampling weights, and school data, analytic indices, and activity states.

The number of respondents and amounts of data available for various subpopulations and for combinations of instruments for three survey periods are tabulated in Table 5-5. This table shows the amounts of data available for each instrument independent of the others (columns 1 to 5) and for various combinations of the instruments (columns 6 to 12).

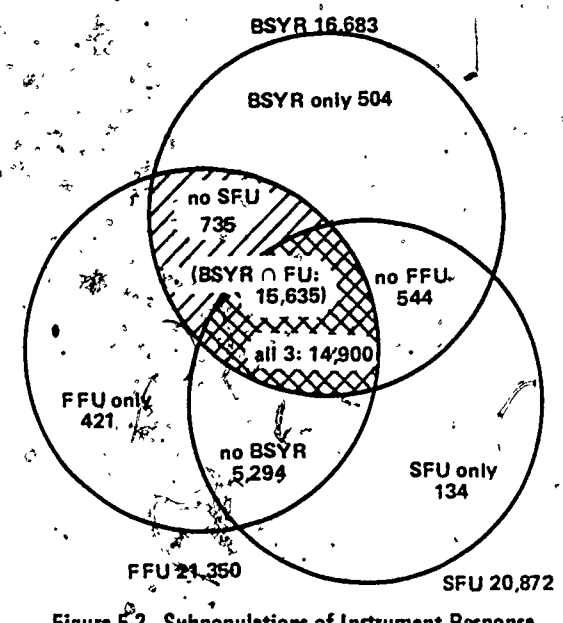


Figure 5-2. Subpopulations of Instrument Response in Three Years of Data Collection

The pattern of response for various classifier variables is also presented. Examination of the table indicates that data are available for all three student instruments (BSYR, FFU, SFU) for 14,900 respondents.* There are 5,294 respondents with FFU and SFU questionnaire data, and there are five other subsets of respondents (ranging in size from 735 to 134 individuals) with either two or only one student instrument. Figure 5-2 illustrates the relationships among these various subsets of data.

References

1. Levinsohn, J.R., L.H. Lewis, J.A. Riccobono, and R.P. Moore, *Base-Year, First and Second Follow-Up Data File Users Manual*, Research Triangle Park, N.C.: Research Triangle Institute, 1976.
2. Levinsohn, J.R., J.A. Riccobono, and R.P. Moore, *Base-Year and First Follow-Up Data File Users Manual*, Research Triangle Institute, 1975.
3. Levinsohn, J.R., "National Longitudinal Study of the High School Class of 1972: Special Activity State Survey and Second Level of Edit Activities," Research Triangle Park, N.C.: Research Triangle Institute, 1976.
4. Research Triangle Institute, *Longitudinal Studies of Educational Effects, National Longitudinal Study of the High School Class of 1972: First Follow-Up Survey, Final Methodological Reports*, North Carolina: Research Triangle Park, 1976.
5. Levinsohn, J.R., and L. Lewis, "Base-Year, First and Second Follow-Up Master File Documentation," Research Triangle Park, N.C.: Research Triangle Institute.
6. Lewis, L., and J.R. Levinsohn, "School File Documentation," Research Triangle Park, N.C.: Research Triangle Institute, 1976.

* If one is concerned with only certain base-year items (Form B items), then data are available for another 4,539 Form B respondents from the first follow-up.

VI. WEIGHT CALCULATIONS

A. Introduction

The sample for the NLS study is highly stratified, multistage, and clustered. As a consequence of the complex design, each observation (response) must be weighted in order to obtain unbiased sample estimates of population parameters. For all students sampled, the unadjusted weights were calculated as the inverses of the probabilities of being included in the sample. For several sets of nonrespondents, adjusted weights were calculated using the weighting-class methods described in detail in previous reports,[1,2,3] and briefly recounted below.

B. Unadjusted Student Weights

First, it was necessary to determine which schools and students were "in sample" for the 1972 NLS project. The NLS sample design included 1,200 primary sample schools (2 per final stratum) and 21,600 students (18 per school). The number of schools was increased (up to 3 or 4 per stratum) by using backup schools in the base-year and first follow-up surveys and by obtaining responses from all primary sample schools in the resurvey (see Chapter II). Included in the NLS sample were—

1,153	participating primary sample schools
21	nonparticipating (no 1972 seniors) primary sample schools
131	participating backup sample schools
18	extra base-year backup sample schools
16	augmentation sample schools
1,339	NLS sample schools

The release tape contains data for students representing 1,318 schools—all of the 1,339 schools in the final NLS sample except the 21 primary sample schools with no 1972 seniors.

There were 23,451 sample members, of whom 16,683 completed a base-year Student Questionnaire, 21,350 completed a First Follow-Up Questionnaire, and 20,872 completed a Second Follow-Up Questionnaire. For each of the 23,451 selected students, the unadjusted student weight, W_{uhij}, was calculated as

$$W_{uhij} = \frac{1}{P_{hi}} \cdot \frac{N_{hi}}{n_{hi}}$$

where

P_{hi} = the sample inclusion probability for school i of stratum h,
N_{hi} = number of senior students in school-hi, and
n_{hi} = number of sampled students in school-hi.

The sum of the unadjusted student weights is an estimate of the total number of 1972 high school seniors in the population. If all of the selected students had completed the survey instruments, these weights would be appropriate for the analyses of student data.

C. Nonresponse Adjustment Methodology

Handling nonresponse when analyzing survey data is a problem. In general, the mean values of most variables are different for respondents and nonrespondents. If the differences are large or if the survey response rates are low, adjustments are used in an attempt to reduce the bias due to nonresponse.

A weighting-class method was used to adjust the NLS student weights for questionnaire nonresponse, but not for item nonresponse within completed questionnaires. Different response rates for students in different weighting classes were reflected in the adjustments. The method involved partitioning the entire sample (respondents and nonrespondents) into weighting classes—homogeneous groups of students with respect to the survey classification variables. In order for the weighting class adjustment procedure to be most effective, the classifier variable values used to construct classes must be available for a very large proportion of respondents and nonrespondents alike.

Once the weighting classes have been defined, the weight adjustment procedure

involves simply calculating each sample student's adjusted weight as

$$W_{hij(k)} = W_{uhij}\, L_{hij}\, \frac{\sum_{hij} K_{hij}\, W_{uhij}}{\sum_{hij} K_{hij}\, L_{hij}\, W_{uhij}}$$

K_{hij} = 1 if student-hij was assigned to weighting class-k, or 0 otherwise;

L_{hij} = 1 if student-hij completed the survey instrument, or 0 otherwise; and

$W_{uhij(k)}$ = the unadjusted student weight for student-j belonging to the weight class (k) of stratum-h as described above.

Thus, the unadjusted weights for all respondent students in a weighting class are simply multiplied by the ratio of the sum of weights for the weighting class for both respondents and nonrespondents to the sum of the respondents' weights for the weighting class. The adjusted weights for all nonrespondents are set equal to zero.

The nonresponse adjustments for the second follow-up survey were similar to those done for the first follow-up. The same core of unadjusted weights for the entire NLS sample (23,451 sample members) was used. Five different sets of adjusted student weights were calculated; each set was appropriate for analyses involving a particular subset of the second follow-up data. Two minor changes in procedure were introduced concerning redefinition of the classifiable sample members. The procedures incorporating these changes are briefly described below.

1. Assembling Classifier Variable Data

The same five first follow-up classifier variables were used in defining the second follow-up weighting classes. These were:

Race—white or nonwhite;

Sex—male or female;

High school curriculum—general, academic, or vocational/technical;

High school grades—B or better, or C or below; and

Parents' education—less than high school graduate, high school graduate, some beyond high school, or college graduate. If available, father's education was used; otherwise, mother's education was used.

After several years of survey activity, there were several response sources for each of the classifier variables. The following source priorities were used:

Race
- (1) Base-Year Student Questionnaire (Q84)
- (2) First Follow-Up Questionnaire Form B (Q95)
- (3) Second Follow-Up Questionnaire (Q28)

Sex
- (1) Base-Year Student Questionnaire (page 1)
- (2) First Follow-Up Questionnaire
- (3) Inferred from name on student rosters
- (4) Second Follow-Up Questionnaire (inside back cover)

High School Curriculum
- (1) Base-Year Student Questionnaire (Q2)
- (2) First Follow-Up Questionnaire Form B (Q86)
- (3) Activity State Questionnaire (Q13)
- (4) SRIF (Q7)

High School Grades
- (1) SRIF (Q1)
- (2) Base-Year Student Questionnaire (Q5)
- (3) First Follow-Up Questionnaire Form B (Q87)

Parents' Education
- (1) Base-Year Student Questionnaire (Q90A)
- (2) First Follow-Up Questionnaire (Q78A)
- (3) Activity State Questionnaire (Q14A)
- (4) Base-Year Student Questionnaire (Q90B)
- (5) First Follow-Up Questionnaire (Q78B)
- (6) Activity State Questionnaire (Q14B)

Table 6-1

AVAILABILITY OF CLASSIFIER VARIABLE VALUES, BY VARIABLE

Classifier Variable	FFU Value Missing	SFU Value Missing	Value Determined	Percent Determined	Classifier Missing Among SFU Respondents
Race	2,606	1,086	22,365	95.4	20
Sex	196	96	23,355	99.6	2
High school curriculum	2,376	206	23,245	99.1	22
High school grades	613	613	23,390	99.7	289
Parents' education	1,966	1,370	22,081	94.2	252

Table 6-1 shows the number of students for whom a value was ascertained for each of the five classifier variables. The parents' education variable had the highest number of missing values, followed by race, grades, curriculum, and sex. Values of all five classifier variables were determined for over 92 percent of the 23,451 sample students, and at least three of the classifier variable values were determined for 98.5 percent of the sample students (Table 6-2). Because of the missing classifier data, an "unavailable" category had to be included for each of the five classifier variables. It is not likely that the number of missing values may be reduced substantially in the future, since the number of missing classifiers among second follow-up respondents is quite small, as seen in the last column of Table 6-1.

Table 6-2

AVAILABILITY OF CLASSIFIER VARIABLE VALUES, BY NUMBER OF VARIABLES DETERMINED

Number of Classifier Variables Determined	FFU Number of Students	SFU Number of Students	Percent of Sample Students
5	19,783	21,717	92.7
4	1,210	685	2.9
3	1,281	681	2.9
2	819	189	0.8
1	289	138	0.5
0	69	41	0.2
Total	23,451	23,451	100.0

2. Forming the Weighting Classes

The next step was to cross-classify the 23,451 sample students by the values of the five classifier variables. Since an "unavailable" category had been added to each classifier variable, 540 cells (3 X 3 X 4 X 3 X 5) were produced, with counts of sample students and responding students for each cell. (Several respondent counts were made since several different adjusted weights were to be calculated—see next section.)

An arbitrary rule that each weighting class must contain at least 20 respondents was used to avoid any very large weight adjustments. A set of collapsing rules had been predetermined for use in combining "similar" cells which contained fewer than 20 respondents. Cells were combined in the following order until each of the combined cells contained at least 20 respondents:

a. Add "unavailables" randomly to known category for each variable in proportion to marginal weight totals for each known category;

Table 6-3

APPROPRIATE WEIGHTS FOR VARIOUS DATA SETS AND VARIABLES

Weight Set	Appropriate Data Set	Appropriate Variables
W1	Respondents to base-year Student Questionnaire	Variables defined from base-year Student Questionnaire items
W2	Respondents to the base-year Student Questionnaire and the First Follow-up Questionnaire (Form B)	Variables defined from base-year Student Questionnaire items 2, 5, 8, 10, 16, 27, 83, 84, 88, 91, 92, 93, 94, and 95
W3	Respondents to First Follow-up Questionnaire	Variables defined from First Follow-Up Questionnaire items
W4	Respondents to the base-year Student Questionnaire and the First Follow-Up Questionnaire	Change variables defined using items from both the base-year Student Questionnaire and the First Follow-Up Questionnaire
W5	Respondents to either i) the base-year Student Questionnaire and the First Follow-Up Questionnaire (Form A), or ii) the First Follow-Up Questionnaire (Form B)	Change variables defined using base-year Student Questionnaire items 2, 5, 8, 10, 16, 27, 83, 84, 88, 91, 92, 93, 94, and 95 and First Follow-Up Questionnaire items
W6	Respondents to either the base-year Student Questionnaire or the First Follow-Up Questionnaire	Variables with value defined from data available for each student in the release file
W7	Raw unadjusted weight for all students, either respondents or nonrespondents	
W8	Respondents to Second Follow-Up Questionnaire	Variables defined from Second Follow-Up Questionnaire items
W9	Respondents to the base-year Student Questionnaire and the Second Follow-Up Questionnaire	Change variables defined from base-year Student Questionnaire and Second Follow-Up Questionnaire
W10	Respondents to the First Follow-Up Questionnaire and Second Follow-Up Questionnaire	Change variables defined from First Follow-Up Questionnaire and Second Follow-Up Questionnaire
W11	Respondents to all three questionnaires	Change variables defined using items from all three questionnaires
W12	Respondents to either of the three questionnaires	Variables with valued defined from data available for each student in the release file

b. Change curriculum to two levels:
   (1) Add "general" to "vocational-technical;"

c. Change father's education to two levels:
   (1) Add "less than H.S." to "H.S. graduate"
   (2) Add "some beyond H.S." to "college graduate;"

d. Eliminate grades;

e. Eliminate curriculum;

f. Eliminate father's education;

g. Eliminate sex;

h. Eliminate race.

It turned out that virtually all of the cells involving one or more "unavailable" classifier variables had fewer than 20 responding students. Because of this, the combinations specified in step a above were done for all of those cells. Step b was used seven times and step c was used two times. The remaining steps, d through h, were never used.

A total of 87 weighting classes were formed using the procedures described in this section. Each weighting class contained 20 or more respondents for each of the data sets described in the next section.

3. Calculating Adjusted Student Weights

Once the weighting classes had been determined, the adjusted student weights were computed using the equation given above. Since several different data sets could be derived from the NLS base-year, first follow-up, and second follow-up data base, a total of five different sets of adjusted weights were computed.

Table 6-3 lists the data set and variables appropriate to each set of weights resulting from addition of second follow-up data—W8, W9, W10, W11, and W12 (weight sets W1 through W7 in this table were developed for first follow-up and base-year data and are described in the *First Follow-Up Survey, Final Methodological Report*[1]). Table 6-4 shows the number of sample students in each of the eight response groups, determined by which questionnaires the students completed.

Table 6-4

RESPONSE GROUPS DEFINED BY BASE-YEAR, FIRST FOLLOW-UP AND SECOND FOLLOW-UP RESPONSES

Response Group	Completed Questionnaires Received for			Number of Students
	Base-Year	First Follow-Up	Second Follow-Up	
I	yes	yes	no	735
II	yes	no	no	504
III	no	yes	no	421
IV	no	no	no	919*
V	yes	yes	yes	14,900
VI	no	yes	yes	5,294
VII	yes	no	yes	544
VIII	no	no	yes	134
Total				23,451

* These students did not respond to either the base-year, first follow-up, or second follow-up instrument, but may have responded to the Test Book and/or the Student Record Information Form.

There was a total of 21,350 respondents to the First Follow-Up Questionnaire, and 20,872 respondents (see Table 6-4) to the Second Follow-Up Questionnaire. The weight W8 is appropriate for analysis of items in the Second Follow-Up Questionnaire.

Analyses of change, or transition, variables derived using both base-year and second follow-up items should be carried out using the W9 weights. For analyses of change variables based on second follow-up items in conjunction with first follow-up items, the W10 weights should be used. The W11 weights should be used for combined analysis of items across all three questionnaires.

The last set of weights, W12, is appropriate for analyses involving every student who completed a base-year Student Questionnaire, and/or a First Follow-Up Questionnaire, and/or a Second Follow-Up Questionnaire.

For each weight set, the adjusted weights for nonrespondents are zero, and the sum of the respondents' adjusted weights equals the sum of the unadjusted weights for the entire sample. The user should choose the set of adjusted weights which is appropriate to the data set and variables to be analyzed. The weights are adjusted only for questionnaire nonresponse and not for item nonresponse. The same methods could be used to obtain another set of weights, adjusted for both questionnaire nonresponse and item nonresponse, for any questionnaire item or variable.

References

1. Research Triangle Institute, *Longitudinal Studies of Educational Effects, National Longitudinal Study of the High School Class of 1972: First Follow-Up Survey, Final Methodological Report*, North Carolina: Research Triangle Park, 1976.

2. Moore, R.P., *Calculation on Nonresponse-Adjusted Student Weights for Respondents to the NLS Base Year and First Follow-Up Surveys*, Research Triangle Park, N.C.: Research Triangle Institute, 1975.

3. Shah, B.V., and D. Marnell, *Calculation of Nonresponse-Adjusted Student Weights for Respondents to the NLS Second Follow-Up Survey*, Research Triangle Park, N.C.: Research Triangle Institute, 1976.

VII. RELIABILITY OF NLS DATA

A. Introduction

As indicated in previous chapters of this report, the basic NLS self-report survey questionnaires cover a broad domain of question formats and content. Question types include: factual and subjective information, free-response and fixed-choice formats, and rating scales. The time orientation of the questions varies from retrospective through prospective. Question content includes work, educational, military, and homemaking activities, opinions, and plans; family and financial status; and a variety of opinion and attitude questions covering consumer activity and political participation, life and career goals, and feelings about the self. But while the NLS questionnaires provide a rich variety of information, the scope of the material covered in conjunction with the variety of data collection procedures (i.e., mail, field interview, telephone interview) and heterogeneity of respondents, plus the novelty or relative novelty of many NLS items, pose a number of complex and important questions regarding the quality of the data obtained.

Information on reliability, for example, is generally desirable and often critical depending on how the data are to be used. One primary purpose of reliability information is to establish subjective confidence in the manifest responses and statistics summarizing these responses. Unreliability inflates variances and proportionally broadens confidence intervals. Unreliability also weakens the power of statistical tests (i.e., the probability of detecting true among-group differences) and attenuates the magnitude of relationships. These are problems of "degree" and not of "kind." However, a number of studies have been done or are contemplated which use path analyses or structural modeling. The consequences of unknown or incorrectly estimated measurement errors for these models can be profound: Conclusions about determination and contribution in path analyses or structural modelings could well be misleading and could be directly opposite to the true relationships if errors of measurement are ignored or are incorrectly specified.[1]

Prior to the second follow-up survey, however, only a small amount of effort had been devoted to investigating the quality of NLS data.[2] The remainder of this chapter summarizes the procedures and results of a second follow-up study designed, in part, to provide answers to the following questions:[3]

1. How reliable are NLS data?
2. How does reliability vary as a function of item characteristics (e.g., subjectiveness, item format, item length, and item content)?
3. How does reliability vary as a function of data collection procedures (mail versus personal interview)?
4. Does reliability vary with respondent characteristics (e.g., sex, race, ability, SES)?
5. What interactions exist among data collection procedures, item characteristics, and respondent characteristics?

Answers to these questions provide useful information on the quality of data in the NLS survey; however, limitations in the design and execution of the reliability study prohibited a comprehensive or definitive conclusion. Consequently, generalizations to all NLS data and to survey data on the whole can be made only in a tentative fashion. The limitations were: only a subset of items (17) from the Second Follow-Up Questionnaire were included; only a subset (600) of NLS respondents were targeted as participants; and the limited number (462) of actual participants prohibited detailed comparisons of reliability among subgroups formed by cross-classifying respondent characteristics and respondent characteristics by data collection modes.

B. Sampling Procedures

A probability sample of 600 students was selected for the reliability study. The sampling frame for the reliability study sample consisted of 22,239 individuals who participated in either the base-year or first follow-up surveys. This sampling frame was formed by merging the original base-year student file with a preliminary edition of the first follow-up file. (The final edited version of the merged base-year and first follow-up data file was not available for use when this sample was selected.)

The sampling frame was stratified by sex, race, and planned activity state for October 1974 (item 16 or the First Follow-Up Questionnaire). A "not ascertained" category was included for each stratification variable. The categories used for the stratification variables were as follows:

1. *Sex* — Male, female, not ascertained;
2. *Race* — White, nonwhite, not ascertained;
3. *October 1974 Plans* — Academic courses at two- or four-year college, other postsecondary education, work (part- or full-time), other (e.g., active military duty, homemaker), not ascertained.

Table 7-1 shows the numbers of persons in the sampling frame sorted by the cross-classification of the three stratification variables. Of the 45 cells defined by crossing the three variables, two cells were empty and 14 cells each contained fewer than 56 persons. Since strata with fewer than 56 individuals would be allocated fewer than two sample persons, these cells were combined with other similar cells to form the 29 final strata listed in Table 7-2.

The allocation of the total sample of 600 persons to the 29 final strata was determined

Table 7-1

NUMBER OF PERSONS IN THE SAMPLING FRAME, BY SEX, RACE, AND 1974 PLANS

Sex and Race	1974 Plans					
	College	Other PSE	Work	Other	NA	Total
Whites:						
Males	3,611	916	2,560	432	402	7,921
Females	3,047	761	3,015	772	250	7,845
NA	8	1	8	3	2	22
Total	6,666	1,678	5,583	1,207	654	15,788
Nonwhites:						
Males	859	351	701	169	175	2,255
Females	973	457	837	144	121	2,532
NA	1	3	2	0	3	9
Total	1,833	811	1,540	313	299	4,796
Race not ascertained:						
Males	360	93	242	58	29	782
Females	298	65	288	73	21	745
NA	7	0	7	3	111	128
Total	665	158	537	134	161	1,655
All races:						
Males	4,830	1,360	3,503	659	606	10,958
Females	4,318	1,283	4,140	989	392	11,122
NA	16	4	17	6	116	159
Total	9,164	2,647	7,660	1,654	1,114	22,239

Table 7-2

DESCRIPTION OF STRATA USED FOR RELIABILITY SAMPLE

Stratum	Sex	Race	1974 Plans	Frame Size	Preliminary Allocation	Adjusted Allocation	Final Sample Allocation
1	Male	White	College	3,611	97.4	82.4	81
2	Male	NA	College	360	9.7	8.2	8
3	Male	White	Other PSE	916	24.7	37.9	37
4	Male	NA	Other PSE	93	2.5	3.8	4
5	Male	White	Work	2,560	69.1	69.1	68
6	Male	NA	Work	242	6.5	6.5	7
7	Male	White	Other	432	11.7	11.7	12
8	Male	NA	Other	58	1.6	1.6	2
9	Male	White	NA	431	11.6	11.6	12
	Male	NA	NA				
10	Male	Nonwhite	College	859	23.2	19.6	20
11	Male	Nonwhite	Other PSE	351	9.5	14.6	15
12	Male	Nonwhite	Work	701	18.9	18.9	19
13	Male	Nonwhite	Other	169	4.6	4.6	5
14	Male	Nonwhite	NA	175	4.7	4.7	5
15	Female	White	College	3,055	82.4	69.7	69
	NA	White	College				
16	Female	NA	College	305	8.2	6.9	7
	NA	NA	College				
17	Female	White	Other PSE	762	20.6	31.6	32
	NA	White	Other PSE				
18	Female	NA	Other PSE	65	1.8	2.8	3
19	Female	White	Work	3,023	81.6	81.6	81
	NA	White	Work				
20	Female	NA	Work	295	8.0	8.0	8
	NA	NA	Work				
21	Female	White	Other	775	20.9	20.9	21
	NA	White	Other				
22	Female	NA	Other	76	2.1	2.1	2
	NA	NA	Other				
23	Female	White	NA	252	6.8	6.8	7
	NA	White	NA				
24	Female	NA	NA	132	3.6	3.6	4
	NA	NA	NA				
25	Female	Nonwhite	College	974	26.3	22.2	22
	NA	Nonwhite	College				
26	Female	Nonwhite	Other PSE	460	12.4	19.0	19
	NA	Nonwhite	Other PSE				
27	Female	Nonwhite	Work	839	22.6	22.6	23
	NA	Nonwhite	Work				
28	Female	Nonwhite	Other	144	3.9	3.9	4
29	Female	Nonwhite	NA	124	3.3	3.3	3
	NA	Nonwhite	NA				
Total				22,239	600.2	600.2	600
	Subtotal		College	(9,164)	(247.2)	(209.0)	(207)
	Subtotal		Other PSE	(2,647)	(71.4)	(109.7)	(110)

in several steps. First, a preliminary allocation in proportion to the stratum counts was calculated as

$$n_i = \frac{600 N_i}{22{,}239}$$

where n_i = allocation to stratum-i, and
N_i = frame size for stratum-i.

Next, the total sample allocations for certain analysis categories were checked. Specifically, samples of at least 100 persons were desired for each of the following groups: males, females, persons taking academic courses at two- or four-year colleges, persons attending other postsecondary institutions, and persons working. Closer examination indicated only one of these groups—other postsecondary education—would fall short of 100 sample individuals. To insure a sample size of 100 for this category, the allocations to all strata involving 1974 plans of "other postsecondary education" were oversampled (i.e., multiplied by 1.535), and the allocations to all strata involving 1974 plans of "two- or four-year college" were undersampled (i.e., multiplied by .846). These adjusted allocations are shown in Table 7-2 in the column headed "adjusted allocation." The final allocations shown as the last column in Table 7-2 were determined by rounding the adjusted allocations to integer values and by reducing the allocations to the largest strata to force a total sample size of 600 persons.

The last step in drawing the reliability study sample involved the selection of the number of persons in the final allocation column for each stratum from the total number in the stratum sampling frame. These selections were made with equal probabilities and without replacement, using random numbers generated by a computer program.

C. Instruments

The questions used for the reliability analyses are a subset of items from the Second Follow-Up Questionnaire. This subset was extracted from the Second Follow-Up Questionnaire and compiled into a separate "short form" questionnaire (the first set of data for the "test-retest" design were the responses to the selected questions embedded in the Second Follow-Up Questionnaire; the second set of data were the responses to the short form questionnaire).

The decision as to how many and which items to include in the reliability study was made primarily on the basis of the following criteria: (1) respondent burden, i.e., the questionnaire should be brief and require no more than 15 minutes to complete; (2) amenability to analysis, i.e., the stability or consistency of the items should be capable of estimation by questioning the same respondents at two close points in time; (3) criticality, i.e., the items should be important or central to the basic NLS analysis; and (4) representativeness, i.e., the items should represent the variety of formats and content areas, and should rely on fact versus subjective opinion.

Based on these criteria, 17 questions were selected for inclusion in the reliability study. (A copy of the short form Second Follow-Up Questionnaire is provided in Appendix E.) These 17 items are identical in wording and format to those of the full-scale Second Follow-Up Questionnaire (hereafter, long form). The short form questionnaire items and their corresponding long form questionnaire numbers are given in Table 7-3.

D. Data Collection Procedures

The data were collected for this study, and for NLS as a whole, through a combination of mail, field interview, and telephone efforts (see Chapter IV). Data collection activity for the reliability study actually began the second week of October 1974 with the initial mailing of the Second Follow-Up Questionnaires to all NLS sample members. All incoming Second Follow-Up Questionnaires completed by mail or by personal interview were event-coded into a computerized automated survey support system. A computer printout identifying reliability study sample members whose long form questionnaires had been received was generated on a daily basis.

Short form questionnaires, with a cover letter (see Appendix E), were then mailed to reliability study members who returned their long form questionnaires by mail. This event occurred no earlier than ten days after the completion date denoted on the background information page of the Second Follow-Up Questionnaire. Two weeks after the mailing of

Table 7-3

DESCRIPTION OF ITEMS EXTRACTED FOR RELIABILITY STUDY

Question Number		
Short Form	Long Form	Description
1	8	Race or ethnicity
2	10	Educational activity in first week of Oct. '74
3	12	Kind of school attended
4	39	Grades from Oct. '73 to Oct. '74
5	75	Work activity in first week of Oct. '74
6	76	Description of job held first week of Oct. '74
7	77	Average hours per week worked at this job
8	105	Marital status as of first week of Oct. '74
9	111	Number of dependents as of first week of Oct. '74
10	113,114	Income (self, spouse, other, and total)
11	132	Self-esteem and locus of control
12	133	Consumer behavior
13	139	Expected activities in Oct. '75
14	140	Educational expectations
15	141	Factors important in determining life's work
16	148	Life goal orientations (work, community, and family)
17	142	Career expectations at age of 30

the short form questionnaire, a prompting telephone call was made to the nonrespondent encouraging him or her to complete and return the questionnaire. If the nonrespondent indicated that he or she had either lost or had never received a short form questionnaire, or if the nonrespondent could not be contacted for prompting, then a second mailout occurred immediately. No further attempts were made to obtain a response.

Reliability sample members who completed a long form questionnaire by personal interview were recontacted two weeks after the first interview, at which time an interview with the short form questionnaire was completed.

Each returned short form questionnaire underwent an initial editing process to determine whether or not it contained adequate information for acceptance and entry onto the data file. Generally, the editing process required cross-checking a respondent's answers to each of 12 key questions on the short form with his or her answers to the same questions on the long form. The decision rule for determining whether or not a key question (and, therefore, the short form questionnaire) should fail edit may be stated as follows: The fail-edit condition resulted if and only if a key question was appropriately answered on the long form questionnaire but was unanswered or inappropriately answered on the corresponding short form questionnaire.

If a respondent's short form questionnaire failed edit, a telephone call was initiated and an attempt was made to obtain information for the key items that the respondent failed to answer. Edited short form questionnaires and the relevant portions of the corresponding Second Follow-Up (long form) Questionnaire were then coded and keypunched. All data collection activities were completed by 30 April 1975.

E. Data Analysis Procedures

The variety of research questions, data collection procedures, items and item uses (e.g., composites) required a variety of analytic procedures. First of all, the items were classified (Table 7-4) as either categorical or continuous in nature. Reliability estimates for categorical items were based on the percent agreement in responses (including item nonresponses) across the two time points, and the degree of association was additionally summarized by Cramer's V.[4] Reliability estimates for continuous and dichotomous variables were provided by product-moment correlations on the available (test-retest) responses.

In order to address the various research questions regarding data collection procedures and respondent characteristics, the following procedures were employed.

1. Categorical Variables

Reliability estimates for subgroups were calculated as percentage agreement and

Table 7-4

VARIABLE SPECIFICATION AND DESCRIPTION

Short Form Item No.	Description
Categorical Variables	
1	Ethnic self-descriptions (8) plus missing clustered into 3 categories: white, nonwhite, and missing
3	School types (4) plus missing
5	Work activity categories (3) plus missing
6	Census code job description—analyzed major classifications
6e	Employer types (4) plus missing
8	Marital statuses (4) plus missing
14	Educational (7) expectancies (7) plus missing
17	Career goals (17) plus missing
Continuous Variables	
2	School attendance (dichotomous variable)
4	School performance (7 levels of self-reported grade)
6f	Date of employment: for job held in October 1974: scored as number of months from December 1971
7	Hours worked per week (write in response)
9	Number of dependents: 0,1,2,3,4
10a	Own income (write in)
10b	Spouse income (write in)
10c	Other income (write in)
10d	Total income (write in)
11	Self-esteem composite* (items a, c, d, and h)
11	Locus of control composite* (items b, e, f, and g)
12	Consumer composite* 1 (items a, b, and d)
12	Consumer composite* 2 (items e and f)
12	Consumer composite 3 (item c)
13	Plans (6) — each of a-f handled as a dichotomous variable (applies or does not apply) with responses assumed missing only if all are blank
15	Work composite* 1 (items a and b)
15	Work composite* 2 (items c, e, f, and i)
15	Work composite* 4 (item d)
16	Work orientation* (items a, c, and e)
16	Community orientation* (items f, g, and j)
16	Family orientation* (items b, h, and i)

* Composite scores were computed by averaging available responses. Composites were based on factor analyses from previous NLS studies.

Cramer's V; differences in reliability among subgroups were determined by comparing percent disagreement and agreement among subgroups using a χ^2 procedure. That is, for each respondent on each categorical variable, responses across the two time points were compared and scored as either "disagreement" or "agreement." These scores were then cast into a subgroup by agreement cross-tabulation table and analyzed by a χ^2 statistic. For each variable designated as categorical, the following analyses were done:

a. Data collection mode by agreement
b. Sex by agreement
c. Ethnicity by agreement
d. SES by agreement
e. Ability by agreement
f. Sex with a data collection mode by agreement
g. Ethnicity with a data collection mode by agreement
h. SES within a data collection mode by agreement
i. Ability within a data collection mode by agreement

2. Continuous Variables

Reliability estimates for subgroups were computed by product-moment correlations; differences in reliability among subgroups

were determined by comparing these correlations using χ^2 tests on Fisher log transformations of the correlations. The correlations were calculated on available test-retest data with no imputation for missing observations.

F. Results

As part of the full-scale second follow-up survey, long form questionnaire data were obtained from 555 of the 600 designated participants. This return rate of 93 percent is very similar to that obtained for the entire sample. The second questionnaire (short form) was administered to these 555 initial respondents, but only 462 short form questionnaires (83 percent) were completed. The larger than normal attrition from long form to short form obviously introduces some potential bias. In order to further investigate this problem, an analysis was done to see if a differential response rate was associated with demographic characteristics of sex, ethnicity, SES, and ability. These analyses indicated that no major or statistically significant differences in attrition could be associated with these demographic characteristics.

A second preliminary analysis was done on the method of data collection. Of the 462 respondents providing data on both the long and short form, 133 (28.8 percent) were interviewed and 329 (71.2 percent) provided data by mail or mail plus telephone solicitation for critical data. These analyses comparing mode of response among classification subgroups defined by sex, ethnicity, SES, and ability showed that nonwhites were more likely to be interviewed than whites (44 versus 22 percent), low SES persons were more likely (36.1 percent) to be interviewed than either middle (24.3 percent) or high (22.0 percent) SES persons, and low ability persons were more likely to be interviewed (39.2 percent) than middle ability persons (24.3 percent), and this group in turn was more likely to be interviewed than high ability persons (11.4 percent). These differences in data collection procedures as a function of ethnicity, SES, and ability could introduce bias into subgroup reliability estimates to the extent that reliability is differentially associated with data collection procedures. For example, if interview data are generally more reliable than mail-in data, nonwhites, low SES, or low ability persons could show higher reliability values than their counterparts. While this would not necessarily introduce bias into the overall reliability indices for the entire NLS sample, it definitely would limit generalizations to survey research as a whole. As a result of the differences in data collection procedures among subgroups, it was decided that mode of response needed to be controlled in subgroup analyses. This has the unfortunate consequence of severely limiting sample size for cross-classifications (e.g., sex by ethnicity) among the major classification variables and even among subgroups within a classification variable within a data collection mode (e.g., only eight high ability persons were interviewed).

Tables 7-5 and 7-6 present the total sample reliability indices for the categorical and continuous variables, respectively. The reliability of the items included in this study is generally quite reasonable. Based on the correlation coefficients for continuous or dichotomous variables and Cramer's V coefficient for categorical data, the median reliability is .67. The highest reliability observed for the total sample was .92 for school attendance. The reliability of some items, however, is quite low (e.g., .36 for other income, .41 for nonacademic educational plans, and .48 for "other" plans).

Table 7-5 also presents percent agreement for the total sample across the two time points for the eight categorical variables. These percents present a more favorable picture than do the coefficients of association.*

* This discrepancy results from the inherent characteristics of these two statistics. The percent agreement index is a measure of agreement for the average respondent, ignoring categories of response, while Cramer's V is related to the agreement of the average response category. Differences between the two statistics indicate that some response categories are likely to be highly unreliable. For example, ethnic self-description had a 92.7 percent agreement index but a .67 coefficient of association. A closer examination of that cross-tabulation table revealed that the major frequency categories of white and nonwhite had high percent agreements but the category "Not Ascertained" had 0 percent agreement. Each approach is legitimate depending on the use; however, percent agreement indices tend to result in higher values.

Table 7-5

OVERALL RELIABILITY AND RELIABILITY AS A FUNCTION OF DATA COLLECTION PROCEDURES: CATEGORICAL VARIABLES

	Total Sample		Data Collection Groups	
			Percent Agreement	
	Percent Agreement	Cramer's V	Mail	Interview
Ethnic self-description	97.2	.67	96.4	99.2
Type of school	94.4	.83	93.3	97.0
Work activity	90.7	.75	89.4	94.0
Job description	88.5	.83	86.9	92.5
Type of employer	87.7	.76	88.4	85.7
Marital status	90.0	.72	90.9	88.0
Educational expectations	70.6	.59	72.0	66.9
Career goals at 30	67.7	.64	62.9*	79.7
N	462	462	329	133

* Difference between subgroup percent agreements is significant at $p < .001$.

1. Reliability as a Function of Question Content and Format

Based strictly on the total sample, factually oriented items were substantially more reliable than items dealing with expectations and self-evaluations. This result is highly consistent with previous studies of survey questionnaire reliability and stands as the best substantiated conclusion of this study.

Systematic variations in reliability with other item characteristics (e.g., free-response format items, items nested within skip patterns) were not apparent.

2. Reliability as a Function of Data Collection Procedure

Fairly clear differences also exist between the reliability of interview and mail-in responses. Personal interview data were, with only one exception, as reliable or more reliable than mail-in data. The single exception was for spouse's income. This exception could well have been due to females not being well informed about their husband's earnings; if so, they could seek out accurate (or consistent) results from their husbands for the mail-in procedure. Also, numerous interactions of procedures with respondent characteristics qualify the main results of interviews being more reliable than mail-solicited data. Despite these interactions, however, it seems safe to conclude that the interview procedure generally produces more reliable data than the mail-in procedure.

3. Reliability as a Function of Respondent Characteristics

Reliability also varied with respondent characteristics; however, many of the differences in reliability associated with respondent characteristics were qualified by interactions of respondent characteristics with data collection procedures. Since many of the interactions between respondent characteristics and data collection procedures were not consistent across items, it seems necessary to conclude that there is at least a three-way interaction (respondent characteristics by data collection made by item content).

Differences in reliability between males and females exist, but neither group was consistently more reliable than the other. Males were more reliable than females for items involving numerical judgments (e.g., income); otherwise, females generally were more reliable than males. When males and females were compared within a data collection procedure, differences were more frequent but did not consistently favor either group.

The ethnic group comparisons showed a tendency for nonwhites to be slightly more reliable than whites. The items favoring nonwhites involved factually oriented data (e.g., anticipated income, number of dependents, date of employment) while those favoring whites were more subjective in nature (e.g., self-esteem, work factors). There was no tendency for the pattern of differences to be associated with data collection procedures. While it is comforting that there was no consistent bias in reliability associated with ethnic/racial groupings, this finding does run counter to previous research and deserves further scrutiny. While test-retest questionnaire nonresponse was not associated at conventional statistical levels ($p < .05$) with any comparison among demographic groups, there was a tendency for whites to have a higher return rate than nonwhites. If this trend has

Table 7-6

OVERALL RELIABILITY AND RELIABILITY AS A FUNCTION OF DATA COLLECTION PROCEDURES: CONTINUOUS VARIABLES*

Description	Total Sample (r)	Data Collection Groups: Mail (r)	Data Collection Groups: Interview (r)
School attendance	.92 (453)	.92 (320)	.93 (133)
School performance	.81 (211)	.78[a] (161)	.89 (50)
Date of employment	.66 (288)	.64 (198)	.75 (90)
Hours worked/week	.81 (293)	.78[b] (202)	.90 (91)
Number of dependents	.84 (448)	.78[c] (318)	.94 (130)
Own income	.62 (369)	.57[b] (252)	.75 (117)
Spouse income	.67 (228)	.94[c] (132)	.35 (96)
Other income	.36 (221)	.34 (124)	.50 (97)
Total income	.74 (363)	.70[c] (247)	.95 (116)
Self-esteem	.66 (454)	.67 (324)	.60 (130)
Locus of control	.71 (454)	.68 (324)	.73 (130)
Consumer behavior 1	.63 (455)	.58[c] (325)	.75 (130)
Consumer behavior 2	.58 (454)	.51[c] (324)	.72 (130)
Consumer behavior 3	.50 (447)	.50 (319)	.52 (128)
Plans: Working	.77 (459)	.79 (326)	.71 (133)
Plans: Academic education	.85 (459)	.84 (326)	.87 (133)
Plans: Other schooling	.41 (459)	.31[c] (326)	.60 (133)
Plans: Military	.86 (459)	.81[c] (326)	1.00 (133)
Plans: Homemaker	.84 (459)	.82[a] (326)	.89 (133)
Plans: Other	.48 (459)	.43[c] (326)	.66 (133)
Work 1	.56 (449)	.55 (319)	.58 (130)
Work 2	.66 (447)	.65 (317)	.69 (130)
Work 3	.54 (447)	.47[b] (317)	.69 (130)
Work 4	.56 (441)	.51[a] (311)	.65 (130)
Work goals	.68 (457)	.65 (327)	.74 (130)
Community goals	.67 (457)	.65 (327)	.73 (130)
Family goals	.68 (457)	.68 (327)	.68 (130)

* Numbers in parentheses are sample sizes. Numbers differ across variables due to respondent nonresponse. Letters a, b, and c refer to significance levels for between-group comparisons of product-moment correlations: a indicates $p < .05$, b indicates $p < .01$, and c indicates $p < .001$. The significance of differences between correlations is based on a χ^2 test on Fisher log transformations of the correlations.

been operating since the base year and if it also occurs at an item nonresponse level, the current findings could be attributed to different questionnaire-taking behaviors. That is, if unreliable nonwhite respondents tend to drop out at a greater rate than reliable nonwhite respondents and whites in general, the current results could be artifactual. Only an evaluation of questionnaire and item nonresponse would provide the necessary data to resolve this.

The majority of items showed variation in reliability as a function of ability. While there were a few minor exceptions (e.g., date of employment and other income in the interview mode), it seems safe to conclude that low ability persons provide less reliable data than middle or high ability respondents. Generally, the high ability respondents were most reliable.

A large number of differences also occurred among SES groups, but unlike the ability group differences, the pattern did not consistently favor any single SES level. Some items (e.g., date of employment) favored the lowest SES group, others (e.g., number of

dependents—interview mode) the middle SES group, but most favored the highest SES group. While there are numerous exceptions, the overall trend was for the highest SES group to be most reliable and for the middle SES group to be least reliable.

It should be apparent that the association of reliability with respondent characteristics forms a complex and almost paradoxical pattern. The general trend is of the least reliable respondents being low ability, middle SES, and white, and the most reliable being high ability, high SES, and nonwhite. The paradoxical nature of these results is to be found in the fact that nonwhites have lower ability scores and SES indices than whites. Thus, one would expect that if high ability and high SES persons were generally most reliable, so too would whites be more reliable than nonwhites. Unfortunately, the already small sample sizes prohibit any meaningful comparison at a cross-classification level (e.g., ethnicity by ability by SES) particularly when controlling for mode of data collection.

4. Integration of Results

On balance, it would appear that complex multiway interactions are operating among the demographic factors. These interactions are further complicated by interactions with data collection procedures and item characteristics (particularly the objectivity-subjectivity dimension). Despite the existence of these interactions, there are fairly strong main effects, most of which are supported by previous research. These findings, in order of strength of substantiation, are:

a. Factually oriented items are more reliable than subjectively oriented items;

b. Interview-collected data is more reliable than mail-in data;

c. Low ability respondents are less reliable than middle or high ability respondents;

d. Middle SES respondents are less reliable than low or high SES respondents;

e. Females are more reliable than males on nonquantitative items;

f. Nonwhites are more reliable than whites;

g. Response categories with an ambiguous referent (i.e., "other") are generally unreliable.

5. Interpretation and Implications

The above conclusions are, of course, qualified by the frequent interactions, and they need to be interpreted with caution due to the unknown effect of instrument and item nonresponse biases. Generalization of these results to the entire NLS data base also needs to be done with care. While the reliability of the average item included in the study was respectable (.67), there was a lot of variation. This level of reliability clearly indicates that the item or composite data are not totally reliable and for some purposes they are not sufficiently reliable. For example, the overall level of reliability is not sufficiently high for path analyses even using a liberal assumption that if the reliability is in the .90's, analytic work may proceed. Similarly, construct interpretations of correlations and regression analyses and comparison of effects among various multiple classification groups all need to be done with caution. The failure to obtain significant relationships between dependent variables and independent variables could be due to an actual absence of a relationship or to poor data quality.

The existence of numerous and perhaps complex interactions among demographic groups alone or among the groups and data collection procedures further complicates interpretation. For many data analyses only a subset of the NLS sample is used. For example, the investigation of work activity and attitudes would generally involve more unreliable respondents than would an investigation of postsecondary education and related factors. Thus, even if a researcher used only those variables included in this study, adequate estimates of reliability for structural modeling might not be available if the subsample did not correspond to one of the demographic subgroups included in this study.

Generalization to the entire NLS sample is also complicated by the higher than usual attrition rate for the short form. There could be a further confounding also, if the relationship between demographic groups and data

collection procedures differs for this sample versus the entire NLS sample. Clearly, generalizations to the entire NLS data base founded solely on this study can only be provisionally and cautiously offered.

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   b. Conger, A.J., S.S. Peng, and G.H. Dunteman, "National Longitudinal Study of the High School Class of 1972: Group Profiles on Self-Esteem, Locus of Control, and Life Goals," Research Triangle Park, N.C.: Research Triangle Institute.
   c. Lyons, N.I., and R.P. Moore, "National Longitudinal Study of the High School Class of 1972: Reliability of Retrospective Data," Research Triangle Park, N.C.: Research Triangle Institute, in press.
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4. *Statistical Package for the Social Sciences*, New York: McGraw-Hill, 1975.

VIII. PRELIMINARY ANALYSES AND RESULTS

A. Introduction

All methodological and descriptive technical reports submitted to NCES by RTI during the second follow-up study are annotated in Appendix A. The reader interested in going beyond the summaries and conclusions in this final report is encouraged to examine Appendix A for relevant materials which can be requested from NCES.

In addition to revising several first follow-up technical reports initially submitted during the previous survey, analysis activities included developing the second follow-up weights (see Chapter VI); preparing a tabular summary (codebook) of the second follow-up item responses; preparing a capsule summary report of the data; and conducting more in-depth investigations into certain policy-relevant areas. This chapter describes some of the more salient results emanating from three descriptive and issue-oriented reports concerned with various aspects of postsecondary education, work, family, and community activities of the study population.

B. Withdrawal from Postsecondary Education[1]

In the two and one-half years since graduating from high school, members of the NLS population have enrolled in, withdrawn from, or persisted in postsecondary education at varying points in time and to varying extents. About 30 percent of the total sample entered four-year colleges in the fall of 1972, and about 15 percent enrolled in either vocational or academic programs in two-year colleges. An additional 5 percent first enrolled in either a two- or four-year college in the fall of 1973. While nearly half of the sample entered some type of postsecondary education within two years after graduating from high school, not all of these students chose to continue their education; in fact, about 30 percent of these individuals dropped out or withdrew during the same time period.

For reporting purposes, withdrawals were first classified into academic and nonacademic (or voluntary) categories and separated by institutional type (i.e., four-year versus two-year and public versus private). Wherever necessary, withdrawals were also defined by the year of withdrawal (i.e., during or at the end of the freshman or sophomore year). In addition, freshman withdrawals were further classified as temporary (stopouts) or continuous (dropouts) on the basis of a two-year span. These refined classifications of college withdrawals have provided a sound basis for estimating the extent of college withdrawals and understanding the withdrawal process. For example, it is interesting to know that, by the fall of 1974, about 24 percent of the four-year college entrants as compared to 39 percent of the two-year college entrants had withdrawn or dropped out prior to completing their program of study for either academic or nonacademic reasons. Further, in both types of institutions, the number of individuals withdrawing for nonacademic reasons was substantially larger than those withdrawing for academic reasons; the ratio was about three to one for four-year colleges, and about six to one for two-year colleges.

Withdrawal rates vary as a function of both institution and student characteristics.

1. Extent of Withdrawal by Institutional Characteristics

As noted above, students from two-year colleges tend to have higher withdrawal rates (39 percent) than those from four-year colleges (24 percent). The withdrawal rate is also significantly higher for students from public four-year institutions versus those from private four-year institutions. The extent of withdrawal also varies significantly with the "selectivity level" of the institution; for both academic and nonacademic withdrawals, the higher the selectivity level, the lower the withdrawal rate. However, there were not significant differences in withdrawal rates among institutions of varying sizes. Nor were any other institutional characteristics found to be related to withdrawal.

2. Extent of Withdrawal by Student Subgroup Characteristics

There were no substantial ethnic or sex group differences in withdrawal rates. Differences were found among groups defined on the basis of socioeconomic status (SES); as SES increased, the withdrawal rate decreased

sharply, especially for four-year colleges. These findings are fairly consistent with previous research except for the finding that there were no substantial sex group differences in withdrawal rates from college. It should also be noted that, when other variables are controlled, some subgroup differences may emerge. In fact, as will be seen in the next section, ethnicity was significantly related to withdrawal rate from four-year colleges when SES was taken into account. Sex differences, however, remained nonsignificant even after SES and other variables were considered.

A number of other subgroup differences in withdrawal rates were found; for example: students whose fathers had a graduate degree had lower withdrawal rates than those whose fathers had only a high school education; Jews had the lowest withdrawal rate among people of different religions; students working full-time had a substantially higher withdrawal rate than students working either part-time or not at all; students in academic fields of study had lower withdrawal rates than those in nonacademic fields; full-time students had a significantly lower withdrawal rate than part-time students; and finally, students with a higher academic aptitude had a lower withdrawal rate than those with a lower academic aptitude.

3. Factors Associated with Withdrawal from Postsecondary Education

While the findings of the NLS analyses are for the most part consistent with and in support of previous findings, there are a few notable exceptions. The effect of race on withdrawal behavior is a particularly interesting example. As noted in the previous section, when race alone was considered, there were no substantial differences among blacks, Hispanics, and whites. However, when SES and sex were held constant, there were race effects for four-year college students. More interestingly, the effects indicated that whites and blacks are more likely than Hispanics to withdraw from four-year colleges when other things are held constant. Such findings should be considered highly tentative at this stage, however; more definitive answers must await further maturation of the NLS data base.

The NLS analyses suggest that withdrawal may be largely a motivational problem. The data have indicated that students of low educational aspiration are much more likely to withdraw than those of high aspiration. They also indicate that a great proportion of withdrawals were due to lack of clear plans and an inability to relate the value of a college education to what is seen as the requirements of the real world.

College experience appeared to be an important factor in the withdrawal process after controlling for student background characteristics. More withdrawals than persisters reported dissatisfaction with the quality of the faculty and their intellectual development. This could to some extent reflect the incongruency between the student's expectation and the actual college environment.

Finally, the NLS analyses have demonstrated that, in addition to SES, educational aspiration, and college experience, many other factors such as high school program, high school grades, and family responsibility are potentially important in the college withdrawal process.

4. Students' Self-Reported Reasons for Withdrawal

A substantial number of the students classified as academic withdrawals reported a number of nonacademic reasons such as job offers and financial problems as their reasons for withdrawing. This supports previous findings that dropouts tend to underplay the academic problems, which are the actual reasons for their dropping out. Among the sophomore academic withdrawals, a considerable number also reported as a reason for withdrawing that they were uncertain as to what they really wanted to do with their lives.

Substantial numbers of nonacademic withdrawals reported financial difficulties, marriage plans, lack of goal clarity, and a desire to get practical experience as reasons for withdrawing.

A larger percentage of two-year versus four-year nonacademic withdrawals reported leaving because of good job offers. Conversely, larger percentages of four-year students reported withdrawing because of marriage plans. Also, among the sophomore withdrawals, more four-year students stated

that they were unsure of their plans for the future.

5. Effects of Withdrawing from Postsecondary Education

The NLS analyses would seem to indicate that a substantial proportion of the withdrawals will eventually reenter college and complete their education. In fact, of those who withdrew from four-year colleges at the end of their freshman year, about one-fourth had already returned to college by the time of the second follow-up. Withdrawals from two-year colleges were less likely to have reentered or to have planned to do so.

Financial problems was the most frequently given reason for not planning to return to college. "Had no time" was another frequently indicated reason for not returning for study by both academic and nonacademic withdrawals. A substantially higher percentage of academic withdrawals than nonacademic withdrawals gave as a reason for not planning to reenter that they were not qualified; however, the percentage of academic withdrawals giving this as a reason (15 to 25 percent) was still much lower than might have been expected. In general, the reasons given for not reentering or planning to reenter college were similar for both academic and nonacademic withdrawals, i.e., because of a lack of money, time, and/or interest.

Most of the withdrawals were employed in full-time positions in October 1974. A slightly higher proportion of the withdrawals were looking for work than were the sample members in general. Of those employed, the withdrawals from two-year schools were nearly as satisfied with their jobs as those who had completed a two-year program.

As far as changes in psychological attributes (e.g., self-esteem and locus of control) are concerned, the data analysis did not suggest any significant impact either positive or negative resulting from withdrawing from college prior to program completion.

C. Transfer Students Among Institutions of Higher Education[2]

Four types of transfer students have been examined:

1. *2→4 Transfers* — Students transferring from a two-year college to a four-year college, sometimes called vertical transfers.
2. *4→4 Transfers* — Students transferring from a four-year college to another four-year college, or horizontal transfers.
3. *4→2 Transfers* — Students transferring from a four-year college to a two-year college, or reverse transfers.
4. *2→2 Transfers* — Students transferring from a two-year college to another two-year college (also called horizontal transfers).

The major findings are highlighted below.

1. 2→4 Transfers

Students moving from two-year to four-year institutions constituted the largest transfer group. About 25 percent of the students who initially entered two-year colleges transferred to four-year colleges after two years. The 2→4 transfers were distinctively different from other two-year college students. In general, they had higher achievement scores, were students of higher SES, and were more likely to major in the field of academic studies.

The 2→4 transfers gave various reasons for transferring: freshmen transfers (i.e., students who transferred by the end of their first year) wanted a larger school with more academic, career, and social opportunities; sophomores wanted generally the same things, in addition to a desire to continue their education.

Whites had a greater 2→4 transfer rate than blacks, who, in turn, had a greater rate than Hispanics. Regionally, the South had the highest and the West the lowest 2→4 transfer rates. No significant sex differences in the 2→4 transfer rates were found.

Several comparisons were made between the four-year native (i.e., started and remained in four-year schools) students and the 2→4 transfer students. In general, transfer students tended to come from lower SES families, and to have lower ability, achievement, and aspiration levels than the native students. Transfer students were also less likely than

native students to receive scholarships, fellowships, or grants. However, 2→4 transfer students were as satisfied with their college education as were the native students.

2. 4→4 Transfers

The proportion of 4→4 transfers was also substantial with about 16 percent of the four-year college students transferring within two years after initial matriculation. Proportionally, there were as many 4→4 transfers among first-year students as among students in their second year.

Differences in the 4→4 transfers existed among several subgroups. Whites were more likely than blacks to transfer; students of high SES were more likely than students of low SES to transfer. Likewise, students of higher educational aspirations and higher college grade-point averages were more likely to transfer than those with low aspirations and averages. In short, the groups more likely to transfer between four-year institutions are characterized as being white, academic high school program participants, with high SES, high aspiration, and high college achievement.

The differences among institutions of varying sizes showed a consistent pattern; the larger the school, the smaller the 4→4 transfer rate. Thus, larger schools seem to exert a greater holding power over their students.

The horizontal transfer students, whether in the four-year or two-year institutions, tended to report similar reasons for transferring. The substantial percentages of horizontal transfers who reported a variety of reasons for changing schools seem to suggest that there are large numbers of students whose interests and needs were not well matched with their original college choices.

3. 4→2 Transfers

Interestingly, in the first year of postsecondary school, the number of 4→2 transfer students was about the same as the number of 2→4 transfer students. Of the 4→2 transfers in the first year, however, many moved back to a four-year institution in the following year. But in the second year, while 2→4 transfers were common (29 percent), the percentage of 4→2 transfers was quite small (about 1 percent).

Differences in the 4→2 transfer rates existed between low and high achievement groups; students having lower college grade-point averages were more likely to transfer from four-year to two-year colleges. This finding lends support to an argument that many four-year college students intend to improve their grade-point averages in a two-year college, and then continue in a four-year college.

Freshman and sophomore 4→2 transfer students reported that their major reason for transferring was to attend a less expensive school. Being closer to home and in a smaller school, as well as increasing career opportunities, were also reported as reasons by substantial percentages in both groups. Regarding academic difficulty as a reason for transferring from a four-year to a two-year college, while the literature suggests that many may in fact transfer for this reason, less than one-fourth of these students reported that this was a reason.

4. 2→2 Transfers

This group was the smallest in terms of both percentage and actual number of transfers for both the first and second years. The 2→2 transfers had lower achievement than persisters, but higher educational aspirations than withdrawals.

There were no substantial subgroup differences in the 2→2 transfer rates. As noted above, the reasons for transferring given by this group were the same as those given by the 4→4 transfers.

D. Participation in Jobs[3]

As of October 1974, 68 percent of the total sample were working at either full- or part-time jobs. In addition, 6 percent were looking for work, on temporary layoff, or waiting to report to work. The remainder, about 27 percent, were not in the labor force, most of whom were either homemakers or were attending college.

1. Occupational Status

Less than 10 percent of the respondents who were working (full- or part-time) held professional or managerial type jobs. Not surprisingly, blacks and Hispanics tended to be

underrepresented in this category, regardless of sex. Looking only at the males, blacks and Hispanics also tended to be somewhat underrepresented in the skilled trades (craftsmen), while Hispanics were overrepresented in clerical and sales jobs, and blacks were markedly overrepresented in the military service. The most notable race difference for females was the disproportionately high number of Hispanics in clerical and sales jobs.

Sex differences in occupational status were even larger than the race differences. Within each racial or ethnic group, young women were working predominantly in traditionally "female" occupations (i.e., clerical and sales). All other major occupational categories contained lower proportions of women than men.

2. Looking for Work

The general pattern of movement of individuals in and out of the labor market between 1973 and 1974 may be described as follows: Of those working in October 1973, 70 percent were still working as of October 1974, 5 percent became unemployed, and 25 percent had dropped out of the labor force. Of those looking for work in October 1973, 49 percent had found work by October 1974, 12 percent were still unemployed, and 39 percent had dropped out of the labor force.

Of those looking for work in October 1973, 56 percent of the males as compared to 44 percent of the females were employed in October 1974, while 14 percent and 11 percent, respectively, were still looking for work. In contrast, 30 percent of the males and 45 percent of the females who were seeking employment in 1973 were neither employed nor looking for work in October 1974. This sex difference is due almost entirely to the women who became homemakers between 1973 and 1974 and thus were no longer in the labor force.

Blacks unemployed in October 1973 were less likely than either unemployed whites or Hispanics to be employed in October 1974. About twice as many blacks and Hispanics as whites were still looking for work in 1974. More blacks than Hispanics had dropped out of the labor force during the year.

E. Family and Community Life[3]

1. Marriage and Children

Consistent with past research, women tend to marry earlier than men. As of October 1974, 17 percent of the males compared to 32 percent of the females were married. An additional 1 percent of the males were divorced, and 3 percent of the females were divorced, widowed, or separated.

Within both sexes, Hispanics had the highest percent "ever married"—24 percent of the males and 43 percent of the females. On the other hand, more white females than black females were (or had been) married as of October 1974, 35 percent versus 29 percent. In contrast, the rates for black and white males were identical, 18 percent in each group.

About one out of ten from the senior class of 1972 had had the first child by October 1974. Sex differences in birth rates, like early marriage, were quite sizable. Whereas 8 percent of the men had one or more children, 16 percent of the women did. This pattern was found for all races.

Race differences in birth rates were even more marked. For both males and females, about three times as many blacks as whites had children. Among females, those with children were: 13 percent of the whites, 35 percent of the blacks, and 24 percent of the Hispanics. Among males, these figures were 6, 21, and 13 percent, respectively.

2. Residential Mobility

One out of four respondents had moved between October 1973 and October 1974, i.e., they no longer were living in the same city or community. About half of these moves, 52 percent, were within 100 miles of the original place of residence. While males moved no more often than females, they tended to move longer distances.

3. Voting Behavior

Seventy percent of both males and females were registered to vote at the time of the survey. Somewhat fewer, 63 percent of the males and 60 percent of the females, had actually voted in a local, state, or national election prior to October 1974.

4. Life Goals

Finding the right person to marry and having a happy family life was judged by both men and women in 1974 as the most important goal in life. This goal was rated as "very important" by 83 percent of the men and 87 percent of the women. Interestingly, between 1972 and 1974 the goals concerned with marriage, family life, and living close to one's relatives increased in importance for both males and females. All other life goals dropped in importance, some quite markedly.

Not unexpectedly, in contrast to the females who were more family oriented, the males rated all of the work-related items higher than did the females in both years. Males showed a marked drop, however, in the value they placed on having lots of money (from 26 percent in 1972 to 18 percent in 1974), while females showed a sharp drop in the emphasis they placed on finding steady employment (from 74 to 60 percent).

Having leisure time and being a community leader also were rated as somewhat more important by the men. Both sexes, though, placed even less value on community leadership in 1974 than they did in 1972.

References

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2. Peng, S.S., "Transfer Students in Institutions of Higher Education," Research Triangle Park, N.C.: Research Triangle Institute, 1976.
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Appendix A

ANNOTATED LIST

OF

SECOND FOLLOW-UP

NATIONAL LONGITUDINAL STUDY REPORTS

BY

RESEARCH TRIANGLE INSTITUTE

(This list covers revisions of prior reports and new reports produced after first follow-up activities were concluded. For a complete listing of all NLS reports produced by RTI, both this document and Appendix A to the First Follow-Up Survey, Final Methodological Report (March 1976) should be examined.)

Base-Year, First, and Second Follow-Up Data File Users Manual (Preliminary)
July 1976, 72 pages
Twenty-three appendixes, 650 pages

The *Users Manual* is a detailed description of the merged base-year, first, and second follow-up NLS data file. The purpose of the manual is to document the contents of the available release tapes so that interested investigators in the general research community can exploit the data effectively. The manual has five parts: Introduction, Methodology, File Preparation, Contents and Organization of the Data File, and Technical Specifications. In Part 2, Methodology, the sample design, instruments, and data collection procedures are discussed. Part 3 describes first and second follow-up data preparations and entry, error and missing data codes, machine editing procedures, and quality and analytic indices. The 23 appendixes are:

A. Student's School Record Information Form, Base-Year Student Questionnaire, First Follow-Up Questionnaire (Form B), Second Follow-Up Questionnaire, and Activity State Questionnaire
B. Critical Items and Supporting Items in the First and Second Follow-Up Questionnaires
C. List of Occupational Codes
D.1 List of Field of Study Codes
D.2 List of License, Certificate, or Diploma Codes for First Follow-Up Question 43B
D.3 Extended Codes for Second Follow-Up Questions 7, 12, 27, 34, 43, 47, 50, and 59
D.4 Military Codes for Second Follow-Up Question 122
D.5 List of Second Follow-Up Questions with Resolvable Multiple Responses
D.6 List of Created Response Categories for Second Follow-Up Questions 44FA and 113DA
E.1 First Follow-Up Routing Codes
E.2 First Follow-Up Routing Patterns
E.3 Second Follow-Up Routing Codes
E.4 Second Follow-Up Routing Patterns
F. Index of NLS Release Tape Variables
G. List of Items Deleted from the SRIF, Base-Year, and First and Second Follow-Up Instruments
H. Imputation of Grade Point Averages and Conversion of Grading Systems
I. List of Region Codes and States Within Regions
J. Frequency Distributions for Base-Year, First Follow-Up, and Second Follow-Up Questionnaire Items
K. Subject Key Word Index
L. Definitions of Weighting Classes
M. Specification and Use of Planning and Activity State Variables
N. Response Rates by Sample Status of School
O. Variable List with Tape Locations

Base-Year, First, and Second Follow-Up Master File Documentation
August 1976, 273 pages

This paper documents the contents of the 1976 NLS Master File. This file is similar in structure and content to the 1976 NLS Public Release File, differing only in the number of variables in the file. The Master File contains 1,669 variables while the Release File contains only 1,495 variables; the Release File is a subset of these 1,669 variables. The additional variables that make up the Master File are primarily drawn from the Student School Record Information Form (SRIF) and items that were withheld from the Public Release File for confidentiality reasons. The report is divided into two sections. Section 1 contains a summary listing of each variable contained in the file. This listing provides, for each variable, the variable number, a short label, the location of the implied decimal point (if blank, the variable is a whole number), the tape position, and a long label. This section should serve as a quick guide to the contents of the file. Section 2 presents a complete and detailed listing of the variables and variable frequency distributions in the data file.

School File Documentation
August 1976, 86 pages

This report describes the contents of the 1976 NLS school data file. The School File is a companion file to the student-based 1976 NLS Master File; it is composed of 1,318 school records, one record for each high school from which NLS students were sampled. The file contains information about the environment, staff, procedures, facilities, and curricula of the NLS sample high schools. The 500 variables that make up the file are primarily from the School Questionnaire and/or one or two Counselor Questionnaires for each of the 1,318 participating schools.

A Survey Measurement Error Model for Repeated Binary Responses
September 1976, 25 pages

This working paper focuses on the analysis of repeated survey measurements with emphasis on the misclassification error aspects of the Census Bureau model for binary (0-1) variables. Separate sections of this paper present a specification of the Census Bureau model for 0-1 variables which postulate a "true value" for each potential respondent and emphasize the misclassification aspects of the error distribution, explore bias and variance implications of the measurement error model for sample proportions, present the expectations of several measures of inconsistency for repeated measurement surveys, and summarize the results, concentrating on practical implications regarding the analysis of repeated survey measurements such as those of the NLS.

Bias Resulting from School Nonresponse: Methodology and Findings (Revised)
September 1976, 79 pages

Approximately 20 percent of the initial sample schools did not participate in the NLS base-year survey. This school nonresponse rate was twice the student nonresponse rate in the participating schools. This paper presents methodology and detailed results of an investigation of the possible bias of school nonresponse in base-year estimates. Two methodologies developed expressly for this analysis and the basic statistics resulting from the method implemented are presented.

Calculation of Nonresponse-Adjusted Student Weights for Respondents to the NLS Second Follow-Up Survey
January 1976, 15 pages

The Sampling Department of the Statistics Research Division of RTI issued this technical report dealing with weighting adjustments for student nonresponse. The report describes the second follow-up weight calculations, nonresponse adjustment methodology, classifier variable data, procedure for forming weighting classes, and the adjusted student weight calculations. The last pages contain tables showing the nonresponse adjustment factors for each weighting class as well as the total number of students, total number of responding students, the sum of all unadjusted weights, and the sum of the respondent unadjusted weights for each weighting class.

Limited Investigation of the Effects of Stratification, Clustering, Respondent Mobility, and Overlapping Schools with the 1972 Sample
April 1976, 26 pages

Longitudinal measures of change are the most important kinds of estimates being produced from the NLS survey. Several topics are presented in this report, most of which build on previous variance components analyses. The major areas covered are effects of stratification and clustering, correlations from overlapping schools in the two NLS surveys, and mobility of the NLS 1972 cohort.

Relative Efficiencies of a Three-Stage versus a Two-Stage Sample Design for a New NLS Cohort Study
March 1976, 48 pages
Two appendixes, 13 pages

In a previous National Longitudinal Study sample design efficiency report, optimum numbers of schools and seniors per school for a new cohort sample were estimated. Because of interviewer travel costs associated with multiple follow-up surveys, a three-stage design clustering schools in primary sampling units (PSUs) of one or more counties might in the long run be a cost-effective alternative. This report compares the efficiency of a deeply stratified three-stage design patterned

after RTI's National Assessment of Educational Progress (NAEP) sample to an optimized version of the 1972 two-stage design.

Supporting Statement for the Survey Instrumentation of the Second Follow-Up Survey for the High School Class of 1972
August 1974, 31 pages
Eight attachments, 122 pages

A supporting statement accompanied the Second Follow-Up Questionnaire when it was submitted for clearance. The first part of the statement gives the background, uses, and justification of the survey; the largest part describes the plans for the second follow-up (survey procedures, reports and publications, schedule); the last part discusses consultations and meetings leading to the development of the Second Follow-Up Questionnaire and concerns about respondent burden, sensitivity, and confidentiality. There are eight attachments to the statement:

A. National Longitudinal Study of the High School Class of 1972: Second Follow-Up Field Test
B. Survey Instrumentation for the Field Test of the NLS: Second Follow-Up
C. Survey Questionnaire for the Second Follow-Up of the NLS of the High School Class of 1972
D. OPERATION FOLLOW-UP Newsletter
E. Parent and Sample Member Advisory Letters
F. Text of Mailgram and Postcard Reminder
G. Cover Letters for First and Second Questionnaire Mailouts
H. Time Frame Chart

Data Collection Activities for the Second Follow-Up (August 1974 — June 1975): Final Report
July 1975, 37 pages

The NLS second follow-up data collection activities involved the mailout of a newsletter to all members of the sample, advisory letters to parents and lead letters to participants, tracing activities for each individual whose newsletter was returned by the post office as undeliverable, questionnaire mailouts, mailout of reminder/thank-you postcards, and mailgram and telephone follow-up contacts with nonrespondents. In addition, a special investigation was conducted to measure the relative impact of mailgrams versus postcards in terms of increasing response. Another special study involved telephone interviews with a subset of the sample members to determine the impact and effectiveness of the newsletter and possible ways of improving it. The final steps in data collection were the editing and coding of all returned questionnaires. This report contains descriptions and tabular summaries of these varied activities. The two attachments are copies of the mailout items and the report on the telephone survey of newsletter recipients.

National Longitudinal Study of the High School Class of 1972: Special Activity State Survey and Second Level of Edit Activities
March 1976, 8 pages
Three appendixes, 11 pages

The special activity state survey described in this paper was designed to collect additional data from NLS sample members in an effort to obtain complete classifications for the 1972 and 1973 activity states and to obtain complete information on certain basic classifier variables. The second level of edit activities described in this paper were specific file editing tasks related to reformatting, recoding, or adding to certain sections of the 1975 NLS data base. The new data came from data collection and data processing activities that continued beyond the first follow-up cutoff dates. This consisted of the Special Activity State Questionnaire (ASQ) survey, processing additional School Record Information Forms (SRIF) and additional School Questionnaires (SQ), and creating new composite variables.

National Longitudinal Study of the High School Class of 1972: Critical Data Base
May 1976, 24 pages

The purpose of this paper is to identify a set of items which are considered indispensable or critical to the needs of most current

and potential uses of the NLS data base. The major section of this paper describes the composition of the proposed critical data base and the procedures and criteria involved in its creation. The critical data base is defined in terms of the Base-Year, First, and Second Follow-Up Questionnaire items; the relationship of the planned third follow-up survey to these items is also discussed.

Reliability of Retrospective Data (Revised)
September 1976, 77 pages

Of the 1,200 primary sample schools in the original NLS sample design, 231 did not participate in the base-year survey. The purpose of this study was to assess the reliability of base-year data obtained retrospectively during the first follow-up of students from nonparticipating schools. Limited base-year Student Questionnaire data were obtained during the first follow-up from a sample of the 1972 senior students from the participating schools. The study documented in this report is a question-by-question assessment of the reliability of the data obtained from these students. The resurvey procedure involved requesting information (i.e., 15 additional items in the First Follow-Up Questionnaire, Form B) from 500 base-year respondents and comparing the responses to the corresponding base-year items. The results and procedures are discussed.

Reliability and Validity of National Longitudinal Study Measures: An Empirical Reliability Analysis of Selected Data and a Review of the Literature on the Validity and Reliability of Survey Research Questions
July 1976, 55 pages
One appendix, 6 pages

This report is divided into four major sections. The first section briefly summarizes the purpose of NLS, the sample design, and characteristics of the basic longitudinal questionnaires. The second major section provides a comprehensive review of validity and reliability for NLS-type questions and respondents. The third and major section presents a detailed study of the reliability of a sample of Second Follow-Up Questionnaire items on a sample of NLS respondents, including an evaluation of test-retest reliability as a function of data collection procedures (mail-in or personal interview), item characteristics (response format, item content, and item length), respondent characteristics (sex, ethnicity, SES, and ability), and the interaction of these diverse factors. The final section integrates the conclusions of the literature review and reliability study results and discusses the implications of these results for survey research.

Tabular Results of the Second Follow-Up Questionnaire
July 1975, (4 volumes) 912 pages

The Tabular Results (codebook) of the Second Follow-Up Questionnaire are presented for each item in the questionnaire. Results are given for the total sample as well as for subpopulations defined by sex, race, ability, SES, high school program, region, sex by race, sex by ability, sex by SES, sex by high school program, sex by region, race by ability, race by SES, race by high school program, and race by region. Actual and weighted subpopulation sizes are presented along with the percent distributions of responses for each item for these groups.

Descriptive and Issue-Oriented Technical Reports:

1. *National Longitudinal Study of the High School Class of 1972: A Capsule Description of the Second Follow-Up Survey Data*
   July 1976, 30 pages

This report is designed to present basic descriptive results of the NLS second follow-up data. The purpose is to give summative information, taken from the analysis of responses to the survey, about education, work, and family and community activities since leaving high school. There is a concentration on persistence in education and participation in jobs because, among the many other issues which could be addressed with the NLS data, these seem to have the most pervasive, important, and meaningful impact on the lives of young adults. The family and community life focus rounds out this descriptive summary of these young adults as they move into the American mainstream.

2. *Withdrawal from Institutions of Higher Education: An Appraisal with Longitudinal Data Involving Diverse Institutions (Technical Report)*
September 1976, 135 pages
Six appendixes, 72 pages

This report is divided into eight chapters. Chapters I and II provide a description of the NLS sample, instruments, data collection procedures, and the weighting process. Chapter III presents the definition and description of how dropouts were classified for this study. Estimates of withdrawal behavior from American institutions of higher education are presented in Chapter IV. Separate estimates are provided for four-year and two-year institutions. The extent of withdrawal is also examined by institutional characteristics such as type of control, size, and selectivity levels, and by subpopulations defined by race, sex, and SES. In Chapter V, students' self-reported reasons for withdrawal are discussed. The withdrawal process is extensively investigated by analytic models in Chapter VI. This includes a conceptualization of the withdrawal process and the specification of analysis techniques (i.e., log-linear models to test specific hypotheses). Chapter VII is a description of what happens to withdrawals regarding employment status, career and education plans, and psychological changes. The last chapter (Chapter VIII) discusses the findings and their implications.

3. *Transfer Students Among Institutions of Higher Education (Technical Report)*
July 1976, 115 pages
Four appendixes, 31 pages

This report is organized around seven separate chapters. Chapter I provides a brief description of the background of the study and the purpose of this investigation. Chapter II describes the extent of transfers in institutions of higher education in terms of percentages and estimated numbers for various transfer groups. In addition, differences in transfer rates among subgroups are described. Chapter III focuses on the differences between transfers and nontransfers in four-year and two-year institutions. Chapter IV compares vertical transfers (i.e., students who move from two-year to four-year colleges) and four-year native students on background variables, financial aid status, satisfaction with college education, and academic performance. Chapter V follows with tabular summaries of students' self-reported reasons for changing schools. Chapter VI presents tests of several hypotheses related to reasons for transferring; these center on the issue of an incongruency between the student and the institution. The last chapter, Chapter VII, summarizes the major findings and discusses their implications.

Papers Presented at Professional Meetings and Conferences:

1. *Implications of National Longitudinal Study Data on Self-Esteem and Locus of Control for Psychological Research*
March 1976, 13 pages

This paper was prepared by A.J. Conger, P.R. Costanzo, J.C. Conger, and G.H. Dunteman, and was presented at the March 1976 annual meeting of the Southeastern Psychological Association (SEPA) in New Orleans. The authors described briefly the scope of the NLS survey, results on self-esteem and locus of control obtained from previous NLS data analysis, and current plans and issues which can be studied by using NLS data on self-esteem and locus of control. The focus of the presentation, however, was not on specific results or plans, but rather on indicating the potential benefits to psychologists and other interested investigators of using such data for confirming laboratory studies and generating further hypotheses.

2. *National Longitudinal Study of the High School Class of 1972: Summary of Proceedings of an AERA Informal Session*
April 1976, 4 pages

In April 1976, an informal session with NLS users and planners was held at the annual AERA convention in San Francisco, California, to discuss problems and share experiences and plans with the project. The anticipated output of this meeting was to be a set of comments, recommendations, and/or concerns which could be considered by both NCES and RTI in further project work. This paper summarizes those proceedings and provides a list of the participants.

3. *The National Longitudinal Study: A Major Data Bank for Policy Analysis*
September 1976, 85 pages

Several presentations dealing with NLS were given at the 1976 Symposium of the American Psychological Association in Washington, D.C., by RTI staff. RTI compiled into one document these presentations:

a. *Some Trends in the Entry to Higher Education: A Comparison Between NLS and Project TALENT* by S.S. Peng.

b. *Group Profiles on Self-Esteem, Locus of Control, and Life Goals* by A.J. Conger.

c. *Money and College: Differences in Ability and SES* by J.A. Riccobono, J.P. Bailey, Jr., and G.H. Dunteman.

d. *Potentials of the NLS Data Base for Issue-Oriented Analyses* by J.A. Davis.

Appendix B

SECOND FOLLOW-UP QUESTIONNAIRE

O.M.B. No. 51-S-74032
APPROVAL EXPIRES SEPT. 1975

ORERATION FOLLOW-UP

NATIONAL LONGITUDINAL STUDY OF THE HIGH SCHOOL CLASS OF 1972

Second Follow-Up Questionnaire

72

Prepared for the
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
BY RESEARCH TRIANGLE INSTITUTE, RESEARCH TRIANGLE PARK, NORTH CAROLINA
FALL 1974

FORM 2367 2

National Center for Educational Statistics
Education Division
Department of Health, Education, and Welfare
Washington, D.C. 20202

DIRECTIONS

This questionnaire is divided into the following seven sections:

A. General Information
B. Education & Training
C. Work Experience
D. Family Status
E. Military Service
F. Activities and Opinions
G. Background Information

Start by answering questions in Section A. You will need to answer the first question in each section, but you may not need to answer all the questions in every section. You may be able to skip most of some sections. We have designed the questionnaire with special instructions in red beside responses which allow you to skip one or more questions. Follow these instructions when they apply to you.

Read carefully each question you answer. It is important that you follow the directions for responding, which are

- (Circle one.)
- (Circle as many as apply.)
- (Circle one number on each line.)

Sometimes you are asked to fill in a blank—in these cases, simply write your response on the line provided. Where you are asked to circle a number, make a heavy circle. Here is an example:

Why did you leave high school?

(Circle one number on each line.)

	My Reasons	Not My Reasons
Graduated	(1)	2
Entered college	1	(2)
Went to work	(1)	2

When you complete this questionnaire, please return it to:

OPERATION FOLLOW-UP
Research Triangle Institute
Post Office Box 12036
Research Triangle Park, North Carolina 27709

A post-paid and pre-addressed envelope is enclosed for your convenience.

Section A: General Information

FACTS ABOUT YOU IN OCTOBER 1974

1. **What were you doing the first week of October 1974?**

(Circle as many as apply.)

- Working for pay at a full-time or part-time job 1
- Taking academic courses at a two- or four-year college 2
- Taking vocational or technical courses at any kind of school or college (for example, vocational, trade, business, or other career training school) 3
- On active duty in the Armed Forces (or service academy) 4
- Homemaker 5
- Temporary lay-off from work, looking for work, or waiting to report to work 6
- Other (describe _____) ... 7

2. **How would you describe your living quarters as of the first week of October 1974?**

(Circle one.)

- Private house, apartment, or mobile home 1
- Dormitory or apartment operated by a school or college 2
- Fraternity or sorority house 3
- Rooming or boarding house 4
- Military service barracks, on board ship, etc. 5
- Other (describe. _____) ... 6

3. **With whom did you live as of the first week of October 1974?**

(Circle one.)

- By myself 1
- With my parents 2
- With my husband or wife 3
- With parents and husband or wife 4
- With other relatives 5
- With person(s) not related to me 6

4. Which of the following best describes the location of the place where you lived in the first week of October 1974?

(Circle one.)

- In a rural or farming community 1
- In a small city or town of fewer than 50,000 people that is not a suburb of a larger place 2
- In a medium-sized city (50,000-100,000 people) 3
- In a suburb of a medium-sized city 4
- In a large city (100,000-500,000 people) 5
- In a suburb of a large city 6
- In a very large city (over 500,000 people) 7
- In a suburb of a very large city 8
- A military base or station 9

5. Is this the SAME city or community where you lived a year ago in October 1973?

- Yes ..... 1 *GO TO Q. 8*
- No ..... 2 *GO TO Q. 6*

6. How far is this from where you lived in October 1973?

(Circle one.)

- Less than 50 miles 1
- 50 to 99 miles 2
- 100 to 199 miles 3
- 200 to 499 miles 4
- 500 miles or more 5

7. What was the main reason you moved to the place where you live now?

(Circle one.)

- To find or take a job 1
- To go to school 2
- To follow my parents or spouse to a new location 3
- Other (specify: _____) 4

8. How do you describe yourself?

(Circle one.)

- American Indian 1
- Black or Afro-American or Negro 2
- Mexican-American or Chicano 3
- Puerto Rican 4
- Other Latin-American origin 5
- Oriental or Asian-American 6
- White or Caucasian 7
- Other 8

Section B: Education & Training

This section asks information about your training and education. The emphasis is on your school experiences from October 1973 through October 1974. (Persons in the military service should also answer the questions in this section.)

SCHOOL ATTENDANCE FROM OCTOBER 1973 THROUGH OCTOBER 1974

9. **From October 1973 through October 1974 were you enrolled in or did you take classes at any school like a college or university, service academy or school, business school, trade school, technical institute, vocational school, community college, and so forth?**

No .....1 *GO TO Q. 38, p. 10*

Yes .....2 *GO TO Q. 10* →

10. **Did you attend school in the first week of October 1974?**

No .....1 *GO TO Q. 32, p. 7*

Yes .....2 *GO TO Q. 11*

11. **What is the exact name and location of the school you were attending in the first week of October 1974? (Please print and do not abbreviate.)**

School Name _____

City: _____ State: _____

12. **What kind of school is this?** (Circle one.)

Vocational, trade, business, or other career training school 1

Junior or community college (two-year) 2

Four-year college or university 3

Other (describe) _____ 4

13. **Were you attending this school as part of an Armed Forces training program?**

Yes 1

No 2

14. **When did you first attend this school?** _____ (month) _____ (year)

15. **Are you currently attending this school?**

Yes 1

No .....2 Date left _____ (month) _____ (year)

16. **During the first week of October 1974, were you classified by this school as a full-time student?**

Yes 1

No 2

Don't know 3

17. **During October 1974, about how many hours a week did your classes meet in the subjects or courses in which you were enrolled? Include time in lectures, shop, laboratories, etc.**

_____ Hours per week

18. **At that time how were you classified by your school?**

(Circle one.)

- Freshman (First-year Student) 1
- Sophomore (Second-year Student) 2
- Junior (Third-year Student) 3
- Senior (Fourth-year Student) 4
- Special Student 5
- Other classification (specify: _____) 6
- My school doesn't classify students 7

19. **As of the first week of October 1974, what was your actual or intended field of study or training area (for example, practical nurse, machinist, beautician, civil engineering, accounting, psychology, home economics, etc.)? Please name the specific field or area:**

(Write in): _____

20. **Please select below the category which best describes this field or area.**

(Circle one.)

- **Agriculture and Home Economics** 1
- **Business** (accounting, marketing, personnel management, etc.) 2
- **Office and Clerical** (bookkeeping, stenography, general office, etc.) 3
- **Computer Technology** (keypunch operator, programming, computer operations, etc.) 4
- **Education** (elementary, special, physical, etc.) 5
- **Engineering** (civil, electrical, mechanical, etc.) 6
- **Mechanical and Engineering Technology** (automotive mechanic, machinist, construction, drafting, electronics, etc.) 7
- **Humanities and Fine Arts** (music, religion, English, etc.) 8
- **Health Services** (nursing, lab technician, occupational therapy, etc.) 9
- **Public Services** (law enforcement, food service, recreation, beautician, etc.) 10
- **Physical Sciences and Mathematics** (physics, geology, chemistry, etc.) 11
- **Social Sciences** (psychology, history, economics, sociology, etc.) 12
- **Biological Sciences** (zoology, physiology, anatomy, etc.) 13
- **OTHER field or area** (specify: _____) 14
- **UNDECIDED** 15

21. **This (above) is:**

- An ACADEMIC program (typically leads to a 4-or 5-year Bachelor's degree) 1
- A VOCATIONAL program (does not lead to a Bachelor's degree) 2

22. **How long does it normally take one to complete this program of studies from beginning to end?**

(Circle one.)

- Less than one year 0
- One year 1
- Two years 2
- Three years 3
- Four years 4
- More than 4 years 5

23. As of the first week of October 1974, what kind of certificate, license, diploma, or degree were you studying for?

	(Circle as many as apply.)	(Year expect to complete.)
None	1	
A certificate (specify in what: _____)	2	( )
A license (specify in what: _____)	3	( )
A two-year or three-year vocational degree or diploma	4	( )
A two-year academic degree	5	( )
A four-year or five-year college Bachelor's degree	6	( )
Other (specify: _____)	7	( )

24. Was your field of study or training area in October 1974 the same as it was a year ago in October 1973?

(Circle one.)

Yes	1	GO TO Q 26
No. I hadn't decided upon a field or area a year ago	2	GO TO Q 26
No. I wasn't enrolled in school a year ago	3	GO TO Q. 28. next page
No. I changed my field or area during the year	4	GO TO Q. 25

25. Listed below are some reasons why students change fields or training areas. What were the reasons in your situation?:

(Circle one number on each line.)

	My Reasons	NOT My Reasons
a. Courses more difficult than I expected	1	2
b. Met people with new ideas	1	2
c. Poor advice on original choice	1	2
d. Lack of information on jobs related to original choice	1	2
e. Content of courses different from what I expected	1	2
f. New information about other fields of study or training areas	1	2
g. Interest aroused by courses	1	2
h. More jobs available for graduates in the field I changed to	1	2
i. Better jobs available for graduates in the field I changed to	1	2
j. Other (specify _____)	1	2

26. Was the school you attended in the first week of October 1974 the SAME school you attended a year ago in October 1973?

Yes	1	GO TO Q. 28. next page
No. enrolled in different school in October 1973	2	GO TO Q. 27. next page

27. **What were your reasons for changing schools?**

(Circle one number on each line.)

	My Reasons	NOT My Reasons
a. My interest changed, and my former school did not offer the course of study I wanted	1	2
b. Wanted to attend a less expensive school	1	2
c. My grades were too low to continue at the former school	1	2
d. Wanted to be at a smaller school	1	2
e. Wanted to be at a larger school	1	2
f. Wanted to attend school closer to home	1	2
g. Wanted to attend a school farther away from home	1	2
h. Wanted to attend a school that would give me better career opportunities	1	2
i. Wanted to attend a more prestigious school	1	2
j. Wanted to attend a school where I could maximize my intellectual and personal development	1	2
k. More group or social activities of interest	1	2
l. Transferred from a two-year to a four-year school to continue my education	1	2
m. Other (specify: _____)	1	2

28. **During October 1974, were you working on a job(s) at the SAME TIME that you were going to school ?**

No .....1 *GO TO Q. 32, next page*

Yes .....2 *GO TO Q. 29* →

29. **At that time, how many hours per week did you normally work?**

(Circle one.)

1-5 hours per week 1
6-10 hours per week 2
11-15 hours per week 3
16-20 hours per week 4
21-34 hours per week 5
35 or more hours per week 6

30. **During October 1974, did you work for the school you were attending?**

(Circle one.)

No 1
Yes, working for pay (only) 2
Yes, working off cost of tuition, housing or meals 3
Yes, both of the above 4

31. **Did someone at the school (for example, a teacher, counselor, employment officer) help you find the job you had in October 1974?**

Yes 1
No 2

ATTENDANCE AT OTHER SCHOOLS FROM OCTOBER 1973 TO OCTOBER 1974

32. Besides any schools you may already have reported in this section, did you enroll in or take classes at any OTHER schools from October 1973 to October 1974? (Again include schools like colleges and universities, service academies, business schools, trade schools, technical institutes, vocational schools, community colleges, and so forth.)

No .....1 *GO TO Q 38, next page*
Yes .....2 *GO TO Q 33*

33. What is the exact name and location of this school? Please print and do not abbreviate. (If you attended more than one (other) school, then give the one that you attended the longest.)

School Name: _____
City: _____ State: _____

34. What kind of school is this?

(Circle one.)

Vocational, trade, business or other career training school 1
Junior or community college (two-year) 2
Four-year college or university 3
Other (describe: _____) ...4

35a. When did you first attend this school? _____ (month) _____ (year)

35b. Are you now attending this school?

Yes 1
No .....2 Date left: _____ (month) _____ (year)

36. Did you withdraw from this school before you completed your studies?

(Circle one.)

No .....1 *GO TO Q. 38, next page*
Yes, but I have since returned to school 2
Yes, but I plan to return before October 1975 .....3 *GO TO Q. 37*
Yes, and I do not plan to return before October 1975 4

37. What were your reasons for withdrawing?

(Circle one number on each line.)

		My Reasons	NOT My Reasons
a	Became ill	1	2
b.	Had financial difficulties	1	2
c.	Was offered a good job	1	2
d.	Got married or planned to get married	1	2
e.	School work was not relevant to the real world	1	2
f.	Wanted to get practical experience	1	2
g.	Failing or not doing as well as I wanted	1	2
h	Wasn't really sure what I wanted to do	1	2
i	Transferred to another school	1	2
j	Other (describe: _____)	1	2

38. **With regard to your education and training during the past year, how satisfied as a whole are you with the following?**

(Circle one number on each line.)

	Very satisfied	Somewhat satisfied	Neutral or no opinion	Somewhat dissatisfied	Very dissatisfied
a. The ability, knowledge, and personal qualities of most teachers	1	2	3	4	5
b. The social life	1	2	3	4	5
c. Development of my work skills	1	2	3	4	5
d. My intellectual growth	1	2	3	4	5
e. Counseling or job placement	1	2	3	4	5
f. The buildings, library, equipment, etc.	1	2	3	4	5
g. Cultural activities, music, art, drama, etc.	1	2	3	4	5
h. The intellectual life of the school	1	2	3	4	5
i. Course curriculum	1	2	3	4	5

39. **Which of the following best describes how well you have done in all of your coursework or program from October 1973 through October 1974? If your school(s) or program(s) do not use letter grades, please choose the letter grade that comes closest to describing your progress.**

(Circle one.)

1 Mostly A
2 About half A and half B
3 Mostly B
4 About half B and half C
5 Mostly C
6 About half C and half D
7 Mostly D or below

40. **Have you had a teacher or instructor during this period who knows you well enough to write you a letter of reference or give you a recommendation for a job or for attendance at another school?**

1 Yes
2 No

41. **Considering all of the schools you have attended since high school, do ANY of these schools or programs give credits which can be used for a 4-year college Bachelor's degree?**

1 I don't know
2 No
GO TO Q. 44, next page

3 Yes *GO TO Q. 42*

42. **Since leaving high school, about how many credits had you earned by October 1974?**

(Write in.)

_____ Number of quarter hours
_____ Number of semester hours
_____ Number of other type of credits (specify type: _____)

43. **Have you taken advantage of any of the following opportunities to accelerate your college program?**

(Circle as many as apply.)

1 Have NOT accelerated my program
2 Began college work before finishing high school.
3 Took an advanced placement course which would allow me to finish sooner
4 Received credit for a course just by taking a special exam
5 Took course work during summer school
6 Took extra courses during the regular school term
7 Other (specify _____)

SCHOOL FINANCES FROM FALL 1973 THROUGH SUMMER 1974

44. Considering just the 12-month period from Fall 1973 through Summer 1974, what is your estimate of how much it cost you to live and go to school? (If you were not in training or school during this time, check here ☐ and go to Q. 58, next page.)

Do not include costs after Summer 1974.

(Estimate the amount for each item. Write "none" where you had no expenses.)

Tuition and fees	$ _____
Books and supplies	$ _____
Transportation to and from class from where I live while attending school	$ _____
Housing and meals	$ _____
All other expenses: medical, dental expenses, debt payments, insurance, taxes, child care, etc.	$ _____
HOW MUCH MONEY IS THIS IN TOTAL?	$ _____

45. How many months were you in school from Fall 1973 through Summer 1974? _____ (months)

46. Considering just the period from Fall 1973 through Summer 1974, did you receive any kind of scholarship, fellowship, or grant to go to school?

No ..... 1 *GO TO Q. 49*
Yes ..... 2 *GO TO Q. 47* →

47. Check below which kind(s) of scholarship, fellowship, or grant you received. (✓)

a) Basic Educational Opportunity Grant ____
b) Supplemental Educational Opportunity Grant ____
c) College scholarship or grant from college funds ____
d) ROTC scholarship or stipend ____
e) Nursing Scholarship Program ____
f) Social Security Benefits (for students 18-22 who are children of disabled or deceased parents) ____
g) Veteran's Administration War Orphans or Survivors Benefits Program ____
h) Veterans Administration Direct Benefits (GI Bill) ____
i) State scholarship ____
j) Other scholarship or grant (write in: _____) ____

48. How much was the total dollar value of the scholarship(s), fellowship(s) or grant(s) you received for this period? $_____

49. Considering just the period from Fall 1973 through Summer 1974, did you receive a loan to go to school?

No ..... 1 *GO TO Q. 52, next page*
Yes ..... 2 *GO TO Q. 50* →

50. Check below which kind(s) of loan you obtained. (✓)

a) Federal Guaranteed Student Loan ____
b) State Loan ____
c) Regular bank loan ____
d) National Defense (Direct) Student Loan ____
e) Nursing Student Loan ✓
f) School or College Loan ____
g) Relatives or friends ____
h) Other loan (write in: _____) ____

51. How much was the total dollar value of the loan(s) you received for this period? $_____

52. **Considering just the period from Fall 1973 through Summer 1974, did you receive financial assistance (not a loan) from any relatives or friends to go to school?**

No .....1 *GO TO Q. 55*
Yes .....2 *GO TO Q. 53* →

53. **Check the sources below from which you received this financial assistance.**

	(✓)
a) Parents	
b) Husband or wife	
c) Other family or friends	

54. **How much was the total dollar value of the financial assistance you received from family or friends for this period?** $_____

55. **Considering just the period from Fall 1973 through Summer 1974, did you pay any of the costs to go to school from money you had saved or earned?**

No .....1 *GO TO Q. 58*
Yes .....2 *GO TO Q. 56* →

56. **Check below all that apply.**

	(✓)
a) Own savings or summer earnings	
b) College work-study programs	
c) Other earnings while taking courses	

57. **How much was the total dollar value of your savings and earnings used during this period?**

$_____

OTHER TRAINING

58. **From October 1973 to October 1974, have you participated in any program such as on-the-job training, registered apprenticeships, manpower training programs, personal enrichment, or correspondence courses? Do not include regular school and college programs.**

No .....1 *GO TO Q. 66, next page*
Yes .....2 *GO TO Q. 59*

59. **What type of training program(s) or course(s) have you participated in?**

(Circle as many as apply.)

An Armed Forces training program 1
On-the-job training (a program of instruction during normal working hours) 2
Formal Registered Apprenticeship (your state or labor union) 3
Manpower Development and Training (MDTA) 4
Work Incentive (WIN) 5
Neighborhood Youth Corps (NYC) 6
Other manpower program (specify: _____) 7
Correspondence course(s) 8
Non-credit courses for personal enrichment 9
Other (specify: _____) 10

60. Were you being trained for some type of work?

No . . . . . 1 *GO TO Q. 62*
Yes . . . . . 2 *GO TO Q. 61.*

61. What type of work were you being trained for or learning about? If you have participated in more than one program, answer for the one in which you spent the most time. (Examples: plumbing, typing, auto mechanic work, photography, sales, etc.)

(Write in). _____

62. How long does (or did) this program last? (Circle one.)

Less than one month 1
One to five months 2
Six to eleven months 3
One year or more 4

63. Have you completed this program? (Circle one.)

Yes 1
No, left without completing 2
No, still enrolled 3

64. Have you used this training on any job?

Yes 1
No 2

65. Which one of the following statements best describes the assistance you received (are receiving) from the program or training center in finding a job? (Circle one.)

DOES NOT APPLY TO ME since my training was in the military or on-the-job 1
I did not want or did not need help from the center in finding a job 2
I wanted and needed help but did not receive any from the center 3
The center provided information on job openings in my field 4
The center put me directly in touch with possible employers or arranged a job for me 5

66. From October 1973 to October 1974, did you earn any certificate, license, diploma, or degree of any kind? (Circle as many as apply.)

No 1
Yes, a certificate (specify in what: _____) 2
Yes, a license (specify in what: _____) 3
Yes, a two-year or three-year vocational degree or diploma 4
Yes: a two-year academic degree 5
Yes, a four-year or five-year college Bachelor's degree 6
Yes, other (specify: _____) 7

USING YOUR TRAINING SINCE LEAVING HIGH SCHOOL

67. Have you ever tried to find work on a job where you might use what you learned from any school or college you attended since leaving high school?

No, because have NOT attended any school or college since leaving high school . . 1 } *SKIP TO SECTION C. p. 13*
No, although I HAVE attended a school or college since leaving high school . . . . . 2 }
Yes . . . . . 3 *GO TO Q. 68*

68. Did you try to find work for which you could use what you learned in school in the locality where you received your training?

No . . . . 1 *GO TO Q. 70, next page*
Yes . . . . 2 *GO TO Q. 69, next page*

69. **What were your experiences in this locality (where you received your training) in trying to find work for which you could use your training?**

a. To be hired in this locality for this kind of work, does a person actually have to have the training?

(Circle one.)
- Yes 1
- No 2
- Don't know 3

b. Does a person have to have prior job experience doing this kind of work in order to get hired in this locality?

(Circle one.)
- Yes 1
- No 2
- Don't know 3

c. Do you think there are more people in this locality who can do this work than there are jobs for them, or are there more jobs than qualified people?

(Circle one.)
- More people than jobs 1
- More jobs than people 2
- About the same 3
- Don't know 4

d. About how many companies in this area are there that hire people to do this kind of work?

(Circle one.)
- None 0
- Only one 1
- A few 2
- Many 3
- Don't know 4

e. Do most of the new people hired by companies in this area live or go to school here, or do they come into the area to take the jobs?

(Circle one.)
- Mostly local people 1
- Mostly from outside 2
- About equal numbers 3
- Don't know 4

70. **Since leaving high school, have you tried to find work for which you could use your training somewhere other than in the locality where you received it, such as in another part of the state or another section of the country?**
- Yes 1
- No 2

71. **Did you find work for which you could use what you learned in school?**

(Circle one.)
- No ..... 1 — *SKIP TO SECTION C, next page*
- Yes, in the locality where I received my training 2
- Yes, somewhere else 3
- Yes, both of the above 4

GO TO Q. 72

72. **After receiving your training, how long did it take you to find this work?**

(Circle one.)
- Before I completed my training 1
- Immediately or within a few days 2
- One to four weeks 3
- One or two months 4
- Three to six months 5
- More than six months 6

73. **How well did your training prepare you for this work?**

(Circle one.)
- Very well 1
- Fairly well 2
- Not well at all 3

Section C: Work Experience

In this section, we would like to find out about the jobs you may have held from October 1973 through October 1974. Include full-time jobs, part-time jobs, apprenticeships, on-the-job-training, military service and so on.

74. **From October 1973 through October 1974, did you hold a job of any kind?**

No . . . . . 1 *GO TO Q. 91a, p. 15*

Yes . . . . . 2 *GO TO Q. 75* ⟶

75. **Were you working during the first week of October 1974?**

No . . . . . 1 *GO TO Q 91a, p. 15*

Yes, full-time . . . . 2 } *GO TO Q 76*

Yes, part-time . . . 3 }

76. **Please describe below the job you held during the first week of October 1974. (If you held more than one job at that time, describe the one at which you worked the most hours.)**

a For whom did you work? (Name of company, business organization, or other employer)

(Write in) _____

b. What kind of business or industry was this? (For example, retail shoe store, restaurant, etc.)

(Write in) _____

c. What kind of job or occupation did you have in this business or industry? (For example, salesperson, waitress, secretary, etc.)

(Write in) _____

d What were your most frequent activities or duties on this job? (For example, selling shoes, waiting on tables, typing and filing, etc.)

(Write in) _____

e. Were you:

(Circle one.)

An employee of a PRIVATE company, bank, business, school, or individual working for wages, salary, or commissions? 1

A GOVERNMENT employee (Federal, State, county, or local institution or school) 2

Self-employed in your OWN business, professional practice, or farm 3

Working WITHOUT PAY in family business or farm? 4

f. When did you start working at this job? _____(month) _____(year)

g. Are you currently working at this job?

Yes 1

No . . . . . 2 Date left: _____(month) _____(year)

77. **How many hours did you usually work at this job in an average week?**

_____Hours per week

78. **In an average week, approximately how much did you earn at this job? (Report your gross earnings before deductions. If not paid by the week, please estimate.)**

$_____per week

(Earnings before deductions)

79. How satisfied were you with the following aspects of this job?

(Circle one number on each line.)

	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied
a. Pay and fringe benefits	1	2	3	4
b. Importance and challenge	1	2	3	4
c. Working conditions	1	2	3	4
d. Opportunity for promotion and advancement with this employer	1	2	3	4
e. Opportunity for promotion and advancement in this line of work	1	2	3	4
f. Opportunity to use past training and education	1	2	3	4
g. Security and permanence	1	2	3	4
h. Supervisor(s)	1	2	3	4
i. Opportunity for developing new skills	1	2	3	4
j Job as a whole	1	2	3	4
k. The pride and respect I receive from my family and friends by being in this line of work	1	2	3	4

80. Not including on-the-job training, did you receive formal instruction to do this kind of work?

No 1 *GO TO Q 85, next page*

Yes 2 *GO TO Q 81* ⟶

81. Where did you receive this training?

(Circle as many as apply.)

- High school 1
- Vocational, trade, business, or other career training school 2
- Junior or community college 3
- Four-year college or university 4
- Military service 5
- Other (describe: _____) 6

82. What were your experiences while working on this job?

(Circle one number on each line.)

	My Experience	NOT My Experience
a. I have been able to apply most of what I learned in school	1	2
b. I would have liked more experience in my training before I started working	1	2
c. I received training different from the way it is done on the job	1	2
d. I was trained with tools or equipment not used on my job	1	2
e. I could have gotten my job without the training	1	2
f. I took coursework associated with my training which was not helpful in performing my job	1	2
g. Most of what I do on the job I learned to do in school	1	2
h. I consider myself doing as well as others with similar training	1	2
i. I consider going to school and getting the training a wise choice	1	2

83. Were you hired for this job because your employer knew you had been trained in a school or college to do this kind of work?

Yes 1

No 2

Don't know 3

84. Did the school at which you received your training for this job refer you to this job?

Yes 1

No 2

85. Do you expect to be working in October 1975?

No	1	GO TO Q 88
Don't know	2	
Yes	3	GO TO Q 86 →

86. Do you plan to work for the SAME EMPLOYER?

Yes	1
No	2
Don't know	3

87. Do you plan to work at the SAME KIND OF WORK?

Yes	1
No	2
Don't know	3

88. Were you working at any OTHER job in the first week of October 1974 at the SAME TIME as you held the job you described above?

No	1	GO TO Q. 92, next page
Yes	2	GO TO Q 89

89. How many hours did you usually work at this other job in an average week? _____ Hours per week

90. In an average week, approximately how much did you earn at this job? (Report your gross earnings before deductions. If not paid by the week, please estimate.)

$_____ per week
(Earnings before deductions)

91a. If you did NOT hold a job during the first week of October 1974, what were the reasons? (If you DID hold a job at that time, check here ☐ and go to Q. 92.)

(Circle one number on each line.)

	My Reasons	NOT MY Reasons
a. Did not want to work	1	2
b. On temporary layoff from work or waiting to report to work	1	2
c. Was full-time homemaker	1	2
d. Going to school	1	2
e. Not enough job openings available	1	2
f. Union restrictions	1	2
g. Would have required moving	1	2
h. Required work experience I did not have	1	2
i. Jobs available offered little opportunity for career development	1	2
j. Health problems or physical handicap	1	2
k. Could not arrange child care	1	2
l. Other family responsibilities (including pregnancy)	1	2
m. Waiting to enter or in Armed Forces	1	2
n. Not educationally qualified for types of work available	1	2
o. There were jobs but none where I could use my training	1	2

91b. Were you looking for work during the first week of October, 1974?

(Circle one.)

Yes, and did NOT work at any job during the period October 1973 to October 1974	1	GO TO Q 100b, p. 17
No, and did NOT work at any job during the period October 1973 to October 1974	2	
Yes, and DID work at a job during the period October 1973 to October 1974	3	GO TO Q 92, next page
No, and DID work at a job during the period October 1973 to October 1974	4	

92. **Besides any jobs you may already have reported in this section, were you working at any OTHER job between October 1973 and October 1974?**

No . . 1 *GO TO Q 97 next page*
Yes . . 2 *GO TO Q 93*

93. **Please describe below this other job (the most recent one during that period).**

a. For whom did you work? (Name of company, business organization, or other employer)
(Write in): _____

b What kind of business or industry was this? (For example, retail shoe store, restaurant, etc.)
(Write in): _____

c What kind of job or occupation did you have in this business or industry? (For example, salesperson, waitress, secretary, etc.)
(Write in): _____

d What were your most frequent activities or duties on this job? (For example, selling shoes, waiting on tables, typing and filing, etc.)
(Write in): _____

e. When did you start working at this job? _____ (month) _____ (year)

f When did you leave this job? _____ (month) _____ (year)

94. **How many hours did you usually work at this job in an average week?**

_____ Hours per week

95. **In an average week, approximately how much did you earn at this job? (Report your gross earnings before deductions. If not paid by the week, please estimate.)**

$_____ per week
(Earnings before deductions)

96. **How important were the following as reasons for your leaving this job?**

(Circle one number on each line.)

	Very Important	Somewhat Important	Not Important
a. Poor pay or fringe benefits	1	2	3
b. Lack of importance and challenge	1	2	3
c. Poor working conditions	1	2	3
d. Lack of opportunity for promotion and advancement with this employer	1	2	3
e. Lack of opportunity for promotion and advancement with this line of work	1	2	3
f. No or little opportunity to use past training and education	1	2	3
g. Lack of security or permanence	1	2	3
h. Dissatisfied with my supervisor(s)	1	2	3
i. Lack of opportunity for developing new skills	1	2	3
j. Unhappy with the job as a whole	1	2	3
k. Moved to another location	1	2	3
l. I was laid off or fired	1	2	3
m. Went back to school or college	1	2	3
n. Got married or had a baby	1	2	3
o Left to obtain a better job	1	2	3
p. Other (specify _____)	1	2	3

97. During the entire 52-week period from October 1973 to October 1974, about how many weeks did you work altogether? (Count all weeks in which you did any work at all or were on paid vacation.)

_____ Number of weeks

98. During the same 52-week period from October 1973 to October 1974, how many different employers did you work for altogether? (Count each employer only once, even if you had different jobs for the same employer.)

_____ Number of employers

99. During the same 52-week period from October 1973 to October 1974, about how many weeks did you spend looking for work or on layoff from a job or waiting to report to a job?

_____ Number of weeks

LOOKING FOR WORK

100a. Were you employed during the month of September 1974?

Yes . . 1
No . . 2

100b. Were you looking for work during the month of September 1974?

No . . . 1 *GO TO Q. 102*
Yes . . . 2 *GO TO Q. 101* →

101. How long had you been looking for work as of the end of September 1974?

(Circle one.)

Less than 2 weeks . . . 1
2-4 weeks . . . 2
5-9 weeks . . . 3
10 weeks or more . . . 4

102. Would you be willing to move to another city or community for a job?

Yes . . . 1
No . . . 2

103. At any time from October 1973 through October 1974, were you looking for work or for a different job or employer?

No . . . 1 *SKIP TO SECTION D, next page*
Yes . . . 2 *GO TO Q. 104*

104. What methods were useful to you?

(Circle one number on each line.)

	Used and Obtained Job	Used But Did NOT Obtain Job	Did NOT Use
a. School or college placement service	1	2	3
b. Professional periodicals or organizations	1	2	3
c. Civil Service applications	1	2	3
d. Public employment service	1	2	3
e. Private employment agency	1	2	3
f. Community action or welfare groups	1	2	3
g. Newspaper, TV or radio ads	1	2	3
h. Direct application to employers	1	2	3
i. Registration with a union	1	2	3
j. Friends or relatives	1	2	3
k. Attendance at job fairs	1	2	3
l. Other (specify _____)	1	2	3

Section D: Family Status

105. **What was your marital status, as of the first week of October 1974?**

(Circle one.)

Never married, but plan to be married within the next 12 months	1	GO TO Q. 110, next page
Never married, and don't plan to be married within the next 12 months	2	
Divorced, widowed, separated	3	
Married	4	GO TO Q. 106

106. **When were you first married?** _____ (month) _____ (year)

107. **As of October 1974, what was your husband or wife doing?**

(Circle as many as apply.)

- Working for pay at a full-time or part-time job 1
- Taking academic courses at a two- or four-year college 2
- Taking vocational or technical courses at any kind of school or college (for example, vocational, trade, business, or other career training school) 3
- On active duty in the Armed Forces (or service academy) 4
- Homemaker 5
- Temporary lay-off from work, looking for work, or waiting to report to work 6
- Other (describe _____) 7

108. **Please describe below the job your husband or wife held during October 1974. (If your spouse was not working, check here ☐ and go to Q. 109.)**

a For whom did he, she work? (Name of company, business, organization, or other employer)
(Write in): _____

b What kind of business or industry was this? (For example, retail store, manufacturer, state or city government, farming, etc.)
(Write in): _____

c. What kind of job or occupation did he, she have in this business or industry? (For example, salesperson, supervisor, police officer, civil engineer, farmer, teacher)
(Write in): _____

d. What were his/her most frequent activities or duties on this job? (For example, selling cars, keeping accounts, supervising others, operating machinery, finishing concrete, teaching grade school)
(Write in): _____

109. As of October 1974, what is the highest level of education that your husband or wife had attained?

(Circle one.)

Some high school, or less		1
Finished high school		2
Vocational, trade, or business school	Less than two years	3
	Two years or more	4
College program	Some college (including two-year degree)	5
	Finished college (four- or five-year degree)	6
	Master's degree or equivalent	7
	Ph.D., M.D., or equivalent	8

110. Which of the following items do you have the use of (a) as your own because you (or your spouse) have bought them or have been given them, or (b) because they belong to your parents, roommates, dormitory, apartment building, etc?

(Circle one number on each line.)

	Have As My Own	Have But Don't Own	Don't Have Use Of
a. Daily newspaper	1	2	3
b. Dictionary	1	2	3
c. Encyclopedia or other reference books	1	2	3
d. Magazines	1	2	3
e. Record player	1	2	3
f. Tape recorder or cassette player	1	2	3
g. Color television	1	2	3
h. Typewriter	1	2	3
i. Electric dishwasher	1	2	3
j. Two or more cars or trucks that run	1	2	3
k. A specific place for study	1	2	3

111. Not including yourself, how many persons were dependent upon YOU for more than one-half of their financial support as of the first week of October 1974.

(Circle one.)

0 1 2 3 4 or more

112. As of the first week of October 1974, were you dependent upon your parents or any other friends or relatives for more than one half of your financial support?

Yes 1

No 2

113. What is the best estimate of your income before taxes for ALL OF 1974? If you are married, include your spouse's income in the total, but do not include loans and gifts. Please make an entry on each line, either a dollar amount, or if you will receive no income from a source during 1974, write in the word "none".

Source	Amount Will Receive
Your own wages, salaries, commissions, and net income from a business or farm	$ _____
Your spouse's (husband or wife) wages, salaries, commissions, and net income from a business or farm	$ _____
All other income you and your spouse will receive (include interest, dividends, rental property income, public assistance, unemployment compensation, cash gifts scholarships, fellowships, etc.)	$ _____

114. TOTAL INCOME YOU AND YOUR SPOUSE WILL RECEIVE $ _____

115. For the year of 1974, how satisfied as a whole have you been with the amount of money you have had to get along on?

(Circle one.)

Very satisfied	1
Somewhat satisfied	2
Neutral or no opinion	3
Somewhat dissatisfied	4
Very dissatisfied	5

116. Not including home mortgages, did you owe money as of the first week of October 1974 for:

(Circle one number on each line.)

	None	Less than $100	$100 to $499	$500 to $999	$1000 to $1999	More than $2000
a Education or training	0	1	2	3	4	5
b. Other debts (car. rent. appliances. medical bills. and so on)	0	1	2	3	4	5

117. As of the first week of October 1974, how much money have you saved and plan to use for:

(Circle one number on each line.)

	None	Less than $100	$100 to $499	$500 to $999	$1000 to $1999	More than $2000
a Education or training	0	1	2	3	4	5
b General savings or other plans	0	1	2	3	4	5

118. As of the first week of October 1974, how many children did you have?

(Circle one.)

0 1 2 3 4 5 or more

119. How many brothers do you have?

(Circle one number on each line.)

a. Older brothers	0	1	2	3	4	5 or more
b. Younger brothers	0	1	2	3	4	5 or more

120. How many sisters do you have?

(Circle one number on each line.)

a. Older sisters	0	1	2	3	4	5 or more
b Younger sisters	0	1	2	3	4	5 or more

Section E: Military Service

121. Since October 1973, have you served in the Armed Forces, or a Reserve or National Guard Unit?

(Circle one.)

No	1	SKIP TO SECTION F. next page
Yes, National Guard or Reserves but not active duty	2	
Yes, active duty	3	GO TO Q. 122

122. In which branch of the Armed Forces did you serve? (Write in): _____

123. When did you begin active duty? _____ (month) _____ (year)

124. Have you received (or are you receiving) four or more weeks of specialized schooling while in the Armed Forces?

No	1	GO TO Q. 126
Yes	2	GO TO Q. 125

125. What is the name of the specialized schooling program in which you spent the longest period of time? Specify your military specialty code, or MOS. (Please print and do not abbreviate.)

Name of program: _____ MOS: _____

126. What is the highest pay grade and specialty rating you have held?

Pay grade: _____ Specialty rating: _____

127. Have you taken any courses while in the Armed Forces that:

(Circle one number on each line.)

	Yes	No
Prepared you for the high school equivalency test?	1	2
Prepared you for equivalency tests that can be taken for college credit?	1	2
Were college-sponsored courses which gave college credits?	1	2

128. Are you currently on active duty?

No (Date left. _____ month _____ year)	1	SKIP TO SECTION F. next page
Yes	2	GO TO Q. 129

129. How long do you expect to be on active duty in the Armed Forces?

(Circle one.)

For a two-year tour of duty only	1
For a three- or four-year tour of duty	2
For more than one enlistment, but less than a full career	3
For a full career (20 years minimum)	4
Have not decided	5

130. What do you plan to do when you get out of the Armed Forces?

(Circle one number on each line.)

	My Plans	NOT my Plans
Full-time or part-time work	1	2
College, either full-time or part-time	1	2
Technical, vocational, or business or career training school, either full-time or part-time	1	2
Registered apprenticeship or on-the-job training program	1	2
Retire	1	2
Undecided	1	2
Other (specify _____)	1	2

Section F: Activities and Opinions

131. To what extent have you voluntarily participated in the following groups during the year October 1973 through October 1974? (By voluntarily, we mean you are not an employee of the group; by active participant, we mean that you attend the meetings or events; by member only, we mean that you are on a mailing or telephone list so that you are kept informed of meetings and events.)

(Circle one number on each line.)

		Active Participant	Member Only	Not At All
a	Youth organizations—such as Little League coach. scouting. etc.	1	2	3
b.	Union. farm. trade or professional association	1	2	3
c.	Political clubs or organizations	1	2	3
d	Church or church-related activities (not counting worship services)	1	2	3
e	Community centers, neighborhood improvement, or social-action associations or groups	1	2	3
f	Organized volunteer work—such as in a hospital	1	2	3
g	A social. hobby. garden. or card playing group	1	2	3
h	Sport teams or sport clubs	1	2	3
i	A literary. art. discussion. music. or study group	1	2	3
j	Educational organizations—such as PTA or an academic group	1	2	3
k.	Service organizations—such as Rotary. Junior Chamber of Commerce. Veterans. etc	1	2	3
l	A student government. newspaper. journal. or annual staff	1	2	3
m.	Another voluntary group in which I participate	1	2	3

132. How do you feel about each of the following statements?

(Circle one number on each line.)

		Agree Strongly	Agree	Disagree	Disagree Strongly	No Opinion
a	I take a positive attitude toward myself	1	2	3	4	5
b.	Good luck is more important than hard work for success	1	2	3	4	5
c	I feel I am a person of worth. on an equal plane with others	1	2	3	4	5
d.	I am able to do things as well as most other people	1	2	3	4	5
e.	Every time I try to get ahead. something or somebody stops me	1	2	3	4	5
f	Planning only makes a person unhappy since plans hardly ever work out anyway	1	2	3	4	5
g	People who accept their condition in life are happier than those who try to change things	1	2	3	4	5
h	On the whole, I'm satisfied with myself	1	2	3	4	5

133. **What ways do you assure yourself of a good buy for your money?**

(Circle one number on each line.)

	Regularly	Sometimes	Never
a. I compare prices and label information of similar products or services	1	2	3
b. I return merchandise that is unsatisfactory to the store where I bought it	1	2	3
c. I rely on brands or companies I know well even if they cost more	1	2	3
d. I follow leads in articles from Consumer Reports, Changing Times, or other such magazines	1	2	3
e. I check a company's reputation with the Better Business Bureau or consumer protection agency before agreeing to an expensive service or repair	1	2	3
f. I write to the manufacturer about the quality of the product if I'm unsatisfied	1	2	3

134. **Generally speaking, how worthwhile are the following activities?**

(Circle one number on each line.)

	Very Worthwhile	Somewhat Worthwhile	Not Worthwhile
a. Voting in local elections	1	2	3
b. Writing or talking to your representatives in the government	1	2	3
c. Voting when you are pretty sure your party won't win	1	2	3
d. Attending city council or county commission meetings	1	2	3
e. Signing petitions to change the way things are in your locality, state, or the whole nation	1	2	3
f. Working to register new voters	1	2	3
g. Becoming an active member of a political party	1	2	3

135. **People often use the term "quality of life" to mean different things. How well does each of the following statements express what "quality of life" means to YOU?**

(Circle one number on each line.)

	Exactly	Extremely Well	Very Well	Fairly Well	Not Very Well
a. Having enough money—to buy sufficient food, to dress as needed, and to have adequate shelter	1	2	3	4	5
b. Having healthful living patterns—eating a balanced diet, getting plenty of exercise and regular sleep	1	2	3	4	5
c. Living where the air is clean, the water is fresh, and where people really try to protect their natural resources	1	2	3	4	5
d. Having time and money for some of the "extras" of life—vacations, hobby time and equipment, entertainment opportunities	1	2	3	4	5
e. Feeling free—not tied down by many personal or work responsibilities	1	2	3	4	5
f. Feeling personally safe from violence, injustice, or fraud	1	2	3	4	5
g. Having a chance to do the kind of work I really want to do in life	1	2	3	4	5
h. Having sustained personal relationships—loving and being loved	1	2	3	4	5
i. Living a life of honesty and moral integrity—doing what I think is right to do	1	2	3	4	5
j. Having the opportunity to read, think and discuss important questions about life values, etc.	1	2	3	4	5
k. Having the chance to get a good education	1	2	3	4	5

136. **The following questions ask about your political pariticipation.**

(Circle one number on each line.)

	Frequently	Sometimes	Never
a. When you talk with your friends, do you ever talk about public problems—that is, what's happening in the country or in your community?	1	2	3
b Do you ever talk about public problems with any of the following people?			
Your family	1	2	3
People where you work	1	2	3
Community leaders, such as club or church leaders	1	2	3
c. Do you ever talk about public problems with elected government officials or people in politics, such as Democratic or Republican leaders?	1	2	3
d. Have you ever talked to people to try to get them to vote for or against any candidate?	1	2	3
e. Have you ever given any money or bought tickets to help someone who was trying to win an election?	1	2	3
f Have you ever gone to any political meetings, rallies, barbecues, fish fries, or things like that in connection with an election?	1	2	3
g. Have you ever done any work to help a candidate in his campaign?	1	2	3
h Have you ever held an office in a political party or been elected to a government job?	1	2	3

137. **Are you registered to vote?**

Yes ... 1
No ... 2

138. **Prior to October 1974, did you ever vote in a local, state, or national election?**

Yes ... 1
No ... 2

OPINIONS ABOUT YOUR FUTURE

139. **What do you expect to be doing in October 1975?**

(Circle as many as apply.)

Working for pay at a full-time or part-time job ... 1
Taking academic courses at a two- or four-year college ... 2
Taking vocational or technical courses at any kind of school or college (for example, vocational, trade, business, or other career training school) ... 3
On active duty in the Armed Forces (or service academy) ... 4
Homemaker ... 5
Other (describe. _____) ... 6

140. **As things stand now, how far in school do you think you actually will get?**

(Circle one.)

High school only ... 1
Vocational, trade, or business school
- Less than two years ... 2
- Two years or more ... 3

College program
- Some college (including two-year degree) ... 4
- Finished college (four- or five-year degree) ... 5
- Master's degree or equivalent ... 6
- Ph D, M D, or equivalent ... 7

141. How important is each of the following factors in determining the kind of work you plan to be doing for most of your life?

(Circle one number on each line.)

	Very Important	Somewhat Important	Not Important
a. Previous work experience in the area	1	2	3
b. Relative or friend in the same line of work	1	2	3
c Job openings available in the occupation	1	2	3
d. Work matches a hobby interest of mine	1	2	3
e. Good income to start or within a few years	1	2	3
f. Job security and permanence	1	2	3
g. Work that seems important and interesting to me	1	2	3
h. Freedom to make my own decisions	1	2	3
i. Opportunity for promotion and advancement in the long run	1	2	3
j. Meeting and working with sociable, friendly people	1	2	3

142. What kind of work will you be doing when you are 30 years old? (Circle the one that comes closest to what you expect to be doing.)

(Circle one.)

a. CLERICAL such as bank teller, bookkeeper, secretary, typist, mail carrier, ticket agent 1
b. CRAFTSMAN such as baker, automobile mechanic, machinist, painter, plumber, telephone installer, carpenter 2
c FARMER, FARM MANAGER 3
d. HOMEMAKER OR HOUSEWIFE ONLY 4
e. LABORER such as construction worker, car washer, sanitary worker, farm laborer 5
f. MANAGER, ADMINISTRATOR such as sales manager, office manager, school administrator, buyer, restaurant manager, government official 6
g. MILITARY such as career officer, enlisted man or woman in the Armed Forces 7
h. OPERATIVE such as meat cutter, assembler, machine operator, welder, taxicab, bus, or truck driver, gas station attendant 8
i. PROFESSIONAL such as accountant, artist, registered nurse, engineer, librarian, writer, social worker, actor, actress, athlete, politician, but not including public school teacher 9
j. PROFESSIONAL such as clergyman, dentist, physician, lawyer, scientist, college teacher 10
k. PROPRIETOR OR OWNER such as owner of a small business, contractor, restaurant owner 11
l. PROTECTIVE SERVICE such as detective, police officer or guard, sheriff, fire fighter 12
m. SALES such as salesperson, advertising or insurance agent, real estate broker 13
n. SCHOOL TEACHER such as elementary or secondary 14
o. SERVICE such as barber, beautician, practical nurse, private household worker, janitor, waiter 15
p TECHNICAL such as draftsman, medical or dental technician, computer programmer 16
q. NOT WORKING 17

143. Do you think you will need more education or schooling than what you have at present in order to obtain this kind of work or to advance as you would like in your job or career?

No ..... 1 — *GO TO Q. 145, next page*
Yes ..... 2 — *GO TO Q 144, next page*
Don't know ..... 3 — *GO TO Q 144, next page*

144. If you wanted to get additional education, would any of the following be reasons why you could not do so?

(Circle one number on each line.)

	My Reason	NOT My Reason
a. I probably couldn't afford it	1	2
b. I wouldn't be qualified (low grades, test scores, etc.)	1	2
c. No school within commuting distance from my home	1	2
d. I wouldn't have the time to do it	1	2
e. I probably couldn't get released from my job to do it	1	2
f. I wouldn't be sufficiently interested	1	2

145. Do you owe any money for an education or training loan for which your repayment schedule has begun?

No .....1 *GO TO Q. 148*
Yes .....2 *GO TO Q. 146*

146. When was your first payment due?

_____(month)_____(year)

147. Are you having or have you had any difficulty in meeting payments?

No 1
Yes .....2 (explain why: _____)

148. How important is each of the following to you in your life?

(Circle one number on each line.)

	Very Important	Somewhat Important	Not Important
a. Being successful in my line of work	1	2	3
b. Finding the right person to marry and having a happy family life	1	2	3
c. Having lots of money	1	2	3
d. Having strong friendships	1	2	3
e. Being able to find steady work	1	2	3
f. Being a leader in my community	1	2	3
g. Being able to give my children better opportunities than I've had	1	2	3
h. Living close to parents and relatives	1	2	3
i. Getting away from this area of the country	1	2	3
j. Working to correct social and economic inequalities	1	2	3
k. Having leisure time to enjoy my own interests	1	2	3
l. Having a good education	1	2	3

INFORMATION ABOUT THE PAST

149. When you were in high school, how good a student did your teachers usually expect you to be?

(Circle one.)

One of the best students in my class 1
Above the middle of my class 2
In the middle of my class 3
Just good enough to get by 4
Expected me not to complete high school 5

150. When you were in the 1st, 6th, 9th, and 12th grades, about what percentage of the students in your class were white or Caucasian?

(Circle one number on each line.)

	None	1 to 10%	11 to 25%	26 to 50%	51 to 75%	76 to 90%	91 to 99%	All (100%)
a. In my 1st grade	0	1	2	3	4	5	6	7
b. In my 6th grade	0	1	2	3	4	5	6	7
c. In my 9th grade	0	1	2	3	4	5	6	7
d. In my 12th grade	0	1	2	3	4	5	6	7

151. When you were in high school, about how many of your teachers were white or Caucasian?

(Circle one.)

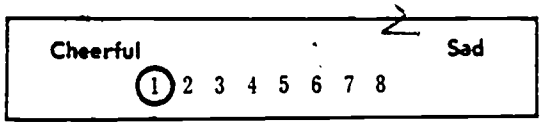
None 0
Some 1
About half 2
Most 3
All 4

152. Were you ever "bussed" to school for the purpose of racially integrating or racially balancing the student body of the school?

(Circle as many as apply.)

Yes, sometime during grades one through six 1
Yes, sometime during grades seven through 12 2
No, I never was bussed for this purpose 3

153. **The following items give you a chance to rate yourself on the degree to which you possess one of each pair of traits. For ratings on this scale, 1-4 refers to the trait on the far left side while 5-8 refers to the trait on the far right side. Let's take an example to show what you are saying when you circle a number from 1-8.**



CIRCLE the ONE NUMBER that comes closest to saying how you would rate yourself

(1) . . cheerful just about all the time.
2 . . cheerful most of the time.
3 . . often cheerful.
4 . . . more often cheerful than sad.
5 . . . more often sad than cheerful.
6 . . . often sad.
7 . . . sad most of the time.
8 . . . sad just about all the time.

(Circle one number on each line.)

a.	**Inactive** I lack drive, energy, vitality: I tend to be passive, and am without strong interests.	1	2	3	4	5	6	7	8	**Energetic** I have unlimited energy, high drive, vitality; I need to be constantly active and interested in many activities.
b.	**Understanding of Others** I am sympathetic about the feelings and problems of other persons, people come to me for advice when in trouble.	1	2	3	4	5	6	7	8	**Not Understanding of Others** I am unaware of and uninterested in the feelings and problems of others: other persons do not come to me for advice.
c.	**Do Not Think Far Ahead** I act impulsively without thinking of the consequences and frequently I am caught short because I have not foreseen the outcomes.	1	2	3	4	5	6	7	8	**Think Ahead** I consider future possibilities and outcomes of my decisions before acting.
d.	**Self-Concerned** I talk a lot about myself, think more about myself and what I want than about other people. I frequently am unaware of the rights and needs of other people.	1	2	3	4	5	6	7	8	**Other-Concerned** I think of others and what they want: try to consider others' points of view: can compromise or adjust to demands of others.
e.	**Enthusiastic** I am interested and excited about new events: get involved in activities easily and have strong interests.	1	2	3	4	5	6	7	8	**Unenthusiastic** I do not get deeply involved or excited: I am mild: not much excites me.
f.	**Practical** I have good judgment and common sense: I make practical and appropriate comments and decisions.	1	2	3	4	5	6	7	8	**Impractical** I make impractical, inappropriate suggestions that don't consider all aspects of a problem.
g.	**Vague Thinking** My thinking is vague, illogical, indefinite.	1	2	3	4	5	6	7	8	**Clear-Thinking** My thinking is clear, precise, and logical.
h.	**Personally Warm** I tend to be sincere, friendly, emotionally responsive, sympathetic to others, affectionate, and enjoy other people.	1	2	3	4	5	6	7	8	**Personally Cold** I tend to be distant, aloof, austere, and undemonstrative with others: I do not like to express affection or feelings and am more comfortable in impersonal situations.
i.	**Ambitious** I set high goals for myself and am dissatisfied when I do not accomplish all of them. When I finish one thing, I begin another right away	1	2	3	4	5	6	7	8	**Unambitious** I am unambitious and am easily satisifed with what I can accomplish.

Section G: Background Information

Please PRINT your name, address, and the telephone number where you can most usually be reached during the coming year.

	TELEPHONE	
YOUR NAME:	AREA CODE	NUMBER
ADDRESS:		
CITY: STATE. ZIP:		

Please PRINT the name, address and telephone number of your parents.

	TELEPHONE	
YOUR PARENTS' NAME:	AREA CODE	NUMBER
ADDRESS:		
CITY: STATE. ZIP:		

Please PRINT the names and address of two other people who will know where to get in touch with you during the coming year. (List no more than one person who now lives with you.)

	TELEPHONE	
NAME:	AREA CODE	NUMBER
ADDRESS:		
CITY: STATE. ZIP:		

	TELEPHONE	
NAME:	AREA CODE	NUMBER
ADDRESS:		
CITY: STATE: ZIP:		

Please PRINT your spouse's full name (if you are married).

SPOUSE'S FULL NAME: _____

Please give the following information about yourself.

(a) Date of birth _____ (month) _____ (day) _____ (year)

(b) Sex. (Circle one) Male 1
Female 2

(c) Social Security No. _____

(d) Driver's License No _____ State _____

(e) When did you complete this questionnaire? _____ (month) _____ (day) _____ (year)

THANK YOU FOR YOUR COOPERATION

THIS INFORMATION WILL BE KEPT IN STRICT CONFIDENCE AND WILL BE USED ONLY FOR FUTURE FOLLOW-UPS IN THE NATIONAL LONGITUDINAL STUDY OF THE HIGH SCHOOL CLASS OF 1972

Appendix C

SURVEY MATERIALS TO MAXIMIZE PARTICIPATION

Appendix C

SURVEY MATERIALS TO MAXIMIZE PARTICIPATION

Exhibit 1

What's Happening To The Class Of '72?

It's been just over two years since you, a member of the class of '72 left high school.

Remember back in 1971 when you were a rising high school senior? You were full of hopes and aspirations for the future, right?

Many of you wanted to continue your education in college, many did not. Many of you wanted to begin work immediately, many didn't, and some of you weren't really sure of what you wanted and quite possibly you are still uncertain.

Indeed, two years isn't a long time, but many things could have taken place to alter your plans for the future. We would like to know about that. In fact, that's what this message is all about.

Remember last fall? You were sent an Operation Follow-Up Questionnaire to fill out. Again, we would like for the members of the high school class of '72 to tell us just what they are doing today and how close they've come to attaining the hopes and goals they set when they were in the last year of high school.

Since our greatest fears or highest hopes are seldom realized, you are probably finding yourself somewhere in between where you wanted to be at this time in life and where you actually are.

But that's where you can help. Tell us about it, let us know if you've been successful in implementing your blueprint for the future.

In October you will receive one of the nearly 23,000 questionnaires we're sending to 1972 seniors, and by completing this questionnaire you will be playing a role in ...ing future educational opportunities. This type of information is essential in devising new federal policies and programs of educational opportunity.

Please be sure to return the attached card with your correct address so that you may take part. This is an important study that can lead to significant improvements in the U. S. educational system.

The study that you are participating in, called the National Longitudinal Study of the High School Class of 1972, is sponsored by the United States Office of Education of the Department of Health, Education and Welfare.

A primary objective is to find out from you '72 seniors just what you're doing today.

Granted, it takes time to complete a questionnaire, at least to complete it responsibly, but the information you provide us can be a valuable asset in improving educational and occupational opportunities.

Perhaps when you were in school you didn't have a forum for venting your various opinions about the educational delivery system. Well, this is your chance.

The information you supply will be used in conjunction with similar data gathered from your fellow members of the high school class of '72.

The first survey of the National Longitudinal Study was in the spring of 1972. It involved 17,726 high school seniors in 1,044 public, private, and church-affiliated schools.

The first follow-up survey, conducted in the fall of 1973, included those 1972 graduates plus about 5,000 additional 1972 graduates from 250 additional schools.

The follow-up you are asked to participate in this fall involves about 23,000 1972 seniors, most of whom have participated in this study since its beginning.

What makes this study unique? It is not just another government study. Rather, it is an on-going observation of a group over a long period of time.

The group of about 23,000 is used to represent all students in the class of 1972--all over the country. You are a sample member. If you drop out of the study, you are in effect dropping out hundreds whom you represent.

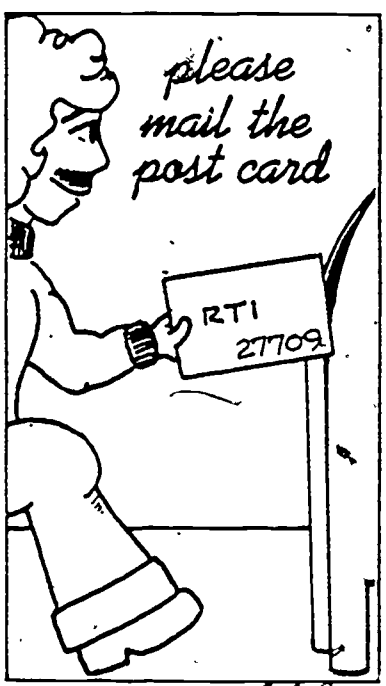
Conducting a study using the same participants is the only way accurate measures of change can be assessed. As you can see, with successive measures the value of the data increases over time.

All data involved in this study are confidential, and your identity will never be published, nor will it be released to anyone other than professional researchers involved with this study.

The National Longitudinal Study of the High School Class of '72 is conducted by the Research Triangle Institute, Research Triangle Park, N. C. 27709

OPERATION FOLLOW-UP

NATIONAL LONGITUDINAL STUDY OF THE HIGH SCHOOL CLASS OF 1972
NATIONAL CENTER FOR EDUCATIONAL STATISTICS WASHINGTON, D.C. 20202 JULY 1974



Si, Si Señora, Bells Are Ringing In New York

Mildred Hardy

You probably have never heard of Vicki Holder, but chances are the name Mildred Hardy might ring a bell in your memory bank. In fact, that's what Mildred has been doing for several months now, ringing bells.

Vicki and Mildred are both members of the high school class of 1972, but unlike you, they are not members of the National Longitudinal Study of the High School Class of '72, although both are playing important roles in that ongoing study.

Both girls are employed by Research Triangle Institute, and are working with NLS, as we call it.

Mildred, a 1972 graduate of Rocky Mount high school, Rocky Mount, N. C., is responsible for tracking down many of you study members. She is one of eight telephone operators we've hired for the duration of the study.

The telephone operators work overlapping eight-hour shifts, four to a team, so we're spending 13 hours each day attempting to verify addresses and to make certain the information you have sent us is correctly understood and meets our editing specifications.

Mildred has talked with at least 2,000 of you, sometimes to verify an address, sometimes to clarify some of the information you sent us during our first follow-up.

Mildred thinks her new job has enabled her to make thousands of new friends. "So far I've talked with sample members in each of the 50 states. Calling all over the country is really cool, it involves contact with people, and I have the satisfaction of knowing I'm playing a part in this important study," she said.

Mildred says she actually has made some friends. "I could not locate one sample member, but I did track down her mother in New York. The mother could not speak English well, and I had to call upon my high school Spanish. She gave me a Spanish lesson over the phone and we got along very well. Oh yes, she helped me locate her daughter."

Mildred thinks the National Longitudinal Study of the High School Class of '72 is "fantastic." She said, "I wish I had been chosen to take part in this study. The information being supplied by the former high school students can be used to help schools set up programs for future students. I think that's important. I've never heard of such a study before," she said.

Mildred tells us that those of you whom she's spoken with are reacting favorably to the study. "That's a good indication that young people are interested in the future of secondary education in this country."

Vicki Holder is a 1972 graduate of Southern high school, Durham, N. C.

She now operates a Sycor machine.

What is a Sycor machine?

You probably have seen computer punch cards--such as a paycheck or time card from a large company or registration cards for high school or college classes. Technology has now advanced beyond the punch card. We are handling your completed questionnaires in a new way to reduce errors and to make sure your answers remain what you intended them to be. We are using an

Vicki Holder

"intelligent typewriter" type of direct linkage to the computer. It's called Sycor.

When your completed questionnaire gets to RTI, a skilled young person checks it to make sure it's legible and that we understand all your answers. Then the Sycor operator "keys" your responses right to the computer just as if he or she were using a typewriter. Why is Sycor more accurate?

Well, we've programmed the computer beforehand not to let the Sycor operator make mistakes--your answers get to the machine just as you wrote them! If you've said you work 35 hours a week, the machine won't accept 53, or 85, or any other very different number, because we have programmed it for a 40-hour week maximum. In fact, Sycor "beeps" and tells its operator that such a mistake has been made.

Why is Vicki such an important part of the study? The data that she is working with are responses to items that you supplied to us during the first follow-up.

Vicki sees the National Longitudinal Study of the High School Class of '72 as a valuable study.

"The response rate has been good. To me, this demonstrates that we have a lot of responsible 19 and 20-year-old young people in this country," she said.

Questionnaire Prepared With You In Mind

REMEMBER--
Complete The Post Card And Return It

The questionnaire that you will be receiving early in October at first glance might appear to be a rather forbidding and long document, but it really isn't.

Quite the contrary.

The questions contained in the questionnaire, its physical appearance and design, and the overall production of this document were completed with you in mind.

Its organization makes it easy to understand, and judging from the comments we received from some of your fellow seniors in the high school class of 1972, we think you'll find it straightforward.

That's right, we've already had the questionnaire tested. In fact, it's been tried out by people your own age, people who just two years ago were high school seniors but are not members of the sample taking part in this study.

What are these people doing today? Probably the same thing you're doing. Some of the people who helped us by pretesting this questionnaire are students at schools such as the University of North Carolina and North Carolina Central University, some are working in manufacturing plants and stores, some are just returning from military service, and some are married with families, but overall, those who completed this questionnaire represent a cross section of people your age with similar interests.

Earlier we had the questionnaire pretested in order to get a valid reading of its accuracy. So we set up conditions under which we thought you'd be filling out this questionnaire and asked our volunteers to complete it.

After the trial we took it back to the drawing board and ironed out the spots where our volunteers indicated they encountered some degree of difficulty.

The most significant comments from the young men and women who helped us in the trial runs were that it was too lengthy, that some questions were difficult to answer, and that some perhaps were a bit too personal.

So we revised the questionnaire in a process of continual refinement to make all questions clear and precise and to make certain that all questions are relevant.

Research Triangle Institute, whose professional staff worked with the U. S. Office of Education to develop the questionnaire, started with a basic concept of data needs and ended up with the questions that you will see in October.

But where did the substance of the questions come from?

Most questionnaires represent a committee effort. That is, various people who have interests in obtaining certain types of information are brought together and they collectively decide just what questions are necessary to bring forth the information needed for a particular educational program.

To that end, Research Triangle Institute's educational psychologists, sociologists, economists interested in the costs of higher education, and other professionals working with the National Center for Educational Statistics--about 40 in all--developed the questionnaire you will receive.

This group of specialists from various professional fields originally came up with too many questions and through a long process of elimination, and after pretesting the questionnaire, questions were selectively included for the final questionnaire.

So all in all, a series of rather extensive efforts of highly skilled people went into the composition of this questionnaire.

We hope you'll enjoy working on this questionnaire. It might even help you learn more about yourself.

This zip code map was prepared to record the number of responses we received from various parts of the country.

Research Triangle Park--More than A Zip Code

Former seniors from the class of 1972 are sending their Follow-Up postcards from all 50 states of the U. S. to an address in North Carolina that has its own special post office box and zip number, but is still so new it does not yet appear on most maps outside of the Tarheel state.

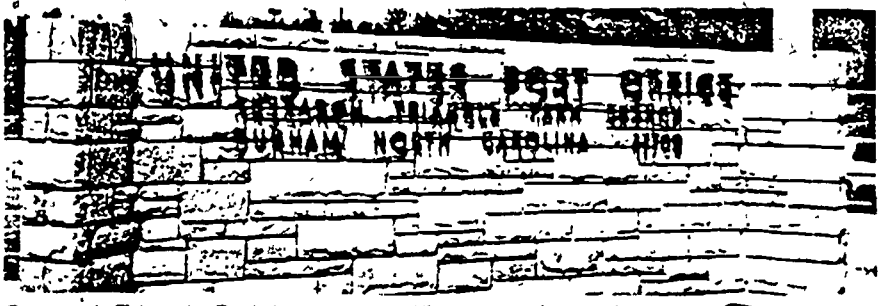
It is the Research Triangle.

Only about 10 years ago it was an all but empty 5,000 acres of clay and scrub pine that was useful mostly for holding three counties together.

Today the Research Triangle is known as one of the world's leading science centers.

The three sides of the Triangle are joined at the campuses of three major universities in three cities. They are the University of North Carolina in Chapel Hill, Duke University in Durham, and North Carolina State University in Raleigh.

At the center of this compact area is the Research Triangle Park, site of about two dozen glistening laboratories and other facilities housing government research agencies and technology-based corporations which now employ more than 10,000 persons in new jobs that did not exist before.



Research Triangle Park has a post office, but it is much more than a zip code.

At the center of the park is the Research Triangle Institute. Established by joint action of the three universities, Research Triangle Institute was created to carry the Research Triangle name and to be the focal point for future growth in the park and throughout the Triangle area.

The Institute employs a permanent, full-time staff of 525. In addition to educational research specialists, the staff includes researchers in chemistry, engineering, economics, biology, statistics, electronics, and the social sciences.

The Institute, or RTI, is a self-supporting nonprofit organization that gains its income by performing scientific research assignments under contract to government and industrial clients.

Government units with projects at RTI include NASA, the Drug Enforcement Agency, Environmental Protection Agency, Department of Transportation, Public Health Service, and the Office of Economic Opportunity. For example, the follow-up survey of 1972 seniors is being conducted by RTI for the U. S. Office of Education.

Operation Follow-Up is huge--RTI is only one of several organizations which have been involved with the high school class of 1972 in this project. Educational Testing Service of Princeton, New Jersey, collected the first questionnaire information when you were still in high school as a senior, RTI conducted the first follow-up last fall, and the U. S. Bureau of the Census individually contacted over 8,000 of you this past winter and spring to collect information by interview.

There are many skilled persons at RTI working on Operation Follow-Up. Psychologists, statisticians, programmers, Sycor operators, secretaries and others are all involved. Perhaps you are in school or training, or already working at a job where your skills could be used on a project like this.

Remember--when you complete your second Operation Follow-Up questionnaire this fall and send it back to RTI, lots of skilled people will work on it to make sure it's handled right.

Research Triangle is more than a post office box and a zip number.

Some 21,000 Answered Follow-Up Call

The questionnaires mailed to you during our first follow-up in October 1973 produced a response rate of 94 percent. This means over 21,000 members of the National Longitudinal Study of the high school class of '72 responded to our call.

By Feb. 1, 1974, the written responses you returned to Research Triangle Institute figured out to a 62 percent response rate--or about 14,000--but when we didn't hear from approximately 8,000 of you we asked for help. We asked the U.S. Bureau of the Census to help us by contact and personal interview.

By the time we contact you with your next newsletter, we'll have all the data tabulated from the first follow-up and we'll be able to tell you how many members of the high school class of '72 are in college, how many are in military service, how many are working, the average salary of those working, and related information.

So you can easily see why your prompt return of the enclosed post card is important. We want to be able to address your questionnaire correctly.

This is another in a series of newsletters you will be receiving during the next two years relating to the National Longitudinal Study of the High School Class of 1972. If this study is to be accurate, we need your help. Please check your address on the attached card, correct it if necessary, and return the card to us as soon as possible.

RESEARCH TRIANGLE INSTITUTE
POST OFFICE BOX 12194
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709

STATISTICS RESEARCH DIVISION

August 8, 1974

Dear Member of the Class of 1972:

This is another in a series of newsletters you will be receiving during the next two years relating to the National Longitudinal Study of the High School Class of 1972. Please check your address on the enclosed card and correct it if necessary.

So that you may return the card without cost to you we are enclosing a return envelope and International Reply coupons which may be exchanged at your local post office for sufficient postage to air mail the card to us. Although the postcard is already postpaid, you will need to purchase air mail stamps and place them on the return envelope. Then put the postcard in the envelope and mail it to us as soon as possible.

Even though you are not in the United States at this time, your participation in this study is important and your cooperation will be appreciated.

Sincerely,

J. A. Davis
RTI Project Director

JAD/dd

Enclosures

(919) 541-8311 FROM RALEIGH, DURHAM AND CHAPEL HILL

RESEARCH TRIANGLE INSTITUTE
POST OFFICE BOX 12194
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709

September 23, 1974

Dear Parent:

Within about two weeks, your son or daughter will receive the second OPERATION FOLLOW-UP survey questionnaire. We are asking your help to make sure that your son or daughter receives these materials promptly.

It is vital to the quality and usefulness of survey results that sample participants have the opportunity to respond. Therefore, I would appreciate your help in assuring that this questionnaire will be received, completed, and returned to us as soon as possible. Information provided by survey participants will be held in confidence and used only to create statistical summaries from which no individual can be identified.

This study, in which your son or daughter has played a major role since high school, is called the National Longitudinal Study of the High School Class of 1972 and is sponsored by the U.S. Office of Education. It involves twenty-two thousand young adults from all over the United States. Additional information concerning the operational aspects of the study and the Research Triangle Institute may be found in the accompanying Newsletter which was sent to all participants last July.

If your son or daughter is temporarily or permanently away from your home, please forward the questionnaire as soon as it arrives. If you cannot forward the questionnaire, please call and give us his or her present address so that we can mail a set of materials directly. You may call the Research Triangle Institute collect (919) 549-8311 from 8:30 a.m. to 5:00 p.m. (Eastern Daylight Time). Identify yourself as an OPERATION FOLLOW-UP parent.

I appreciate very much your cooperation and assistance in making sure your son or daughter has an opportunity again to participate in OPERATION FOLLOW-UP. If you have any questions about this study please do not hesitate to call me.

Sincerely,

J. A. Davis

J. A. Davis
RTI Project Director

JAD:mt

Enclosure

(919) 549-8311 FROM RALEIGH, DURHAM AND CHAPEL HILL

RESEARCH TRIANGLE INSTITUTE
POST OFFICE BOX 12194
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709

September 30, 1974

Dear Member of the High School Class of 1972:

I hope you found the recent OPERATION FOLLOW-UP Newsletter interesting and informative about the National Longitudinal Study of the High School Class of 1972. This letter is a reminder that in about two weeks you should receive your second OPERATION FOLLOW-UP questionnaire. Like the first, this questionnaire is for you to use in telling us about your activities, experiences, and plans.

If your questionnaire hasn't arrived by 21 October, please call us and we will try again. Call (919) 549-8311 COLLECT, between 8:00 a.m. and 5:00 p.m. (Eastern Daylight Time), identify yourself as an OPERATION FOLLOW-UP participant, and give us your name and current mailing address.

Please take pleasure in knowing that your participation in this project with the U.S. Office of Education is very important. This study should benefit programs affecting the educational and vocational progress of young people. As always, safeguards in the data collection and resulting statistical summaries preserve the anonymity of each participant.

With luck and warmest regards in your future endeavors.

Sincerely,

J. A. Davis

J. A. Davis
RTI Project Director

JAD:mt

(919) 549-8311 FROM RALEIGH, DURHAM AND CHAPEL HILL

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON D C 20202

October 7, 1974

Dear Member of the High School Class of 1972:

Here is the OPERATION FOLLOW-UP questionnaire that was promised you a couple of weeks ago. Please take a little time and fill out this questionnaire.

OPERATION FOLLOW-UP is based upon a sample of the total population of about three million 1972 high school seniors. You and the other members of OPERATION FOLLOW-UP, therefore, are the voices of all students in the class of '72. Thus, it is important that you complete and return your questionnaire as soon as possible in the enclosed pre-addressed envelope.

Instructions for filling out your questionnaire may be found inside the front cover. Should you have any questions about the study itself or the questionnaire, please write or call me:

Dr. Kenneth A. Tabler
USOE Project Director
National Center for Educational Statistics
U.S. Office of Education
Washington, D. C. 20202
Telephone (202) 245-8766

I appreciate your cooperation. Your help will be a significant contribution to the National Longitudinal Study of the High School Class of 1972.

Sincerely,

K. A. Tabler

Kenneth A. Tabler
USOE Project Director

KAT/mt

Enclosure

RESEARCH TRIANGLE INSTITUTE
POST OFFICE BOX 12194
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709

CENTER FOR EDUCATIONAL RESEARCH AND EVALUATION

October 14, 1974

Dear Member of the Class of 1972:

This is another in a series of follow-up questionnaires you will be receiving during the next several years for the National Longitudinal Study of the High School Class of 1972. So that you may return the questionnaire without cost to you, we are enclosing a return envelope and International Reply coupons which may be exchanged at your local post office for sufficient postage to air mail the questionnaire to us. Although the envelope is already postpaid, you will need to purchase air mail stamps and place them over the first class permit on the return envelope. Then mail the questionnaire to us as soon as possible.

Even though you are not in the United States at this time, your participation in this study is important and your cooperation will be appreciated.

Sincerely,

J. A. Davis
RTI Project Director

JAD/jaw

Enclosures

(919) 549-8311 FROM RALEIGH, DURHAM AND CHAPEL HILL

NATIONAL LONGITUDINAL STUDY OF THE HIGH SCHOOL CLASS OF 1972

Just a reminder . . .

Last week we mailed you an OPERATION FOLLOW-UP questionnaire.

If you *have* completed and mailed your questionnaire, thank you. We appreciate your continuing participation in this important study.

If you *haven't* completed your questionnaire yet, please fill it out and mail it today. You are an important person to us, and we want to hear from you.

Don't forget OPERATION FOLLOW-UP!

RESEARCH TRIANGLE INSTITUTE
POST OFFICE BOX 12194
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709

CENTER FOR EDUCATIONAL RESEARCH AND EVALUATION

Dear OPERATION FOLLOW-UP Participant:

Thank you for completing the Second Follow-up Questionnaire for the *National Longitudinal Study of the High School Class of 1972*. Your completed questionnaire again gives you an important voice in representing the entire nation's Class of '72 in OPERATION FOLLOW-UP, which is dedicated to improving educational and vocational opportunity.

We are truly pleased that you and so many of the more than 22,500 members of the Class of '72 have chosen to participate in OPERATION FOLLOW-UP. Last year, during the first follow-up, we received completed questionnaires from 21,516 of you, or almost 95% of the total group. We have so much information, in fact, that we are still working on summarizing it for you. You will hear from us about this in early spring in an OPERATION FOLLOW-UP newsletter.

Meanwhile, we'll be sending you an OPERATION FOLLOW-UP identification card within a few months. This ID card will have a change-of-address postcard attached to it so that you can notify us if you move.

Remember, we are most grateful for your help. You are very special to us, and your continuing cooperation is very important. We hope you've found the questionnaires as interesting to fill out as we are finding your experiences to be instructive.

Sincerely,

JA Davis

Junius A. Davis
Project Director

(919) 549-8311 FROM RALEIGH, DURHAM AND CHAPEL HILL

NATIONAL LONGITUDINAL STUDY OF THE HIGH SCHOOL CLASS OF 1972

We are missing something! We haven't received your OPERATION FOLLOW-UP questionnaire yet.

Your participation in this study is vital because your activities and experiences since leaving high school are what OPERATION FOLLOW-UP is all about. The information you provide can help improve schools and school programs—perhaps for your brothers and sisters, and someday, for your own children.

Please fill out your OPERATION FOLLOW-UP questionnaire and mail it *today*. If you have lost or misplaced your questionnaire, or if you never got one, please call us *collect* at (919) 549-8311. Identify yourself as an OPERATION FOLLOW-UP participant and give us your current mailing address. We'll mail you another questionnaire because we don't want to miss you!

1-194027B02035 10/29/74
ICS MGMNCSA RTRI
·01392 MLTN VA
7IP 29902

western union **Mailgram**

UNITED STATES SERVICE U.S.MAIL

173831

WE ARE MISSING SOMETHING! WE HAVEN'T RECEIVED YOUR OPERATION FOLLOW-UP QUESTIONNAIRE YET.

YOUR PARTICIPATION IN THIS STUDY IS VITAL BECAUSE YOUR ACTIVITIES AND EXPERIENCES SINCE LEAVING HIGH SCHOOL ARE WHAT OPERATION FOLLOW-UP IS ALL ABOUT. THE INFORMATION YOU PROVIDE CAN HELP IMPROVE SCHOOLS AND SCHOOL PROGRAMS--PERHAPS FOR YOUR BROTHERS AND SISTERS, AND SOMEDAY, FOR YOUR OWN CHILDREN.

PLEASE FILL OUT YOUR OPERATION FOLOW-UP QUESTIONNAIRE AND MAIL IT TODAY. IF YOU HAVE LOST OR MISPLACED YOUR QUESTIONNIARE, OR IF YOU NEVER GOT ONE, PLEASE CALL US COLLECT AT (919) 549-8311. IDENTIFY YOURSELF AS AN OPERATION FOLLOW-UP PARTICIPANT AND GIVE US YOUR CURRENT MAILING ADDRESS. WE'LL MAIL YOU ANOTHER QUESTIONNAIRE BECAUSE WE DON'T WANT TO MISS YOU!

J. A. DAVIS
PROJECT DIRECTOR

1200 EST

MGMSAVB SAV

128

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON D C 20202

November 10, 1974

Dear Member of the High School Class of 1972:

About three weeks ago you should have received a large certified mail envelope containing an OPERATION FOLLOW-UP questionnaire. This questionnaire is for you to use in telling us about your achievements and experiences since leaving high school.

As of today, we have not received your completed questionnaire. Just in case you never got it or have misplaced it, I am sending you another.

Please take time to fill out the questionnaire now. Instructions for completing the questionnaire may be found on the inside front cover. When you have answered all questions which apply to you, put your completed questionnaire in the enclosed postage-paid envelope and drop it in the mail.

I deeply appreciate your help. Your answers are important in helping us learn how to improve the educational and vocational opportunities for the young people of today and tomorrow.

Sincerely,

K. A. Tabler

Kenneth A. Tabler
USOE Project Director

KAT:mt

Enclosure

NATIONAL LONGITUDINAL STUDY OF THE HIGH SCHOOL CLASS OF 1972

You are important to us! So are your activities and experiences since you left high school—that's what OPERATION FOLLOW-UP is all about.

We haven't received your OPERATION FOLLOW-UP questionnaire yet. Your cooperation is vital to our study and your participation will help improve our schools and school programs. Please fill out your questionnaire and mail it *today*.

If you have lost or misplaced your questionnaire, or if you never got one, call us *collect* at (919) 549-8311. Identify yourself as an OPERATION FOLLOW-UP participant and give us your current mailing address. We'll mail you another questionnaire because we want to hear from you!

Exhibit 13

western union Mailgram

UNITED STATES POSTAL SERVICE U.S. MAIL

MGMTACA TAC
1-138816U323244 11/19/74
ICS IGMNCSA RTRI
00807 ALTN VA
ZIP 98362

136564

YOU ARE IMPORTANT TO US! SO ARE YOUR ACTIVITIES AND EXPERIENCES SINCE YOU LEFT HIGH SCHOOL--THAT'S WHAT OPERATION FOLLOW-UP IS ALL ABOUT.

WE HAVEN'T RECEIVED YOUR OPERATION FOLLOW-UP QUESTIONNAIRE YET. YOUR COOPERATION IS VITAL TO OUR STUDY AND YOUR PARTICIPATION WILL HELP IMPROVE OUR SCHOOLS AND SCHOOL PROGRAMS. PLEASE FILL OUT YOUR QUESTIONNAIRE AND MAIL IT TODAY!

IF YOU HAVE LOST OR MISPLACED YOUR QUESTIONNAIRE, OR IF YOU NEVER GOT ONE, CALL US COLLECT AT 919-549-8311. IDENTIFY YOURSELF AS AN OPERATION FOLLOW-UP PARTICIPANT AND GIVE US YOUR CURRENT MAILING ADDRESS. WE'LL MAIL YOU ANOTHER QUESTIONNAIRE BECAUSE WE WANT TO HEAR FROM YOU!

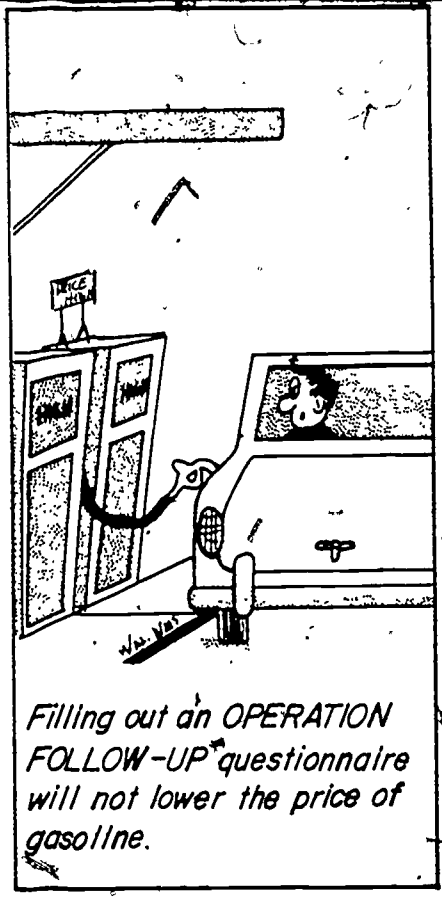
J. A. DAVIS
PROJECT DIRECTOR

1709 EST

MGMTACA TAC

Filling out an OPERATION FOLLOW-UP questionnaire will not improve your love life.

Filling out an OPERATION FOLLOW-UP questionnaire will not get you two free tickets to a rock concert.



Filling out an OPERATION FOLLOW-UP questionnaire will not lower the price of gasoline.

Filling out an OPERATION FOLLOW-UP questionnaire may not ever do you any good... but should you take that chance? Think about it...

Let's put OPERATION FOLLOW-UP in focus. You got a questionnaire this year; you'll get another one in 1976 and then the last one in 1978. What we're asking for is about 2½ hours of your time during the next 4 years. That's only 3 minutes a month between now and 1978. Think about how you spend your time...

The training and courses you had in high school may not have done all you wanted. But have you told anybody who can do something about it?

You may want to go back to school some day. But can you be sure there'll be room for you?

Your own kids are going to need schools and teachers and books and training programs. Are you satisfied with what you got?

Think about it...

If you've lost or thrown away your questionnaire, call collect and we'll mail you another one. Call (919) 549-8311 during the day and ask for an OPERATION FOLLOW-UP operator.

Think about it...

OPERATION FOLLOW-UP

NATIONAL LONGITUDINAL STUDY OF THE HIGH SCHOOL CLASS OF 1972
NATIONAL CENTER FOR EDUCATION STATISTICS WASHINGTON, D.C. 20202

MGMDALT HSA
1-212002U345028 12/11/74
ICS MGMNCSA RTRI
00080 MLTN VA
ZIP 75925

western union **Mailgram**

UNITED STATES POSTAL SERVICE U.S.MAIL

009514

THIS IS IT!

THIS IS THE LAST PIECE OF MAIL YOU'LL GET THIS YEAR ASKING YOU TO FILL OUT AN OPERATION FOLLOW-UP QUESTIONNAIRE. NO MORE CARDS, NO MORE LETTERS, NO MORE MAILGRAMS.

WE STILL WANT YOUR ANSWERS TO THE QUESTIONNAIRE. IF WE HAVEN'T GOTTEN THEM BY JANUARY, ONE OF OUR PEOPLE IN YOUR AREA WILL COME BY TO TALK WITH YOU PERSONALLY--TO GO THROUGH THE QUESTIONNAIRE WITH YOU, GET YOUR ANSWERS, AND THEN SEND THE QUESTIONNAIRE BACK TO US.

I DON'T LIKE TO KEEP BUGGING YOU, BUT YOU ARE VERY IMPORTANT TO OPERATION FOLLOW-UP.

IF YOU'D LIKE TO TALK TO SOMEONE ABOUT WHY YOU'RE SO IMPORTANT, GIVE US A CALL. BILL OLIVERI IS ONE OF THE GUYS WHO RUNS THE STUDY FOR THE GOVERNMENT. CALL HIM COLLECT AT (202) 245-7809.

IF YOU NEED ANOTHER QUESTIONNAIRE, CALL ME COLLECT. MY NUMBER IS (919) 549-8311. IF YOU HAVE ANY QUESTIONS OR HANG-UPS ABOUT THE STUDY, BILL AND I WOULD LIKE TO TALK TO YOU.

THANKS FOR LISTENING TO ME. NOW, LET ME HEAR FROM YOU.

MIMI HOLT
RESEARCH TRIANGLE INSTITUTE

18:58 EST

MGMDALT HSA

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF THE ASSISTANT SECRETARY FOR EDUCATION
WASHINGTON, D.C 20202

NATIONAL CENTER FOR
EDUCATION STATISTICS

7 January 1975

Dear Member of the High School Class of 1972:

Remember your senior year in high school? Among all the other things you were doing in the spring of '72, you completed a questionnaire asking you about your plans after high school, and your hopes and aspirations for the future. About 22,000 other high school seniors did, too--and you are all a part of OPERATION FOLLOW-UP.

This is an invitation for you to become an active member of OPERATION FOLLOW-UP, which is what I call the National Longitudinal Study of the High School Class of 1972. Let me tell you what OPERATION FOLLOW-UP is all about.

Educators and other people interested in education have been questioning for some time how well America's high schools prepare young adults for jobs, further schooling, and the responsibilities of "adult" life. In order to discover what happens to young people after they leave high school, the National Center for Education Statistics (NCES) of the Department of Health, Education, and Welfare is conducting OPERATION FOLLOW-UP. Through a series of questionnaires given over a period of years to selected 1972 high school seniors, NCES hopes to find out how the continuing experiences of these young people, including you, relate to the courses and training they had in high school. The fact that you are working, married, in college, in military service, training for a job, or trying to decide what you want to do is important in relation to your educational background, your plans while you were in high school, and your plans, experiences, and problems now and in the future.

While your experiences and activities since high school are unique to you, the types of things you have been doing represent similar experiences and activities shared by over 3-1/2 million of your fellow classmates across the nation. You and each of the other 22,000 members of the Class of '72 selected for OPERATION FOLLOW-UP represent all the rest of your classmates--nationwide--and you can provide valuable information about some very important people: young adults going through one of the more significant periods of their lives.

The training and courses you had in high school may not have done all you wanted. But have you told anybody who can do something about it? You may want to go back to school some day. But can you be sure there will be room for you? Your own kids are going to need schools and teachers and books and training programs. Are you satisfied that they will be available?

Within the next few months someone will call on you to talk with you about OPERATION FOLLOW-UP. This person will be a representative of the Research Triangle Institute (RTI), which is a non-profit research organization located in North Carolina. RTI is collecting and tabulating the information gathered from OPERATION FOLLOW-UP participants.

Be assured that all of the information you give us is treated in strictest confidence. Your name will never be published or released to anyone. Your responses will be analyzed and used only in statistical summaries that show what members of the Class of '72 are doing and how they feel about things that are important to them.

Please take a moment now and check your name and address on the label on the enclosed postcard. Make any corrections or additions and drop the card in the mail. Don't worry about stamps because the card is postage-paid. Even if your name and address are correct, please return the postcard anyway so that I'll know that you've heard from me.

I hope you'll accept my invitation to join OPERATION FOLLOW-UP. If you have questions or would like additional information about OPERATION FOLLOW-UP, send me a note. I'll be glad to hear from you.

Sincerely,

Elmer F. Collins

Elmer Collins
NCES Project Director

EC:fh

Enclosure

Appendix D

ACTIVITY STATE QUESTIONNAIRE

National Center for Education Statistics
Education Division
Department of Health, Education, and Welfare
Washington, D.C. 20202

OPERATION FOLLOW-UP
Supplementary Information

A. October 1972 Activities

Think back to October 1972, the fall of the year after you left high school. [Circle the numbers of the answers which best fit the situation then.]

1. Were you:
   - Working full time? 1
   - Working part time? 2
   - Not working? 3

2. Were you looking for work?
   - Yes 1
   - No 2

3. Were you going to school?
   - Full time 1
   - Part time 2
   - Not going to school 3

4. What were the name and address of the school?
   Name: _____
   Address: _____
   _____

5. Were you on active military duty?
   - Yes 1
   - No 2

6. Were you a homemaker?
   - Yes 1
   - No 2

B. October 1973 Activities

Think back to October 1973, the fall of the second year after you left high school. [Circle the numbers of the answers which best fit the situation then.]

7. Were you:
   - Working full time? 1
   - Working part time? 2
   - Not working? 3

8. Were you looking for work?
   - Yes 1
   - No 2

9. Were you going to school?
   - Full time 1
   - Part time 2
   - Not going to school 3

10. What were the name and address of the school?
    Name: _____
    Address: _____
    _____

11. Were you on active military duty?
    - Yes 1
    - No 2

12. Were you a homemaker?
    - Yes 1
    - No 2

C. General Information

The following questions are more general in nature. [Circle the numbers of the answers which best fit.]

13. What kind of high school program were you in?

General 1
Academic or college preparatory 2
Vocational or technical 3

14. What is the highest educational level completed by your mother and father? If you are not sure, please give your best guess.

(Circle one number on each line.)

	None or grade school only	High School: Did not finish	High School: Finished	Vocational, trade, business, or career program in a school or college: Less than two years	Vocational, trade, business, or career program in a school or college: Two years or more	Academic programs: Some college (including two-year degree)	Academic programs: Finished college (four- or five-year degree)	Academic programs: Master's degree or equivalent	Academic programs: Ph. D., M.D., or equivalent
Father or male guardian	1	2	3	4	5	6	7	8	9
Mother or female guardian	1	2	3	4	5	6	7	8	9

15. What job did your father (or male guardian) hold when you were a senior in high school, even if he is now retired, deceased, or disabled?

a. For whom does (or did) he work? (Name of company, business, organization, or other employer)

(Write in): _____

b. What kind of business or industry is (or was) this? (For example, retail store, manufacturer, state or city government, farming, etc.)

(Write in): _____

c. What kind of job or occupation does (or did) he have in this business or industry? (For example, salesman, foreman, policeman, civil engineer, farmer, teacher)

(Write in): _____

d. What are (or were) his most frequent activities or duties on this job? (For example, selling cars, keeping accounts, supervising others, operating machinery, finishing concrete, teaching grade school)

(Write in): _____

Appendix E

SHORT FORM QUESTIONNAIRE AND COVER LETTER

the survey, and will not be disclosed or released to others for any purposes.

OPERATION FOLLOW-UP

NATIONAL LONGITUDINAL STUDY OF THE HIGH SCHOOL CLASS OF 1972

SHORT FORM
Second Follow-Up Questionnaire

'72

Prepared for the
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
BY RESEARCH TRIANGLE INSTITUTE ◻ RESEARCH TRIANGLE PARK, NORTH CAROLINA
FALL 1974

140

1. **How do you describe yourself?**

(Circle one.)

American Indian 1
Black or Afro-American or Negro 2
Mexican-American or Chicano 3
Puerto Rican 4
Other Latin-American origin 5
Oriental or Asian-American 6
White or Caucasian 7
Other 8

2. **Did you attend school in the first week of October 1974?**

No ..... 1 *GO TO Q. 5*
Yes ..... 2 *GO TO Q. 3*

3. **What kind of school is this?**

(Circle one.)

Vocational, trade, business, or other career training school 1
Junior or community college (two-year) 2
Four-year college or university 3
Other (describe: _____ _____) 4

4. **Which of the following best describes how well you have done in all of your coursework or program from October 1973 through October 1974? If your school(s) or program(s) do not use letter grades, please choose the letter grade that comes closest to describing your progress.**

(Circle one.)

Mostly A 1
About half A and half B 2
Mostly B 3
About half B and half C 4
Mostly C 5
About half C and half D 6
Mostly D or below 7

5. **Were you working during the first week of October 1974?**

No ..... 1 *GO TO Q. 9*
Yes, full-time ..... 2 } *GO TO Q. 6*
Yes, part-time ..... 3 }

6. **Please describe below the job you held during the first week of October 1974. (If you held more than one job at that time, describe the one at which you worked the most hours.)**

a. For whom did you work? (Name of company, business organization, or other employer)
(Write in): _____

b What kind of business or industry was this? (For example, retail shoe store, restaurant, etc.)
(Write in): _____

c What kind of job or occupation did you have in this business or industry? (For example, salesperson, waitress, secretary, etc.)
(Write in): _____

d What were your most frequent activities or duties on this job? (For example, selling shoes, waiting on tables, typing and filing, etc.)
(Write in): _____

e. Were you:

(Circle one.)

An employee of a PRIVATE company, bank, business, school, or individual working for wages, salary, or commissions? 1
A GOVERNMENT employee (Federal, State, county, or local institution or school) 2
Self-employed in your OWN business, professional practice, or farm 3
Working WITHOUT PAY in family business or farm? 4

f When did you start working at this job? _____(month)_____(year)

g. Are you currently working at this job?

Yes 1
No .....2 Date left. _____(month)_____(year)

7. **How many hours did you usually work at this job in an average week?**

_____Hours per week

8. **What was your marital status, as of the first week of October 1974?**

(Circle one.)

Never married, but plan to be married within the next 12 months.....1
Never married, and don't plan to be married within the next 12 months 2
Divorced, widowed, separated.....3
Married. 4

9. **Not including yourself, how many persons were dependent upon YOU for more than one half of their financial support as of the first week of October 1974.**

(Circle one.)

0 ..1....2....3. ..4 or more

10. What is the best estimate of your income before taxes for ALL OF 1974? If you are married, include your spouse's income in the total, but do not include loans and gifts. Please make an entry on each line, either a dollar amount, or if you will receive no income from a source during 1974, write in the word "none".

Source	Amount Will Receive
Your own wages, salaries, commissions, and net income from a business or farm	$ _____
Your spouse's (husband or wife) wages, salaries, commissions, and net income from a business or farm	$ _____
All other income you and your spouse will receive (include interest, dividends, rental property income, public assistance, unemployment compensation, cash, gifts, scholarships, fellowships, etc.)	$ _____
TOTAL INCOME YOU AND YOUR SPOUSE WILL RECEIVE	$ _____

11. How do you feel about each of the following statements?

(Circle one number on each line.)

	Agree Strongly	Agree	Disagree	Disagree Strongly	No Opinion
a. I take a positive attitude toward myself	1	2	3	4	5
b. Good luck is more important than hard work for success	1	2	3	4	5
c. I feel I am a person of worth, on an equal plane with others	1	2	3	4	5
d. I am able to do things as well as most other people	1	2	3	4	5
e. Every time I try to get ahead, something or somebody stops me	1	2	3	4	5
f. Planning only makes a person unhappy since plans hardly ever work out anyway	1	2	3	4	5
g. People who accept their condition in life are happier than those who try to change things	1	2	3	4	5
h. On the whole, I'm satisfied with myself	1	2	3	4	5

12. What ways do you assure yourself of a good buy for your money?

(Circle one number on each line.)

	Regularly	Sometimes	Never
a. I compare prices and label information of similar products or services	1	2	3
b. I return merchandise that is unsatisfactory to the store where I bought it	1	2	3
c. I rely on brands or companies I know well even if they cost more	1	2	3
d. I follow leads in articles from Consumer Reports, Changing Times, or other such magazines	1	2	3
e. I check a company's reputation with the Better Business Bureau or consumer protection agency before agreeing to an expensive service or repair	1	2	3
f. I write to the manufacturer about the quality of the product if I'm unsatisfied	1	2	3

13. **What do you expect to be doing in October 1975?**

(Circle as many as apply.)

- Working for pay at a full-time or part-time job 1
- Taking academic courses at a two- or four-year college 2
- Taking vocational or technical courses at any kind of school or college (for example, vocational, trade, business, or other career training school) 3
- On active duty in the Armed Forces (or service academy) 4
- Homemaker 5
- Other (describe: _____) 6

14. **As things stand now, how far in school do you think you actually will get?**

(Circle one.)

- High school only 1
- Vocational, trade, or business school
  - Less than two years 2
  - Two years or more 3
- College program
  - Some college (including two-year degree) 4
  - Finished college (four- or five-year degree) 5
  - Master's degree or equivalent 6
  - Ph.D., M.D., or equivalent 7

15. **How important is each of the following factors in determining the kind of work you plan to be doing for most of your life?**

(Circle one number on each line.)

		Very Important	Somewhat Important	Not Important
a.	Previous work experience in the area	1	2	3
b.	Relative or friend in the same line of work	1	2	3
c.	Job openings available in the occupation	1	2	3
d.	Work matches a hobby interest of mine	1	2	3
e.	Good income to start or within a few years	1	2	3
f.	Job security and permanence	1	2	3
g.	Work that seems important and interesting to me	1	2	3
h.	Freedom to make my own decisions	1	2	3
i.	Opportunity for promotion and advancement in the long run	1	2	3
j.	Meeting and working with sociable, friendly people	1	2	3

16. **How important is each of the following to you in your life?**

(Circle one number on each line.)

		Very Important	Somewhat Important	Not Important
a.	Being successful in my line of work	1	2	3
b.	Finding the right person to marry and having a happy family life	1	2	3
c.	Having lots of money	1	2	3
d.	Having strong friendships	1	2	3
e.	Being able to find steady work	1	2	3
f.	Being a leader in my community	1	2	3
g.	Being able to give my children better opportunities than I've had	1	2	3
h.	Living close to parents and relatives	1	2	3
i.	Getting away from this area of the country	1	2	3
j.	Working to correct social and economic inequalities	1	2	3
k.	Having leisure time to enjoy my own interests	1	2	3
l.	Having a good education	1	2	3

17. What kind of work will you be doing when you are 30 years old? (Circle the one that comes closest to what you expect to be doing.)

(Circle one.)

a. CLERICAL such as bank teller, bookkeeper, secretary, typist, mail carrier, ticket agent ... 1
b. CRAFTSMAN such as baker, automobile mechanic, machinist, painter, plumber, telephone installer, carpenter ... 2
c. FARMER, FARM MANAGER ... 3
d. HOMEMAKER OR HOUSEWIFE ONLY ... 4
e. LABORER such as construction worker, car washer, sanitary worker, farm laborer ... 5
f. MANAGER, ADMINISTRATOR such as sales manager, office manager, school administrator, buyer, restaurant manager, government official ... 6
g. MILITARY such as career officer, enlisted man or woman in the Armed Forces ... 7
h. OPERATIVE such as meat cutter, assembler, machine operator, welder, taxicab, bus, or truck driver, gas station attendant ... 8
i. PROFESSIONAL such as accountant, artist, registered nurse, engineer, librarian, writer, social worker, actor, actress, athlete, politician, but not including public school teacher ... 9
j. PROFESSIONAL such as clergyman, dentist, physician, lawyer, scientist, college teacher ... 10
k. PROPRIETOR OR OWNER such as owner of a small business, contractor, restaurant owner ... 11
l. PROTECTIVE SERVICE such as detective, police officer or guard, sheriff, fire fighter ... 12
m. SALES such as salesperson, advertising or insurance agent, real estate broker ... 13
n. SCHOOL TEACHER such as elementary or secondary ... 14
o. SERVICE such as barber, beautician, practical nurse, private household worker, janitor, waiter ... 15
p. TECHNICAL such as draftsman, medical or dental technician, computer programmer ... 16
q. NOT WORKING ... 17

18. When did you complete this questionnaire?

_____ (month) _____ (day) _____ (year)

THANK YOU FOR YOUR COOPERATION

THIS INFORMATION WILL BE KEPT IN STRICT CONFIDENCE AND WILL BE USED ONLY FOR FUTURE FOLLOW-UPS IN THE NATIONAL LONGITUDINAL STUDY OF THE HIGH SCHOOL CLASS OF 1972

RESEARCH TRIANGLE INSTITUTE
POST OFFICE BOX, 12194
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709

CENTER FOR EDUCATIONAL RESEARCH AND EVALUATION

RTI

Dear Follow-Up Participant:

We appreciate your completing the second follow-up questionnaire for the National Longitudinal Study of the High School Class of 1972. Your cooperation greatly helps in the continuing effort to collect information for planning better programs to enhance work and educational activities of young people like yourself.

We are always trying to improve the questionnaire. One thing we wonder about is whether a question has the same meaning to a person when asked at different times. To determine this, we have selected a few questions from the second follow-up questionnaire, which you have already completed, and we are asking you to answer them again. The results of this study will help us improve future questionnaires.

Please read carefully each question in the short questionnaire. It is important that you follow the directions for responding. Sometimes you are asked to fill in a blank--in these cases, simply write your response. Where you are asked to circle a number, make a heavy circle. Here is an example:

Did you complete high school?

(Circle one.)

No, still in high school 1
No, left high school without completing 2
Yes, graduated ..... (3)

The entire questionnaire will take only a few minutes of your time. When you complete the questionnaire, please seal it in the postpaid envelope provided and return it to:

OPERATION FOLLOW-UP
Research Triangle Institute
Post Office Box 12036
Research Triangle Park, North Carolina 27709

Thank you again for your help.

Sincerely,

J. A. Davis
RTI Project Director

JAD:fh

Enclosure

(919) 549-8311 FROM RALEIGH, DURHAM AND CHAPEL HILL