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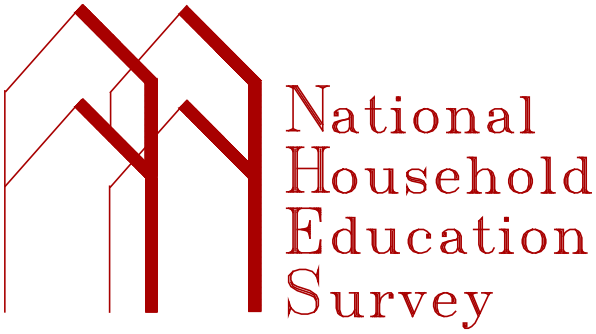
User's Manual October 1996

National Household Education Survey of 1995

Adult Education Data File User's Manual



U.S. Department of Education
Office of Educational Research and Improvement NCES 96-826

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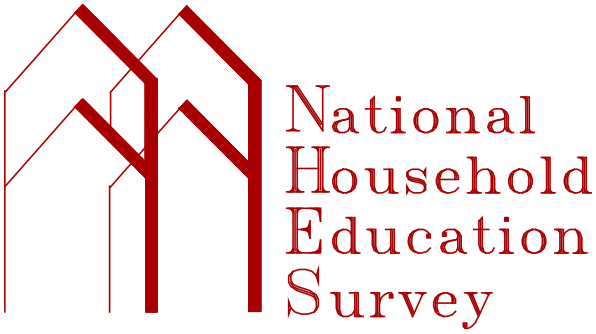

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U.S. Department of Education
Office of Educational Research and Improvement **NCES 96-826**

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1. INTRODUCTION

The 1995 National Household Education Survey (NHES:95) was a random digit dial (RDD) telephone survey of households developed by the National Center for Education Statistics (NCES) and conducted by Westat, Inc. The NHES:95 included two topical survey components; one called the Adult Education (AE) component which collected information about adults' participation in adult education and another called the Early Childhood Program Participation (ECPP) component which collected information about children's participation in nonparental child care and early childhood programs.

This manual provides documentation and guidance for users of the public release data file for the AE component of the NHES:95. Information about the purpose of the study, the data collection instruments, the sample design, and data collection and data processing procedures is contained in this manual. Also contained is some information regarding factors that should be kept in mind when analyzing the AE data.

For the AE component, interviews were completed with 19,722 adults 16 years and older who were not currently enrolled in elementary or secondary school and not on active duty in the U.S. Armed Forces. Data were collected from January through April 1995.

1.1 Background of Study

The legislative mandate of NCES is to collect and report information on the condition of education in the United States. In responding to this mandate, NCES historically collected data primarily from teachers, students, schools, school districts, and state education agencies. The National Household Education Survey is a data collection program that permits NCES to go beyond its traditional, school-based data collection systems to a household-based data collection, thereby greatly expanding the scope of issues that can be covered by the data collection activities of the Center. A household survey has the potential to provide data to address many current issues in education, such as preprimary education, school safety and discipline, adult education, and activities related to citizenship.

The Field Test of the NHES was conducted by Westat for NCES in the fall of 1989. This first effort, which included the screening of about 15,000 households, comprised two topical components: school dropouts (interviews were conducted with adult household respondents and 14- to 21-year-old youth) and early childhood education (interviews were conducted with parents/guardians of 3- to 5-year-olds). The design of the field test and the results of the field test data collection activities are described in an *Overview of the NHES Field Test* (Brick et al. 1992).

The first full-scale implementation of the NHES was conducted in the spring of 1991 (NHES:91). The topical components in the survey were early childhood education for 3- to 8-year-olds and participation in adult education. For the NHES:91, more than 60,000 households were screened, nearly 14,000 early childhood education interviews were conducted with the parents/guardians of eligible children, and about 12,500 interviews were conducted with adults regarding participation in adult education activities. More information about these data can be found in the *NHES:91 Preprimary and Primary Data Files User's Manual* (Brick et al. 1992) and the *NHES:91 Adult and Course Data Files User's Manual* (Brick et al. 1992). NCES reports using these data include *Profile of Preschool Children's*

Child Care and Early Education Program Participation (West et al. 1993) and *Adult Education Profile for 1990-91* (Korb et al. 1991).

The NHES was again conducted in 1993, addressing the topics of readiness for school and safety and discipline in school. The NHES:93 early childhood component focused on readiness for school in a broad sense and examined several relevant issues, such as experience in early childhood programs, the child's accomplishments and difficulties in several developmental domains, early home activities, and delayed kindergarten entry. For the School Readiness component, parents of 10,888 children aged 3 through 7 or in 2nd grade or below were interviewed. The School Safety and Discipline component of the NHES:93 focused on four areas: school environment, school safety, school discipline policy, and alcohol/other drug use and education. Parents of 12,680 children in 3rd through 12th grades were interviewed, as were 6,504 students in 6th through 12th grades. More information about these data can be found in the *NHES:93 School Readiness Data File User's Manual* (Brick et al. 1994) and the *NHES:93 School Safety and Discipline Data File User's Manual* (Brick et al. 1994) . NCES reports using these data include *Approaching Kindergarten: A Look at Preschoolers in the United States* (Zill et al. 1995) and *Parent and Student Perceptions of the Learning Environment at School* (Chandler et al. 1993).

1.2 NHES:95 Survey Topics

The NHES:95 addressed participation in nonparental child care and early childhood programs as well as participation in adult education. These topics are related to Goal 1 and Goal 5, two of the eight National Education Goals. Specifically, Goal 1 states that "By the year 2000, all children in America will start school ready to learn." Goal 6 states that "By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship."

Adult Education (AE) Component

The NHES:95 Adult Education component focused on the participation of adults (aged 16 years and older) in a wide range of educational activities during the 12 months prior to the interview. Respondents were asked about their participation in seven broadly defined types of adult education activities: adult basic skills and GED preparation classes, English as a Second Language instruction, courses taken toward college degrees or vocational diplomas or certificates, apprenticeship programs, career or job-related courses, any other formally structured courses, and computer-only or video-only instruction on the job. The AE component also collected data pertaining to reasons for and barriers to participation in adult education. In all, 19,722 adult interviews were completed: 11,713 with adult education participants and 8,009 with nonparticipants.

Early Childhood Program Participation (ECPP) Component

As noted above, the NHES has included topical components related to early childhood education beginning with the 1989 Field Test. The NHES:95 early childhood component focused on children's early experiences in various types of nonparental child care arrangements and early childhood programs. The core of this survey collected extensive information on children's participation and experiences in four types of nonparental care and programs: care by relatives (not including parents), care

by nonrelatives, Head Start programs, and other center-based programs. Other information collected in this component pertains to children's kindergarten and primary school experiences, children's personal and household demographic characteristics, parent/guardian characteristics, literacy-related home activities, and children's health and disability statuses. Altogether, interviews were completed for 14,064 children who were newborn through age 10 and in 3rd grade or below. This includes interviews for 4,135 infants and toddlers, 3,431 preschool children, 1,680 kindergarten children, 4,717 primary school children, and 101 home school children. A complete description of the ECPP component can be found in the *NHES:95 Early Childhood Program Participation Data File User's Manual* (Collins et al. 1996)

1.3 Overview of Design

The NHES:95 was developed to provide reliable national estimates from both the AE and ECPP components. More than one population and set of issues were addressed concurrently in the NHES:95 because of the high costs associated with screening large numbers of households in order to meet the sample size requirements for precise estimates. This strategy is key to the NHES design. By including more than one topic within the framework of a single survey, the cost of screening households to find those eligible for the study could be partitioned over the two component surveys.

Another general feature of the NHES was developed in response to concerns about the burden placed upon those who respond to multiple survey components. With the introduction of multiple surveys within a single framework, the possibility of increasing response burden on the members of the sampled households arose. It is possible that the same household member could be selected to respond to more than one interview and/or that more than one household member could be sampled. For the ECPP interview, if there were one or two eligible children in the household, those children were sampled for the survey. If the household included more than two eligible children, two children were sampled from that household, with kindergartners sampled at a higher rate to improve single-year estimates for these children. For the AE interview, one adult per household was sampled unless the household contained rare subgroups, such as adult education participants with low educational attainment, in which case up to two adults per household were sampled. Since households may have had up to two ECPP interviews and up to two AE interviews, the maximum number of interviews per sampled household was four. (See chapter 3 for a detailed discussion of sampling procedures for the NHES:95.)

Even though sampling methods reduced the number of interviews per household, the length of the interview was considered to be a critical factor in obtaining high response rates and reliable estimates. Therefore, the number of items included in the NHES:95 was limited in order to help improve response rates and reduce the demands made on survey respondents. The average administration time for the ECPP component was 12.6 minutes; for the AE component it was 13.9 minutes.

Because of the above requirements, complex sampling techniques, and the need for quick and accurate administration, the NHES:95 was conducted using computer assisted telephone interviewing (CATI) technology. Some of the advantages of CATI for the NHES:95 included improved project administration, on-line sampling and eligibility checks, scheduling of interviews according to a priority scheme to improve response rates, managing data quality by controlling skip patterns and checking responses on-line for range and consistency, and an on-line "help" function to answer interviewers' questions.

Five different interview instruments were used in the NHES:95. These instruments were the Basic Screener, the Expanded Screener, the ECPP interview, the AE interview, and the AE Splice interview. The Basic and Expanded Screeners were two different household screening interviews that were used to sample household members for the ECPP and AE interviews; they are discussed in detail along with the AE interview in chapter 2. The AE Splice interview was used for a special methodological test and is also discussed in chapter 2. Items within each of the five NHES:95 instruments were programmed so that the appropriate items appeared on the interviewer's computer screen corresponding to the respondent's answers to previous questions.

Table 1-1 summarizes the number of completed interviews and response rates for the Basic and Expanded Screeners, ECPP, and AE components. More details on the computation of these rates are given in chapter 4.

1.4 Flow of the Interviews

Figure 1-1 shows the flow of the NHES:95 interviews. Each household contact began with a Screener interview (either a Basic or Expanded Screener), which obtained information used to sample adults and children for extended interviews. (The term "extended interview" refers to the topical components of the study, that is, the AE or ECPP interviews.) The information gathered in the screening interview pertained to household membership, school enrollment, educational attainment, and adult education participation. The Expanded Screener included questions beyond those needed to sample subjects for the study, and was included in the NHES:95 as a feasibility test of a means of collecting additional information about household members who may not be sampled for AE or ECPP interviews. (The Expanded Screener is discussed further in chapter 2.)

If the household contained any 0- to 10-year-olds in 3rd grade or below, up to two ECPP interviews were conducted with the parent or guardian most knowledgeable about each child's care and education. Any adults aged 16 or older and not enrolled in elementary or secondary school who were sampled for the AE interview responded to the interviews themselves.

Whenever possible, all interviews with household members were conducted during the same telephone call as the Screener, starting with any AE or ECPP interviews for which the Screener respondent was the appropriate extended interview respondent. Followup calls were made to complete interviews not completed during the initial contact.

1.5 Contents of Manual

The chapters that follow provide additional information about the survey instruments (chapter 2), the sample design and estimation procedures (chapter 3), data collection and response rates (chapter 4), data preparation (chapter 5), and the use of the AE data file and codebook (chapter 6). Data considerations and anomalies identified in the data are highlighted in chapter 7. The appendices provide a copy of the Basic and Expanded Screeners and the AE questionnaire, the public file layout, the SAS code used to create composite variables, and the codebook for the AE data file. The industry and occupation coding manual can be found in appendix E and the major fields of study coding manual can be found in appendix F of this manual.

Table 1-1.-- Summary of completed interviews and completion and response rates

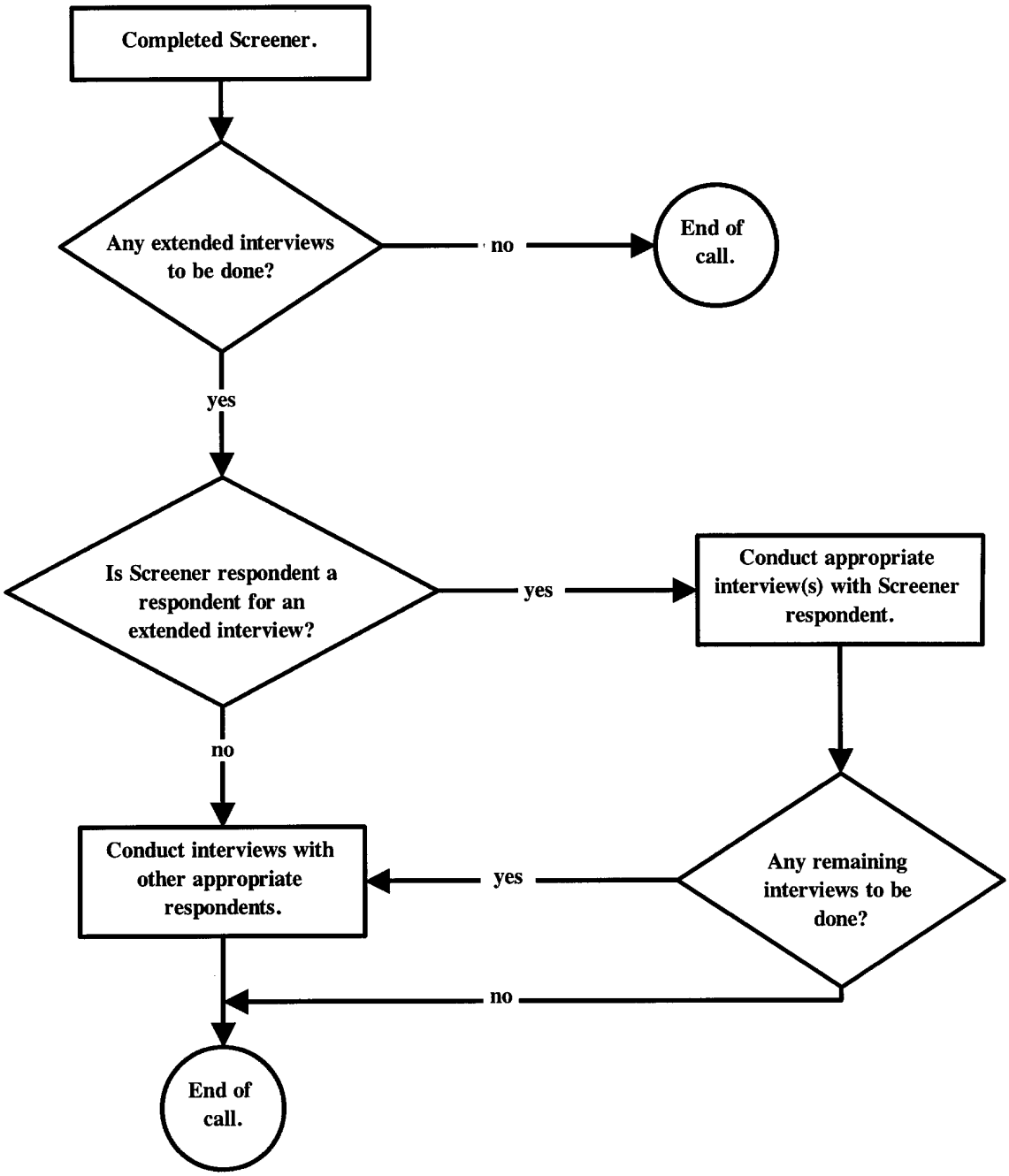
Interview type	Number of completed interviews	Completion rate[1]	Response rate[2]
Basic Screener	43,987	73.3	73.3
Expanded Screener	1,478	73.2	73.2
Early Childhood Program Participation	14,064	90.4	66.3
Adult Education	19,722	80.0	58.6
Adult Education Splice	3,569	87.3	64.0

[1]The completion rate is the percentage of completed interviews for a specific stage of the survey (i.e., the household screening stage or the AE or ECPP interview stage). It is a ratio of the number of completed interviews to the number of units (e.g., households, household members) sampled for the interviews. The completion rates presented are weighted.

[2]The response rate indicates the percentage of possible interviews that have been completed, taking all sampling stages into account. It is the product of the Screener completion rate for the AE or ECPP interview. The response rate and completion rate are identical for the first stage of sampling and interviewing (i.e., the Screener). The response rates presented are weighted.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

Figure 1-1.--Flow of the interviews



2. DESCRIPTION OF DATA COLLECTION INSTRUMENTS

The sections that follow describe the questionnaires used to collect data for the AE component of the NHES:95. Included are descriptions of the Basic and Expanded Screeners and the AE interview. Appendix A contains a copy of each instrument.

2.1 The NHES:95 Basic and Expanded Screeners

The purpose of the screening interview in the NHES:95 was to gather information needed to sample household members to be AE or ECPP interview subjects. The NHES:95 Basic Screener served this purpose. In addition, an alternative screening instrument that collected information beyond that needed to sample subjects for extended interviews was also tested in the NHES:95. An Expanded Screener was tested in a small number of households (approximately 2,000) to evaluate the possibility of using screening interviews to collect data on standard education and sociodemographic characteristics of households, as well as on a key topical issue in education (e.g., use of public libraries). Therefore, while the vast majority of AE interviews were preceded by the Basic Screener interview, some received the Expanded Screener test instrument. Both screening instruments are discussed in detail below. However, please note that throughout this manual, unless otherwise noted, the term "Screener" refers to the screening interview in general (either the Basic or Expanded Screener).

Basic Screener

The purposes of the NHES:95 Basic Screener were to determine whether sampled telephone numbers belonged to households and to collect information required for sampling household members for extended interviews. The Basic Screener was designed to accomplish these tasks efficiently, placing minimum burden on the respondent.

The Basic Screener questionnaire was designed to flow smoothly through the following steps:

- Explain the purpose of the call;
- Determine if the telephone number reached was used for residential or both residential and business purposes;
- Verify that the Screener respondent was an adult member of the household;
- Identify all persons who resided in the household and obtain their ages and genders;
- Gather information needed for sampling subjects for extended interviews (e.g., school enrollment status, current grade, high school completion status, adult education participation status); and
- Determine the adult household member most knowledgeable about each sampled child, and determine the relationship of that person to the child.

The first series of questions in the Basic Screener determined whether the phone number was residential and whether the person on the telephone was eligible to answer the questions. If it was determined that the phone number was used for business only, the call was terminated. The survey continued for numbers that were for household use or for both business and household use.

If the person who answered the telephone was not a household member or was a household member under 18 years of age, an appropriate Screener respondent was requested. If no member of the household was 18 years or older, a person designated as the male or female head of household was eligible to be the Basic Screener respondent.

Once an appropriate Basic Screener respondent was on the telephone, the entire household was enumerated. The enumeration involved collecting the first name, age, and gender for each household member. Basic Screener questions directly following the enumeration determined whether any household members were sampled for the study. The questions asked whether children or youth ages 3 to 10 or 16 to 19 in the household were attending a school or being home schooled, and the grade or year of school in which they were enrolled. Questions also inquired about the high school completion status and adult education participation status of household members aged 16 or older and not currently enrolled in grade 12 or below. If no household members were selected for extended interviews, the screening was terminated.

The final series of Basic Screener items were administered if children were sampled for ECPP interviews and if any adult sampled for an AE interview aged 16 to 25 was enrolled in college, graduate school, or vocational/technical school. For children sampled for the ECPP interview, the final Basic Screener questions recorded the parent or guardian in the household who was the most knowledgeable about the sampled child's care and education, and that person's relationship to the sampled child. The parent or guardian who was identified as the most knowledgeable was designated the respondent for the ECPP interview about the sampled child. For 16- to 25-year-olds enrolled in post-secondary school and sampled for the AE interview, the final questions determined whether these persons were living in the sampled household, in student housing, in another private home or apartment, or in an institution or group quarters. Those living in another private home or apartment were ineligible for the survey because they had their own probability of selection in their own household. Those living in an institution or group quarters also were ineligible for the survey because the NHES is a survey of households and these living arrangements do not qualify as households. Those living at the sampled household or in student housing were eligible. The last names and telephone numbers of those living in student housing were obtained so they could be contacted at their student housing for the interviews.

Expanded Screener

Many NHES screening interviews are done in households in which no person is sampled for extended interviews, therefore yielding no data that are useful for analysis purposes. The NHES:95 Expanded Screener was included as a feasibility test of a means of collecting information about households and household members who may not be sampled for extended interviews. A relatively small number of households received the Expanded Screener (4,040 telephone numbers were sampled; 1,962 residential phone numbers were identified, and 1,478 Expanded Screeners were completed).

The Expanded Screener contained the same questions used in the Basic Screener to identify appropriate Screener respondents, to enumerate household members, and to sample household members

for extended interviews. However, the Expanded Screener also contained questions that gathered information on some educational and sociodemographic characteristics of all household members including school enrollment status, educational attainment, marital status, race and ethnicity, languages first spoken and languages spoken in the home. It also contained items gathering some household-level information, including household income and whether the home is owned or being rented. Also included were questions related to a current educational issue -- household members' use of public libraries.

For this test, four different versions of the Expanded Screener were administered. These versions differed in the subsets of questions that were asked in addition to the Basic Screener questions. For example, some households received the questions gathering sociodemographic information, but did not receive questions pertaining to household members' use of public libraries; other households received both sets of items. Because this was a test instrument, data particular to the Expanded Screener are not included in the public release file or the proprietary file (see section 6.3 for a brief discussion of the AE proprietary data file).

2.2 Adult Education Interview

In the NHES:95 AE component, data were collected about adults aged 16 and older who were not enrolled in elementary or secondary school at the time of the interview. Based on responses to the background information at the outset of the interview, respondents were asked the appropriate sets of items regarding their adult education participation in the past 12 months. There are seven types of adult education:

- English as a Second Language;
- Basic skills and GED preparation;
- Credential;
- Apprenticeship;
- Career- or job-related activities;
- Other formal structured activities; and
- Computer-only or Video-only instruction.

With two exceptions, all respondents were questioned about their participation in each of the general types of adult educational activities listed above, and thus, respondents' participation status was not determined until survey completion. The two exceptions were 1) only persons whose main language at home was not English were asked about participation in English as a Second Language instruction and 2) only persons whose educational attainment is less than high school, who completed high school in the last year, or who received their high school diploma in a foreign country were asked about participation in basic skills training and GED preparation. To avoid redundancy and increased response burden, household information was collected only in the first interview conducted in each household.

2.3 Adult Education Splice Interview

A splice sample was included with the NHES:95 to help evaluate the difference in the participation rates as estimated from the NHES:91 and the NHES:95, especially due to the different screening procedures in these surveys. The initial questions from the NHES:91 AE component were asked of the sampled persons. Only one adult was selected for interview from each sampled household.

2.4 Authorship of the Adult Education Questionnaire

The AE questionnaire was designed by Carin Celebuski, Kwang Kim, and Mary Collins of Westat, and Peter Stowe of NCES. They received advice and guidance from a Technical Review Panel. Panel members were Jean Lowe, Center for Adult Learning and Educational Credentials; Ivan Charner, Academic for Educational Development; Alice Grindstaff, George Meany Center for Labor Studies; Elisabeth Hayes, University of Wisconsin-Madison; Noah Brown, National University Continuing Education Association; Rebecca Maynard, University of Pennsylvania; Tony Sarmiento, AFL-CIO; Rosalind Bruno, Bureau of the Census; John Beverly, U.S. Department of Labor; James Massey, National Center for Health Statistics; Richard Hoehlein, Tidewater Community College; Janet Baldwin, Center for Adult Learning and Educational Credentials; Barry Stern, Public Performance Information Systems.

3. SAMPLE DESIGN AND IMPLEMENTATION

This chapter describes the sample design for the NHES:95, including a number of special features of the design. Also presented are the procedures for weighting to national estimates, imputation for items that had missing values, and variance estimation.

3.1 Sampling Households

Different methods have been developed over the years for selecting random samples of telephone households. The Mitofsky-Waksberg method of random digit dialing as described in Waksberg (1978) is probably the best known of the methods. For the NHES:91 and the NHES:93, a modified Mitofsky-Waksberg method described by Brick and Waksberg (1991) was used. The NHES:95 used a different approach to RDD sampling, called a list-assisted method. This method reduces the number of unproductive calls to nonworking or nonresidential numbers (compared with simple random sampling of all numbers), produces a self-weighting sample, is a single stage and unclustered sample, and eliminates the sequential difficulties associated with the Mitofsky-Waksberg method. The major disadvantage of this method is that it incurs a coverage bias because not all telephone households are included in the sampling frame.

The list-assisted sampling used in the NHES:95 was conducted by stratifying telephone numbers by the type of 100-bank they fall within (all the numbers in a 100-bank have the same first 8 digits of the 10-digit telephone number). An equal probability random sample of telephone numbers was selected from all possible telephone numbers that were in 100-banks with at least one White Page directory-listed telephone number (called the listed stratum). Telephone numbers in 100-banks with no listed telephone numbers (called the zero-listed stratum) were not sampled. The telephone numbers in the listed stratum included both listed and unlisted numbers.

A coverage bias arises because households in the zero-listed stratum have no chance of being included in the sample. Empirical findings were presented by Brick, Waksberg, Kulp, and Starer (1995) to address the question of coverage bias. These results show that the percentage of telephone numbers in the zero-listed stratum that are residential is very small (about 1.4 percent), and about 3 to 4 percent of all telephone households are in the zero-listed stratum. Furthermore, the bias resulting from excluding the zero-listed stratum is generally small.

The sampling frame for the NHES:95 was all telephone numbers in 100-banks with one or more listed telephone numbers as of December 1994. An important goal of the NHES:95 was to produce reliable estimates for subdomains defined by race and ethnicity. To accomplish this goal, telephone numbers in areas with high percentages of blacks and Hispanics were sampled at higher rates. The sampling frame used in the study contained the 1990 census counts of the percentage of persons in the area by race and ethnicity. The 100-banks were classified in the high minority concentration stratum if at least 20 percent of its population was black or at least 20 percent was Hispanic. The banks that did not

meet this requirement were classified in the low minority concentration stratum. The sampling rate in the high minority concentration stratum was twice that of the low minority stratum.[1]

A sample of 133,874 telephone numbers was selected for the NHES:95, but not all these telephone numbers were actually used, as described below. The sampled 133,874 telephone numbers were randomly allocated to the AE Splice sample (n = 10,620), the Expanded Screener sample (n = 4,040), and the regular Basic Screener sample (n = 119,214). The telephone numbers in the regular sample were then divided into random subsets for data collection. A decision was made during data collection to reduce costs by eliminating a random subsample of 13,415 telephone numbers from the regular sample. Thus, a total of 120,459 sampled telephone numbers were used in the data collection. Of this total, 62,984 numbers were sampled from the high minority stratum, including 5,553 in the AE Splice sample and 2,112 in the Expanded Screener sample. Screening interviews were completed if the sampled telephone number was residential and the respondent agreed to participate in the survey. The number of households with completed screening interviews was 45,465. There was an expectation that 120,459 telephone numbers would have resulted in 56,760 completed Screeners. The lower than anticipated response rate was the main reason this number of Screeners was not achieved.

3.2 Sampling Within Households

Once the enumeration of the household members was completed in the Screener, the sampling of members for the extended interviews was done by computer. Any adult aged 16 years or older, not currently enrolled in secondary school, was eligible for sampling for the AE component. Active duty personnel of the U.S. Armed Forces were excluded from the sample because the NHES is designed to examine only the civilian population. There were two key domains of adults that required special sampling procedures: adults with low educational attainment and adults who participated in some type of adult education activity in the last 12 months. In general, one adult was sampled per household. However, up to two adults were eligible to be sampled in households in which any adult was classified as a low-education participant, because many Department of Education and other federal adult education programs are targeted to adults with low educational attainment.

In order to sample adults with low educational attainment and adults who participated in some type of adult educational activity in the past 12 months at different rates, items about the participation of each adult in adult education and about high school completion were included in the Screener interview. Responses to Screener items were used to classify adults for sampling.

Each adult was classified as being in one of four categories for sampling purposes:

(a) low education, participated in adult education (LP);
(b) low education, had not participated in adult education (LU);
(c) high education, participated in adult education (HP); and
(d) high education, had not participated in adult education (HU).

[1] Research was done for the NHES Field Test of 1989, the NHES:91, and the NHES:93 that tested the effects of different sampling plans and definitions of high minority strata on sample sizes and variances of estimates. This research led to implementing the procedures just described for oversampling telephone numbers in high minority areas. This design improves the precision for estimates of blacks and Hispanics and allows the overall estimates to be as precise as possible, given the constraints of oversampling minority areas.

Please recognize that some adults who were classified as participants in adult education in the Screener reported that they were not participants and vice versa. It is important to realize that the misclassification of persons in the screening interview for sampling purposes did not bias the estimates of participation, even though it made it difficult to estimate the target sample sizes in the various domains accurately.

After the adults were classified, an unequal probability sample of adults was selected. For households with only one adult, the sampling rates for the four categories ensured that LPs were selected with certainty (a probability of 1.0), LUs and HUs were selected with probability of 0.20, and HPs were selected with probability 0.50^2. As a result, a household with one HP adult would have that adult selected 50 percent of the time and no one selected the other 50 percent. For households with more than one adult, the same base rates applied, except the sample size was restricted to sample, at most, one adult per household unless there were one or more Lps in the household. If there were one or more Lps in the household, up to two adults could be selected (one LP *would* be selected and another adult *might* be selected).

The estimates of the sample sizes for the AE component of the NHES:95 were based on assumptions about the number of adults per household, the rates of participation in adult education, the rate of misclassification of adults by Screener respondents, and response rates. The estimates of participation from the 1992 Current Population Survey (CPS) were used to predict the percentage of adults participating in adult education activities.

Based on the design assumptions, the expected number of completed interviews in a sample of 41,383 households (the 45,465 completed households minus the 4,082 splice sample households) was 14,678, including 7,788 participants and 6,890 nonparticipants. The actual number of completed interviews was 19,722, including 11,713 participants and 8,009 nonparticipants. The differences between the actual and the expected sample sizes were largely the result of different participation rates between the observed rates of participation and the actual rate. The estimate of the participation rate from the CPS was 24 percent, and the observed rate in the NHES:95 was nearly twice as large. A technical report is being prepared that examines the differences in the participation rates as measured in the CPS and the NHES, *Measuring Participation in Adult Education Activities* (Brick, et al., forthcoming).

3.3 Weighting Procedures

The objective of the NHES:95 is to make inferences about the entire civilian, noninstitutionalized population for the domains of interest. Although only telephone households were sampled, the estimates were adjusted to totals of persons living in both telephone and nontelephone households derived from the Current Population Survey (CPS). Beginning in 1994, the CPS used totals of the number of persons that were adjusted to account for the undercoverage from the 1990 decennial Census. Much of the undercoverage was in urban areas and was disproportionately among racial and ethnic minorities. Any additional undercoverage in the CPS of special populations, such as the homeless, remains in these totals. The weighting procedures are described briefly below. More complete details are presented in a Working Paper entitled *Unit and Item Response Rates, Weighting, and Imputation Procedures in the 1995 National Household Education Survey* (Brick and Broene, forthcoming).

[2] These probabilities were developed to meet the sample size requirements for these four categories of adults.

The first step was the weighting associated with the sample of telephone numbers. A household weight was developed to account for the RDD sampling of telephone numbers, including the sampling rate differences by minority concentration strata. This weight was then adjusted for households that had more than one telephone number, hence more than one chance of being included in the sample. The final adjustment was made in the household weights to account for the fact that not all households responded. Nonresponse adjustment cells were defined based on the characteristics of the areas served by the telephone exchange. More specifically, the adjustment cells were based on a cross-classification of the following variables: metropolitan status, census division, percent renters, percent owner occupied, percent college graduates, median income, percent black, percent Hispanic, and percent age 0 to 17. The adjustments were defined as the inverse of the response rates for the cells. The household weight was used as a base weight for the subsequent weighting steps.

The next weighting procedures resulted in person-level weights, i.e., weights used to estimate the number of persons. These methods included the adjustment of the estimates to independent totals from the CPS. The person-level weighting procedures are described below.

Person Weights

As described earlier, every adult 16 years and older not currently enrolled in secondary school or the military was eligible to be interviewed for an interview, but not all adults in the households with completed Screener interviews were sampled. Adults were sampled at different rates that varied depending on whether the adults had a high school diploma or its equivalent, such as GED, and had participated in any adult education activities in the 12 month prior to the interview. The sampling rates for adults without a high school diploma or GED were greater than adults with a high school diploma and the rates were also higher for those adults who had participated in adult education activities than those who had not.

Since the data used for sampling were collected during the Screener, some of the information may not have been correct for the sampled adult. The actual data used to classify the adult by education level and participation status was collected in the extended interview with the sampled adult. The misclassification of adults in the Screener was anticipated in the design of the survey based on data collected in the NHES:91. The weighting steps described below were developed with this possible misclassification taken into account so that the estimates would be unbiased.

The weighting procedures were different depending on the age of the adult. First, the procedure is described for those adults age 20 years or older. The steps for younger adults are described later. The first step in developing the person weights was to adjust the household weights for the probability of sampling the adult from the household. For example, if there were two adults in the household and only one was sampled then the sampling adjustment was two, which is the inverse of the probability of selecting the adult from the household. The actual adjustments were more complex because they took into account the varying sampling rates by the adult=s education level and by whether the adult was participating in adult education as well as the number of eligible adults in the household. The person-level weighting adjustment for the probability of sampling the adult from the household was then multiplied by the household weight to create a person level weight.

The next step involved adjusting the person level weight for nonresponse. Four nonresponse adjustment cells were created by crossing the data collected in the Screener on the adult=s education level (low or high) and participation in adult education (participating or not). For each cell, the ratio of the weighted number of sampled adults to the weighted number of responding adults was then computed. The nonresponse adjusted person level weight was the person level weight adjusted by this nonresponse adjustment ratio.

The final stage of weighting involved raking the nonresponse adjusted person weights to the percentage distributions from the October 1993 CPS using the total number of persons from the February 1995 CPS. Raking is an iterative procedure that ensures that survey weights sum to known population totals. It is a calibration estimator and closely related to poststratification. The main purpose of the raking was to adjust for undercoverage of persons who lived in households without telephones.

The raking for adults 20 years and older was done to four dimensions: 1) race/ethnicity and household income; 2) Census region and urbanicity; 3) age and gender; and 4) home type (i.e., owned or rented). The control totals for adults 20 years and older are given in table 3-1.

These same procedures could not be followed for younger adults because control totals for adults 16 to 19 years and not currently enrolled in secondary school were not available from the CPS. For adults 16 to 19 years, the first step was to poststratify all the adults enumerated in the sampled households to the control totals shown in table 3-2. These are totals of all adults 16 to 19 years old by age and Census region from the same CPS files mentioned above. The next step was to adjust the weights of the sampled persons by the probability of selecting the person as described above for older adults. At this stage, the weights of those not sampled or not eligible were set to zero. The sum of the weights for the eligible sampled persons was 4,621,527. The final step was to adjust the weights of the respondents to account for nonresponse, where the nonresponse adjustment was the weighted number of sampled adults divided by the weighted number of respondents.

Since many of the younger adults were still enrolled in secondary school and not eligible for the study, the sum of the weights does not equal the sum of the control totals in tables 3-1 and 3-2, rather the sum of the weights for the younger adults is 4,621,527. Thus, the estimated total number of eligible adults is 189,575,702 (4,621,527 + 184,954,175). The final raked person weight for each sampled adult with a complete AE interview is contained in the 184,954,175 adults 20 years and older plus the 4,621,527 adults 16- to 19-years-old not enrolled in secondary school in the variable AEWEIGHT in the data file.

Table 3-1.-- NHES:95 control totals for raking adults age 20 years and older in the AE regular and splice surveys

Control characteristics		Control totals
Race/ethnicity	**Household income**	
Non-Hispanic/non-black	Less than $10,000	15,958,260
Non-Hispanic/non-black	$10,000 or more	133,637,820
Hispanic	Less than $10,000	3,457,282
Hispanic	$10,000 or more	11,654,140
Black/non-Hispanic	Less than $10,000	5,963,521
Black/non-Hispanic	$10,000 or more	14,283,152
Census region	**Urbanicity**	
Northeast	urban	29,814,613
Northeast	rural	7,971,525
Midwest	urban	31,812,118
Midwest	rural	12,558,388
South	urban	43,612,194
South	rural	19,919,565
West	urban	33,865,109
West	rural	5,400,662
Age	**Gender**	
20 to 29 years	male	18,341,877
20 to 29 years	female	19,047,689
30 to 49 years	male	39,681,845
30 to 49 years	female	41,033,240
50 years and older	male	30,105,466
50 years and older	female	36,744,058
Home type		
Owned or other		131,565,993
Rented		53,388,182
Total		**184,954,175**

NOTE: Details do not add to the same total due to rounding.

SOURCE: Special tabulations from the October 1993 and February 1995 Current Population Surveys.

Table 3-2.-- NHES:95 control totals for poststratifying young adults in the AE regular and splice surveys

Control characteristics		Control totals
Census region	**Age**	
Northeast	16	636,782
Northeast	17	628,551
Northeast	18	614,011
Northeast	19	604,423
Midwest	16	905,416
Midwest	17	819,446
Midwest	18	861,713
Midwest	19	842,692
South	16	1,208,377
South	17	1,148,100
South	18	1,209,436
South	19	1,217,132
West	16	793,579
West	17	759,306
West	18	685,663
West	19	710,028
Total		**13,644,655**

NOTE: Details do not add to the same total due to rounding.

SOURCE: Special tabulations from the October 1993 and February 1995 Current Population Surveys.

Course Weights

Data were collected from AE participants for up to six career- or job-related courses and up to three other formal structured courses. If an adult took more than six career- or job-related courses, six were randomly selected for data collection; if an adult took more than three other formal structured courses, three were randomly selected for data collection.

Some analysts may have an interest in conducting analyses using individual course data. The NHES:95 AE component is based on a sample of adults, and not a sample of courses. What having a sample of persons rather than courses means is that, in the NHES:95, a course taken by 10 adults would be represented 5 times as often as a course taken by 2 adults. Because the sample is person-based, course-based estimates are inappropriate. For example, it would be inappropriate to state that "*x* percent of all career- or job-related courses taken by adults in the U.S. were provided by employers," since this is a course-based estimate (an estimate of courses) and not a person-based estimate. However, the data from the NHES:95 may be used to conduct analyses of "person-courses," that is the course "seats" represented by the sample members. This analysis must take into account the sampling of courses. Course weights for career- or job-related courses and other formal structured courses are provided for this purpose.

Course weights are also needed for other types of analyses regarding career- or job related courses and other formal structured courses. For instance, analysts may have an interest in making person-based estimates that use totals from the courses reported, for example, total or mean time spent in courses or total or mean amount spent for course-related costs. Again, because the courses were sampled for some respondents, course weights are needed to fully represent the time or cost.

The course weight to be used for career- or job-related courses is WRWGT; the course weight to be used for other formal structured courses is SAWGT. The course weight is the ratio of the total number of courses of a given type reported by the respondent to the number of courses for which data were collected. If a respondent took eight career- or job-related courses, then WRWGT equals 1.333 (8/6). If a person took six other formal structured courses, then SAWGT equals 2.000 (6/3). If the person took few courses and subsampling was not necessary, the course weight equals 1.0. The course weight is applied to variables associated with courses in order to represent the total courses taken by the adult, the total amount spent, the total time spent in courses, and so on. The application of the weight results in a new **variable** that represents the total for all the person's courses, taking into account the subsampling of courses. Note that the course weight is used to create a **variable**, and is not intended for use in the same way as full sample weights in analysis.

Example: An example of the application of the career- or job-related course weight (WRWGT) can be seen in the derived variable WRTMONEY, the total cost for career- or job-related courses. To form this variable, the cost variables for career- or job-related courses (WRTUITO1, WRTUITO2, etc.) were added together and the sum was multiplied by the career- or job-related course weight (WRWGT). (This variable is described on page 54 and the code used to create the derived variable appears on page C-7.)

The calculated variable WRTMONEY can be analyzed like any other variable in the file by using the person weight (AEWEIGHT) in the procedure statement (e.g., a SAS PROC or an SPSS procedure) to estimate the characteristic.

The total number of person-courses or "seats" in AE activities for the population can be computed by first creating a new variable. For example, a person-course estimate of interest might be the total number of career- or job-related person-courses that were provided by employers. In this case, count the number of employer-provided courses reported by the adult (the count of WR1PREMP = 1, WR2PREMP = 1, WR3PREMP = 1, WR4PREMP = 1, WR5PREMP = 1, WR6PREMP = 1). That count is then multiplied by the career- or job-related course weight (WRWGT) to arrive at the weighted number of employer-provided career- or job-related person-courses. The weighted count of this variable (using AEWEIGHT) across adults would be used in an analysis to provide the estimate of the employer-provided career- or job-related person-courses.

For many analyses related to courses, the use of course weights is not needed. For example, to estimate whether an adult took **any** career- or job-related courses provided by a university does not require the use of a course weight. For this example, create a variable that indicates if the first career- or job-related course was provided by a university or the second career- or job-related course was provided by a university, and so on, up to the total of six career- or job-related courses. The course weight makes no difference in this example, because the analysis is focused on whether **any** of the courses had a specific characteristic, and not on a total. On the other hand, if the average number of university-provided courses adults took is of interest, then course weight would be used to create a variable representing the total number of university-provided courses (the number for which data were collected times the course weight).

The calculation of standard errors for estimates produced in analyses using variables constructed with course weights is the same as in all other analyses using the AE data set. Since the same full sample weight (AEWEIGHT) is used in the analysis procedure, the method used to calculate variances for the estimates, whether using a Taylor series approach or a replication approach, is identical to all other analyses.

3.4 Computing Sampling Errors

Direct estimates of the sampling errors assuming a simple random sample of adults will typically underestimate the variability in the estimates. The NHES:95 sample design and estimation include procedures such as oversampling areas with higher concentrations of minorities, clustering the sample of persons within households, sampling with differential probabilities, and raking to control totals, which deviate from the assumption of simple random sampling.

One method for computing sampling errors to reflect these aspects of the sample design and estimation is the replication method. Using replication involves splitting the entire sample into a set of groups or replicates based on the actual sample design of the survey. The survey estimates can then be estimated for each of the replicates by creating replicate weights that mimic the actual sample design and estimation procedures used in the full sample. The variation in the estimates computed from the replicate weights can then be used to estimate the sampling errors of the estimates from the full sample.

A total of 50 replicates were defined for the NHES:95 based on the sampling of telephone numbers. A total of 50 replicates were created to provide reliable estimates of sampling errors within reasonable data processing costs. The specific type of replication procedure used for the NHES:95 is a jackknife replication method (Wolter 1985). It involves dividing the sample into 50 random samples for the computation of the replicate weights. Replicate weights were created for each of the 50 replicates

using the same estimation procedures used for the full sample. These replicate weights are included in the data file as ARPL1 to ARPL50. The computation of the sampling errors using these replicate weights can be done easily using WesVarPC, a Windows-based software program (Brick et al. 1995), with the JK1 option. The WesVarPC software is available free of charge through the Internet (http:// www.westat.com) or by sending an e-mail message to wesvar@westat.com.

Another approach to the valid estimation of sampling errors for complex sample designs is to use a Taylor series approximation to compute sampling errors. The software available to compute sampling errors using this method typically requires that two variables, stratum and PSU, be available for all the completed interviews. One example of this type of software is SUDAAN (Shah et al. 1995). To support users with this type of software, the stratum and PSU variables were computed based on the sample design and have been included in the data file as STRATUM and PSU. For the NHES:95, there are two strata corresponding to the high and low minority concentration telephone number exchanges. The PSUs refer to the clusters of persons living together at telephone numbers, that is, there is a unique PSU value for each unique telephone number. The full sample weight to be used for analysis is AEWEIGHT. To produce sampling errors for estimates from the NHES:95 data using SUDAAN, the appropriate statements include the DESIGN=WR and NEST STRATUM PSU statements.

Data users should be aware that the use of different approaches or software packages in the calculation of standard errors may result in somewhat different standard errors. Estimates of standard errors computed using the replication method and the Taylor series method are nearly always very similar, but not identical.

3.5 Approximate Sampling Errors

Although the methods of directly calculating the sampling errors using the methods described above are recommended for many applications, simple approximations of the sampling errors may be valuable for some purposes. One such approximation is discussed below.

Most statistical software packages compute standard errors of the estimates based upon simple random sampling assumptions. The standard error from this type of statistical software can be adjusted for the complexity of the sample design to approximate the standard error of the estimate under the actual sample design used in the survey. For example, the variance of an estimated proportion in a simple random sample is the estimated proportion (p) times its complement (l-p) divided by the sample size (n). The standard error is the square root of this quantity. This estimate can be adjusted to more closely approximate the standard error for the estimates from the NHES:95.

A simple approximation of the impact of the sample design on the estimates of the standard errors of the estimates that has proved useful in previous NHES surveys and in many other surveys is to adjust the simple random sample standard error estimate by the root design effect (DEFT). The DEFT is the ratio of the standard error of the estimate computed using the replication method discussed above to the standard error of the estimate under the assumptions of simple random sampling. An average DEFT is computed by estimating the DEFT for a number of estimates and then averaging. A standard error for an estimate can then be approximated by multiplying the simple random sample standard error estimate by the mean DEFT.

In complex sample designs, like the NHES:95, the DEFT is typically greater than one due to the clustering of the sample and the differential weights attached to the observations. In the NHES:95 both of these factors contributed to making the average DEFT greater than one. A fuller description of these factors for the NHES:95 is given in Brick and Broene (forthcoming).

The estimated DEFT computed for a particular estimate in the NHES:95 AE data was typically between 0.8 and 1.3. The average DEFT did not vary considerably for subgroups defined by the size of the estimate or by race and ethnicity. Since participants and nonparticipants in adult education were sampled at different rates, the average DEFTs for these groups were also examined. The average DEFT for participants was 1.1, while the average DEFT for nonparticipants was 1.3.

To be conservative, it is recommended that an average DEFT of 1.3 be used for approximating the standard error of the estimates. This conservative approach is suggested because it will be appropriate for most subgroups (including nonparticipants) while the overall average design effect would underestimate the standard error for nonparticipants. Also, this recommendation is made even though the overall average DEFT was 1.2, where the average was computed over a range of estimated proportions with at least 30 estimates in each of the subgroups described above. This value should result in approximate standard errors that are larger than the actual standard errors in most cases.

The average DEFT can be used to approximate the standard error for an estimate. For example, if a weighted estimate of 40 percent is obtained for some characteristic (for example, the overall adult education participation rate), then an approximate standard error can be developed in a few steps. First, obtain the simple random sampling error for the estimate using the weighted estimate in the numerator and the unweighted sample size in the denominator: the standard error for this 40 percent statistic would be the square root of ((40 x 60)/19,722) = 0.35, where the weighted estimate is 40 percent (p), 60 is 100 minus the estimated percent (100-p), and the unweighted sample size is 19,722 (n). The approximate standard error of the estimate from the NHES:95 is this quantity (the simple random sample standard error) multiplied by the DEFT of 1.3. In this example, the estimated standard error would be 0.46 percent (1.3 x 0.35).

The approximate standard error for a mean can be developed using a related procedure. First, the mean is estimated using the full sample weight in a standard statistical package like SAS or SPSS. Second, the simple random sample standard error is obtained through a similar, but unweighted, analysis. Third, the standard error from the unweighted analysis is multiplied by the DEFT of 1.3 to approximate the standard error of the estimate under the NHES:95 AE design. For example, suppose that the estimated (weighted) mean number of hours per week in a basic skills program was 20 and the simple random sampling standard error (unweighted) was 5 hours. Then, the approximate standard error for the estimate would be 6.5 hours (5 x 1.3).

Users who wish to adjust the standard errors for parameter estimates of regression models should follow a procedure similar to that discussed for means, above. Specifically, the parameter estimates of the model can be estimated using a weighted analysis in a standard statistical software package such as SAS or SPSS. A similar, but unweighted, analysis will provide the simple random sample standard errors for these parameter estimates. The standard errors can then be multiplied by the DEFT to arrive at the adjusted standard error for the NHES:95 design. For example, if a given variable has a weighted estimate of 2.334 and an unweighted standard error of 0.45, then the adjusted standard error would be 1.3 x 0.45 = 0.59.

It should be noted that direct computation of the standard errors is always recommended when the statistical significance of statements would be affected by small differences in the estimated standard errors.

3.6 Imputation

In the NHES:95, as in most surveys, the responses to some data items are not obtained for all interviews. There are numerous reasons for item nonresponse. Some respondents do not know the answer for the item or do not wish to respond for other reasons. Some item nonresponse arises when an interview is interrupted and not continued later, leaving items at the end of the interview blank. Item nonresponse may also be encountered because responses provided by the respondent are not internally consistent, and this inconsistency is not discovered until after the interview is completed. In these cases, the items that were not internally consistent were set to missing.

For most of the data items collected in the NHES:95, the item response rate was very high, with a median item response rate of 98 percent. (The item response rates are discussed in detail in chapter 4.) Despite the high item response rate, **all data items with missing data on the file were imputed**. The imputations were done for two reasons. First, complete responses were needed for the variables used in developing the sampling weights. Second, users will be computing estimates in a variety of methods and complete responses should aid their analysis. The procedures for imputing missing data are discussed below; more information is available in a Working Paper, *Unit and Item Response Rates, Weighting, and Imputation Procedures in the 1995 National Household Education Survey* (Brick and Broene, forthcoming).

A hot-deck procedure was used to impute missing responses (Kalton and Kasprzyk 1986). In this approach, the entire file was sorted into cells defined by characteristics of the respondents. The variables used in the sorting were general descriptors of the interview and also included any variables involved in the skip pattern for the items. The standard set of sort order variables for items with an item response rate greater than 95 percent consisted of MAINRSLT, PARTIC, EDUC, AGECAT, ARACETH, and HINCMRNG[3]. MAINRSLT (main result) is the final completion code for an extended interview. PARTIC is a variable classifying respondents into 1) participants or 2) nonparticipants. EDUC is a variable classifying respondents' education attainment as 1) less than a high school diploma, 2) high school diploma, or 3) more. AGECAT is a variable classifying respondents' age into 1) 16 to 29 years, 2) 30 to 49 years, and 3) 50 years and older. ARACETH is a variable classifying respondents as 1) Hispanic, 2) black, non-Hispanic, or 3) other. HINCMRNG is a variable identifying household income as 1) less than or equal to $25,000 or 2) greater than $25,000.

All of the observations were sorted into cells defined by the responses to the sort variables, and then divided into two classes within the cell depending on whether or not the item was missing. For an observation with a missing value, a value from a randomly selected donor (observation in the same cell but with the item completed) was imputed for the missing value. After the imputation was completed, edit programs were run to ensure the imputed responses did not violate edit rules.

[3] Of these variables, PARTIC, EDUC, AGECAT, and ARACETH were created for imputation purposes only and do not appear in the public data file.

For some items, the missing values were imputed manually rather than using the hot-deck procedure. Manual imputation was used if edit failures were found after the hot-deck imputations were completed or complex criteria were involved (such as examining educational level and credential type to impute major field of study). Manual imputation was done for very few cases, relative to the total number of cases in the AE data set. Manual imputation procedures to correct for edit failures were guided by the total distribution of values for the item being imputed and by the consistency of other data for the individual case. Please see the Working Paper entitled *Unit and Item Response Rates, Weighting, and Imputation Procedures in the 1995 National Household Education Survey* (Brick and Broene, forthcoming) for more information about manual imputation for the NHES:95.

Additional measures were taken to impute some variables that had item response rates of less than 95 percent. Altogether, there were 51 variables with response rates of less than 95 percent and sample sizes greater than 25. Focusing on items administered to at least 25 cases eliminates other items for which the response rate is dependent on just a few cases. For 18 of the 51 variables, additional correlated variables could be identified and were added to the standard sort variables to improve the hot-deck imputation for these items. These 18 variables, and the additional sort variables in parentheses, are as follows (see appendix A for the questionnaire items with which these variable names are associated): BSTUITON (BSWHEN), CR1LENUM - CR2LENUM (CR1PRTYP - CR2PRTYP), CRLENUN1 - CRLENUN2 (CR1PRTYP - CR2PRTYP), APLENNUM (APFEDGOV), APLENUNT (APFEDGOV), APOJTHRS (APFEDGOV), APOJTHRS (APFEDGOV), WRHRS6 (WRHRUNT6), EARNAMT (IBGRADE), EARNUNT (IBGRADE), HINCMRNG (IBGRADE), HINCOME (IBGRADE), HINCMEXT (IBGRADE), WORKNUM (WORKUNT), and FSIC2 - FSIC3 (FSOC2 - FSOC3). These 18 variables had response rates ranging from 54 to 94 percent. For the remaining 33 variables with response rates less than 95 percent, only the standard sort variables were used.

For each data item for which any values were imputed, an imputation flag variable was created. If the response for the item was not imputed, the imputation flag was set equal to 0. If the response was imputed, the flag was set to either 1, 2, or 3. The value of the imputation flag indicates the specific procedure used to impute the missing value. The imputation flag was typically set to 1 if the missing value was imputed using the standard hot-deck approach. Other imputation flag values are explained below.

The procedure for hot-deck imputation only recognizes missing value codes as those that need to be replaced by imputed values. For the NHES:95, these missing value codes were -7=refused, -8= don't know, and -9=not ascertained. Therefore, in some cases, variables that originally equaled -1 (inapplicable) had to be recoded to a missing value code (i.e., -9=not ascertained) prior to being imputed using the standard hot-deck approach. This was done so that data were consistent with the skip patterns of the questionnaire. For these cases the imputation flag was set to 2. For example, if the value of IBWORK12 (whether worked in the past 12 months, A6) equaled -8 (don't know) for an adult, then IBSELFEM (whether self-employed in the past 12 months, A7) was never asked and thus equaled -1 (inapplicable). During the imputation process for this adult, if IBSELFEM was imputed to equal 1 (self-employed), then IBWORK12 had to first be recoded from -1 (inapplicable) to -9 (not ascertained) before the imputation procedure would recognize IBSELFEM as a variable that should be imputed to equal either 1 (self-employed) or 2 (not self-employed). In this case, the imputation flag for IBSELFEM would be set to 2. For some items with complex skip patterns and only a few missing values, the item was imputed manually and the flag was set to 3.

The imputation flags were created to enable users to identify imputed values. Users can employ the imputation flag to delete the imputed values, use alternative imputation procedures, or account for the imputation in computation of the reliability of the estimates produced from the data set. For example, some users might wish to analyze the data with the missing values rather than the imputed values. If the flag corresponding to the variable is not equal to 0, the user can replace the imputed response with a missing value to accomplish this goal. This method could also be used to replace the imputed value with a value imputed by some user-defined imputation approach. Finally, if the user wishes to account for the fact that some of the data were imputed when computing sampling errors for the estimates, the missing values could be imputed using multiple imputation methods (Rubin 1987) or imputed so that the Rao-Shao (1992) variance procedures could be used.

4. DATA COLLECTION METHODS AND RESPONSE RATES

4.1 Data Collection Procedures

The following sections discuss the procedures used in the data collection phase of the NHES:95, including the use of computer-assisted telephone interviewing (CATI), staff training, interviewer assignments and contact procedures, and quality control. More detailed descriptions of these topics can be found in a Working Paper entitled *Design, Data Collection, Interview Timing, and Data Editing in the 1995 National Household Education Survey* (Collins et al., forthcoming).

4.1.1 CATI System Applications

The use of a CATI system for the NHES:95 included a number of applications that facilitated the implementation of the survey. Briefly, the most salient features of the CATI system for the NHES:95 were as follows:

- **Sampling:** The use of online sampling through CATI eliminated the need for separate screening and interviewing calls, reducing the cost and the burden on respondents.

- **Scheduling:** The CATI system was used to feed telephone numbers to the interviewers, maintain a schedule of callback appointments, and reschedule unsuccessful contact attempts to the appropriate day and time.

- **Skip Patterns:** The CATI system was programmed to automatically guide interviewers through the complex skip patterns in the questionnaire, reducing the potential for interviewer error and shortening the questionnaire administration time.

- **Copying Responses:** The CATI system was used to copy responses from one interview to another to prevent unnecessary repetition of questions. For example, when two children with the same parents were sampled in a household, the parent characteristics series and household information items were asked only once. This helped to reduce response burden.

- **Monitoring Survey Progress:** The CATI system was programmed to provide automatic status reports throughout data collection. This allowed ongoing monitoring of the survey's progress.

- **Online Help:** The CATI system was programmed to provide an online help screen for each screen in the screener and extended interviews. These screens, which could be accessed with a keystroke by the interviewer, clarified terminology, explained the intent of questions, and helped the interviewer obtain correct information.

4.1.2 Interviewer Training

Interviewer training was conducted over a 3-week period in late December 1994 and early January 1995. Interviewers were trained in groups of about 30. Interviewers experienced in conducting random-digit-dial CATI surveys received 16 hours of training related to the conduct of the NHES:95, while interviewers with no such previous experience received 20 hours of NHES:95 project training. Prior to the NHES:95 project training, all interviewers had participated in a basic training in general interviewing techniques and the use of the CATI system. In total, 289 interviewers completed training for the study.

Interviewer training was conducted using the CATI system. The trainees entered information in the CATI system during training presentations, providing them with hands-on experience prior to beginning data collection. The topics covered in the training session included an introduction to the study, interactive lectures based on each of the survey questionnaires, details about survey procedures, and techniques for refusal avoidance. Prior to live interviewing, trainees practiced interviews in pairs using several role-play scripts. The majority of training time (about 11 to 12 hours) was spent on interactive lectures and practice interviews using role-play scripts. Most of the remaining time was spent on procedures for contacting households and respondents and techniques for refusal avoidance.

The survey staff included 16 interviewers bilingual in English and Spanish. These interviewers received the same English training as all other interviewers, and were then trained to conduct the interviews in Spanish. All of the CATI screens were translated into Spanish, and these screens were available to bilingual interviewers at a keystroke.

4.1.3 Interviewing Procedures

The CATI system scheduled cases automatically, based on an algorithm that was customized for the NHES:95 survey. The system assigned cases to interviewers in the following order of priority:

- Cases that had specific appointments;
- Cases that had unspecified appointment/general callback times for the time period;
- Cases that had resulted in busy signals 15 minutes earlier;
- Cases that had not been contacted on previous attempts and had not been attempted during the time frame; and
- Cases that were new and had never received call attempts.

At least seven attempts were made by NHES interviewers to screen households in order to determine the presence of eligible household members, that is, an eligible child or adult. These calls were staggered on different days of the week and at different times of the day over a period of at least 2 weeks. This included at least two daytime calls, three evening calls, and two weekend calls. In addition, nearly all cases for which this seven-call limit was reached were released at several points during data collection to receive additional calling attempts. Some cases received more than 20 calls in this effort to complete screening interviews. Cases that were coded as problems were referred to a telephone supervisor to

discuss appropriate methods of completing an interview (e.g., holding a case for some time and releasing it for additional attempts later in the data collection period). In the paragraphs below, the specific calling strategies used during the NHES:95 data collection and their results are described. Because most nonresponse in a random-digit-dialing (RDD) survey occurs at the screening level, these procedures emphasized increasing the Screener response rate. Please see *Design, Data Collection, Interview Timing, and Data Editing in the 1995 National Household Education Survey* (Collins et al., forthcoming) for a more detailed account of these procedures and their results.

The NHES:95 was conducted primarily in English, but provisions were made to interview persons who spoke only Spanish. As mentioned above, the questionnaires were translated into Spanish, Spanish versions of the CATI instruments were programmed, and bilingual interviewers were trained to complete the interview in either English or Spanish.

When the person answering the telephone was not able to speak English, and the interviewer was not bilingual and was not able to identify an English-speaking household member, the interviewer coded the case as a "language problem" and further specified the case as either "hearing/speech problem," "Spanish," or "language other than English or Spanish." Bilingual interviewers were the only ones who could access these "language problem" cases for followup. If a bilingual interviewer encountered a Spanish-speaking respondent, the interviewer could immediately begin to conduct the interview in Spanish without ever coding the case as a language problem.

There were 359 Screeners that were classified by at least one interviewer as a "hearing/speech problem." About one-quarter of these cases (n=100) were eventually completed, either because another household member answered the phone or because the interviewer initially misclassified the case. Of the 100 hearing/speech problem Screeners that were completed, 9 were completed in Spanish.

A total of 1,633 Screeners were classified by the first interviewer making contact as Spanish-speaking. Eventually, 1,300 of these cases were completed, 95 percent of which were completed in Spanish. About 80 percent of all Spanish-classified, language-problem cases were finalized as completes, somewhat higher than the overall completion rate for the Screener.

For the Screeners with respondents identified by the first interviewer making contact as speaking some language other than English or Spanish, only about one-quarter were completed. There were 706 cases in this category; 138 were completed in English and 63 were completed in Spanish.

During the last two weeks of data collection, Screener cases that had been coded twice as non-English language problems (as opposed to hearing/speech problems) were released for additional call attempts in an effort to identify an adult household member who spoke either English or Spanish. The number of Screener cases released for this activity was 393 and only about 10 percent resulted in completed Screener interviews.

Refusal conversion efforts were used to obtain responses from households or individual respondents who had initially refused to complete an interview. However, if the interviewer indicated that the initial response was "hostile" (e.g., profane or abusive), the case was reviewed by a supervisor to determine whether another attempt should be made. One refusal conversion attempt was made for each Screener or extended interview refusal, with the exception of these "hostile" cases. For most of the field period, a 14-day hold was placed on initial refusals before a conversion attempt was made. This period

was decreased near the end of data collection to facilitate survey close-out while maximizing response rates.

An additional refusal conversion attempt was made in a subset of cases which had twice refused to participate in the Screener interview. The cases included in this effort were those for which neither the first or second refusal received a code of "hostile." This effort resulted in the completion of 2,310 additional Screeners, which is about 5 percent of all completed Screeners. All refusals were considered to be final if a third contact with the household resulted in a code of refusal. For extended interviews, cases were coded as final refusals if the first conversion attempt resulted in a second refusal.

Another effort to increase the Screener response rate was the release of "maximum calls" cases, in which a person had answered on at least one of the seven previous attempts. The cases were held for a period of time and released for additional attempts periodically during the data collection period. Initially, only maximum call cases that had never been released for additional attempts were released. However, toward the end of the data collection period, all maximum call cases were released for additional call attempts, regardless of how many additional attempts they had already received. This effort resulted in the completion of 1,393 additional Screeners, which is about 3 percent of all completed Screeners.

There were some numbers at which no answer was ever received during the seven attempts, called "no answer" cases. These cases were also released for additional call attempts, resulting in nearly all no answer cases receiving 14 or more calls unless they were completed prior to that number of attempts. Telephone company business office checks indicated that approximately 40 percent of cases finalized as no answer cases were residential [see *Unit and Item Response Rates, Weighting, and Imputation Procedures in the 1995 National Household Education Survey* (Brick and Broene, forthcoming) for details regarding the use of telephone company business office checks to estimate the residential status of telephone numbers]. Based on this information, the final noncontact cases were proportionally allocated to residential and nonresidential status in the calculation of final response rates.

Another activity to increase Screener-level response included a nonrespondent mailing for those telephone numbers for which an address could be obtained. A brief letter explaining the purpose of the NHES:95 and encouraging participation in the study was mailed to approximately 12,000 households which had not yet completed screening interviews. About one-third of the households to which a letter was mailed completed screening interviews. This yield was higher than that for households for which addresses were sought but could not be obtained (17 percent).

4.1.4 Data Collection Quality Control

Data collection quality control efforts began during the CATI development period. As the CATI system was programmed, extensive testing of the system was conducted. This testing included review by project research staff, telephone interviewing staff, data preparation staff, statistical staff, and the programmers themselves. The testing by staff members representing different aspects of the project was designed to ensure that the system was working properly from all of these perspectives. Three live pretests were conducted in households between March 31 and April 6, June 10 and 13, and July 8 and 9 of 1994. During the first phases of the pretest, 759 ECPP and 120 AE extended interviews were completed. The purpose of the field test was to ensure that the CATI system was working properly. Modifications to

the instruments to address some administrative problems were also made at this time. During the second pretest 111 ECPP and 99 AE extended interviews were completed. The purpose of this phase was to evaluate revisions to the instruments made after the first phase. A few final revisions to the AE interview were evaluated during the third pretest in which 54 extended interviews were completed.

Quality control activities continued during training and data collection. During interviewer training, interviewers were paired with one another and they conducted role-play interviews on telephones monitored by supervisors. When interviewers began actual data collection, they were monitored on an ongoing basis by telephone center supervisors. Project research staff also monitored the interviewers occasionally. Data preparation staff reviewed the cases from the CATI system as they were completed and referred problems to the project staff for resolution. Interviewer memos were posted and distributed when any recurring problems were identified. Additional training was provided as necessary.

Throughout data collection, supervisors and telephone monitors (experienced telephone interviewers who were trained for monitoring) monitored the interviews by listening for about 15 minutes at a time to the interviewers from either a monitoring room or from a carrel on the floor of the telephone center. The monitor completed a special monitoring form that covered five major areas of telephone interviewing:

- Reading and general skills;
- Listening skills and probing;
- Recording;
- Handling refusals and questions; and
- Telephone manner and relationship with respondent.

The monitors recorded their impressions of the interviewer's skills and abilities for 22 items within these five major areas using three categories: "no problem," "minor difficulty," and "major difficulty." If a skill was not rated during the monitoring session, a not applicable (N/A) code was used. Interviewers who had major difficulties were counseled and monitored to make sure the difficulties were resolved. If the problems continued, then the interviewers were released from the NHES:95 interviewing pool.

In addition, at least once a week the CATI management system produced computer-generated reports that displayed response rates, refusal rates, and refusal conversion rates for each NHES:95 interviewer. These reports assisted telephone center supervisors in identifying interviewer performance problems that might not be detected through monitoring. For instance, these reports would allow supervisors to identify interviewers with low response rates, even though monitoring sessions may not have indicated that the interviewer had problems obtaining respondent cooperation.

4.2 Response Rates

A response rate is the ratio of the number of units with completed interviews (the units could be telephone numbers, households, or persons) to the number of units sampled and eligible to complete the interview. In some cases, these rates are easily defined and implemented, while in other cases the numerators or denominators of the ratio must be estimated.

The "response rate" is the percentage of possible interviews completed, taking all survey stages into account, and the "completion rate" is used to measure the ability to complete interviews for a specific component of the survey. For example, household members are identified for extended interviews in a two-stage process: first, Screener interviews are conducted to enumerate and sample household members, and then interviews are conducted for the sampled members using extended questionnaires. The failure to complete the first stage Screener means that it is not possible to enumerate and interview any members of the household. The completion rate for the second stage is the percentage of sampled persons with completed interviews. The response rate is the product of the first- and second-stage completion rates.

Response rates and completion rates are identical for the first stage of the sampling and interviewing. For the NHES:95, the first stage is the Screener. The next section discusses the response rate (which is also the completion rate) for the Screener and provides a profile of the characteristics of the respondents. The response and completion rates for the extended interviews are given in the following sections.

All of the response rates reported are weighted to account for different probabilities of selection. The weighting gives a more accurate representation of the proportion of the population that responded than unweighted response rates, although in most cases the rates are similar. Additional information on the NHES:95 response rates, including the findings of additional nonresponse bias analyses, is included in *Unit and Item Response Rates, Weighting, and Imputation Procedures in the 1995 National Household Education Survey* (Brick and Broene, forthcoming).

4.2.1 Screener Response Rates

The first panel of table 4-1 gives the disposition of the 120,459 telephone numbers that were sampled for the NHES:95. This includes 105,799 numbers in the Basic Screener sample, 4,040 numbers in the Expanded Screener sample, and 10,620 numbers in the Adult Education Splice sample. The three major categories of response status are 1) those identified as numbers for residential households, 2) those identified as nonresidential numbers (primarily nonworking and business telephone numbers), and 3) those numbers that, despite numerous attempts, could not be identified as residential or nonresidential.

In the lower part of the table, the estimated response rate of 73.3 (business office method) for the Screener is shown. The numerator is the number of telephone numbers in households that participated in the survey (45,465) weighted by the probability of selecting the telephone number. The denominator is the total number of residential telephone numbers plus the 40.5 percent of numbers with unknown residential status that are assumed to be residential also weighted by the probability of selecting the telephone number. The 40.5 percent estimate was based on a special study conducted at the conclusion of the NHES:95 survey in which telephone business offices were contacted to provide the status of a sample of telephone numbers that had unresolved residency status. More details can be found

Table 4-1.-- Number of telephone numbers dialed, by residential status and weighted Screener response rates

Screener response category	Number	Percent of all numbers	Percent of residential numbers
Total	120,459	100.0	
Identified as residential	59,713	49.6	100.0
Participating	45,465	37.7	76.1
Not participating	14,248	11.8	23.9
Identified as nonresidential	54,131	44.9	
Unknown residential status	6,615	5.5	
Screener response rates*	**Rate (Percent)**		
Estimated response rate (using business office method)	73.3		
CASRO response rate	72.4		
Conservative response rate	69.0		
Liberal response rate	76.6		

*All the response rates use the estimated number of participating households as the numerator. The denominators vary but are all estimated totals: for the estimated response rate using the business office method, the proportion of unknown residential status numbers included in the denominator was based upon the proportion identified in checks with telephone business offices; for the CASRO (Council of American Survey Research Organizations) responses rate, the proportion of unknown residential status numbers included in the denominator was based upon the residency rate for the numbers with known residential status; for the conservative response rate, all of the unknown residential status numbers were included; for the liberal response rate, none of the unknown residential status numbers were included.

NOTE: Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

in *Unit and Item Response Rates, Weighting, and Imputation Procedures in the 1995 National Household Education Survey* (Brick and Broene, forthcoming). If the raw count of telephone numbers was not weighted, the Screener response rate using the business office method would also have been 73 percent.

Other estimates of the response rates were developed, based on different means of allocating the telephone numbers with unknown residential status. The footnote to table 4-1 explains four different schemes for estimating the response rate. It is reasonable to say that the Screener response rate is between 69 and 77 percent, and the best estimate is 73 percent. The variability in the estimates arises because it is not possible to identify precisely the residency status for each telephone number.

As shown in table 4-2, the Screener response rate varied somewhat by region of the country (based on Census region). The Screener response rates in the Northeast and West regions are about 5 percent lower than those in the Midwest and South. A few other characteristics are shown in the table based upon the characteristics of the area served by the telephone number. The response rates were about 3 percent lower in the high minority concentration areas than in other areas. The response rates are also lower in the areas with the highest concentration of renters. These findings suggest a general pattern of response rates being somewhat lower in areas with lower economic statuses. However, the Screener response rates were also lower in areas with relatively large percentages of college graduates than in other areas.

Table 4-2.-- Number of telephone numbers dialed in the Screener, by response status and weighted response rates

	Total	Participating	Not participating	Nonresidential	Unknown residential status	Estimated response[1] rate (%)
Total	120,459	45,465	14,248	54,131	6,615	73.3
Census region						
Northeast	23,154	8,518	3,252	9,696	1,688	69.2
Midwest	25,261	9,683	2,592	11,756	1,230	76.5
South	44,760	17,616	4,850	20,232	2,062	75.8
West	27,284	9,648	3,554	12,447	1,635	70.0
Minority concentration						
High minority	62,984	22,631	7,614	29,284	3,455	71.5
Not high minority	57,475	22,834	6,634	24,847	3,160	74.3
Percent college graduates						
Less than 11 percent	37,045	14,018	3,770	17,586	1,671	76.5
11 to 25 percent	58,368	22,629	7,388	25,235	3,116	72.9
26 percent or more	25,046	8,818	3,090	11,310	1,828	70.1
Percent renters						
Less than 34 percent	54,890	22,539	6,251	23,355	2,745	75.4
34 to 50 percent	39,774	15,340	4,996	17,404	2,034	72.7
51 percent or more	25,795	7,586	3,001	13,372	1,836	66.7

[1]The estimated response rate is the number of completed interviews divided by the sum of the number of completed interviews, nonresponses, and 40 percent of the not resolved telephone numbers, weighted by the probability of selection.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

4.2.2 Extended Interview Response Rates

The number of adults enumerated and sampled, and those with completed interviews for the AE component of the NHES:95, are given in table 4-3. Approximately 2 percent of all the adults identified and sampled for the AE interview in the Screener were determined to be ineligible when the extended interview was conducted. These adults were ineligible because they were still enrolled in secondary school or they were active duty members of the U.S. Armed Forces. AE interviews were not conducted for ineligible adults.

Interviews were completed for 19,722 eligible adults for a completion rate of 80 percent. The main reason an interview was not completed was because the adult refused to respond to the interview (67 percent of the nonresponse). The other major reason for nonresponse was inability to contact and interview the adult (25 percent of the nonresponse).

When the completion rate for the extended interview is multiplied by the Screener completion rate, the overall response rate for the AE interview is obtained. The overall response rate was 59 percent (58.6 percent = 80.0 percent times 73.3 percent).

Table 4-3.-- Number of sampled adults for Adult Education interviews, by response status and weighted completion rates

Respondent characteristic	Total	Complete	Nonresponse	Ineligible	Estimated completion rate (%)
Total	24,538	19,722	4,247	569	80.0
Census region					
Northeast	4,578	3,589	920	69	76.5
Midwest	5,181	4,315	778	88	83.2
South	9,345	7,477	1,613	255	79.9
West	5,434	4,341	936	157	80.3
Sex (Screener)					
Female	13,062	10,915	1,956	191	83.1
Male	11,433	8,785	2,282	366	76.7
Unknown[1]	43	22	9	12	73.4
Age[2] (Screener)					
Less than 20 years	1,003	815	97	91	87.7
20 to 34 years	8,262	6,624	1,283	355	82.3
35 to 49 years	8,350	6,924	1,339	87	81.8
50 to 64 years	4,100	3,230	843	27	77.1
65 or more years	2,823	2,129	685	9	74.0
High school diploma (Screener)					
Yes	20,590	17,120	3,427	43	81.3
No	3,948	2,602	820	526	72.5
Participant (Screener)					
Yes	14,355	11,890	2,039	426	84.4
No	10,183	7,832	2,208	143	77.4

[1]Status at the time of sampling.

[2]Age is the subject's age as of December 31, 1994.

NOTE: The response rate is the product of the completion rate shown in this table and the Screener completion rate of 73.3 percent. The overall response rate is 58.6 percent (80.0 percent times 73.3 percent).

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

The completion rates for the AE extended interview are shown in table 4-3 by Census region, sex, age, receipt of high school diploma, and adult education participation status of the sampled adult. The sex, age, receipt of high school diploma, and participation status variables are the data reported in the Screener. The completion rates vary by region, age, sex, education level, and participation status. For example, those sampled adults with a high school diploma were much more likely to have responded, as were those who participated in adult education activities. These highly variable rates could be indicative of potential bias. To reduce the bias in the estimates, nonresponse adjustment groups based on the classification of the sampled adults by education level and participation status were used in producing the weights for estimation. The other variables (region, age, and sex) were used in the final step of weighting.

4.3 Item Response in the Adult Education Interview

For nearly all of the items in the AE interview, item response rates were very high. Nonresponse included "don't know," "refused," and "not ascertained." Most of the items in the interview had response rates of 95 percent or more. The median response rate for items with any missing values was 98.5 percent. There were 51 items with item response rates of less than 95 percent and sample sizes greater than 25, only 17 of which had item response rates of less than 90 percent. Using the sample size of 25 eliminates those items that were dependent on just a few cases. There were 7 items with a sample size greater than 25 and a response rate of under 75 percent: ESPROVEM, ESAWARE, ESEMPREQ, ESEMPWP, ESEMPSPA, ESUNION, and HINCMEXT. Table 4-4 shows the item response rates for a representative group of items. The items included were selected to represent key items, to represent the range of item response rates, and to examine any differences in response rates to items appearing early in the interview versus those appearing later. The number of cases for which each item was attempted and the percentage of cases for which a valid response was obtained are shown.

When an interview was broken off after a major portion of the questions were answered and it was not possible to recontact the respondent to complete the remaining questions, the case was included in the data set. In the AE interview, this occurred if the interview was completed through the items pertaining to participation in other formal structured courses, that is, all AE participation items were completed. This was the situation for 231 AE interviews. The item response rates do not decrease appreciably after the other formal structured activities section.

For more details on item response rates, including a complete listing of all item response rates, see *Unit and Item Response Rates, Weighting, and Imputation Procedures in the 1995 National Household Education Survey* (Brick and Broene, forthcoming).

Table 4-4.-- Item response rates for selected items in the Adult Education interview

Item	Number attempted	Percent response
Initial Background		
Highest grade/year of school	19,722	99.7
High school diploma	8,960	99.9
Worked at a job in past 12 months	19,722	99.9
Language spoken at home	19,722	99.8
English as a Second Language		
Participation in ESL classes	1,427	99.8
Main reason for ESL classes	131	99.2
Instructional provider was employer	123	52.0
Would take ESL classes again	131	96.2
Basic Skills and GED preparation		
Participation in Basic skills classes	3,629	99.8
Main reason for ABE/GED classes	456	99.6
Instructional provider was employer	308	99.7
Would take ABE/GED classes again	456	100.0
Credential		
Participation in college or university programs	19,722	99.9
Main reason for credential program #1	3,779	99.9
Instructional provider of credential #1	3,238	99.9
Length of credential program #1	550	82.4
Apprenticeship		
Participation in apprenticeship program	19,722	99.9
Career- or job-related activities		
Participation in career- or job-related activities	19,722	99.9
Main reason for career- or job-related course #1	5,842	99.9
Instructional provider of course #1 was employer	5,115	99.9
Would take career- or job-related course #1 again	5,842	98.3
Other formal structured activities		
Participation in other formal structured courses	19,722	99.9
Main reason for other formal structured course #1	4,817	99.9
Employer provided any support	1,982	99.7
Remaining Background		
Ever worked at a job	3,172	97.4
Activity done most last week	5,103	90.7
Total household income	19,722	79.9
Total personal income	16,501	77.5
Household income to the nearest $1,000	919	54.6

NOTE: The percent response rate is given as 99.9 when the number of missing values is less than 0.1 percent, rather than rounding the percent responses to 100 percent. This designation is used to distinguish such variables (which usually have fewer than 10 missing values) from those that have no missing values.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

5. DATA PREPARATION

5.1 Coding and Editing Specifications

Most of the NHES:95 interview data were coded by the interviewers during the interview using the CATI system. As the interviewers entered the number of the response option given by the respondent, this number was written to the data file. Range and logic edits were developed for relevant items to maximize coding accuracy.

5.1.1 Range Specifications

The ranges of most of the items were determined by the codes available for the responses, since most were closed ended. For open-ended items that required an entry by the interviewer (for example, number of different employers in the past 12 months, length of time spent in ESL instruction, or amount of respondent's own money paid for career- or job-related courses) there were not specific sets of responses; therefore, reasonable ranges were defined.

Range checks included both hard- and soft-range edits. A "soft range" is one that represents the reasonable expected range of values but does not include all possible values. Responses outside the soft range were confirmed with the respondent and had to be entered a second time. For example, the amount of the respondent's own money that was paid for tuition, books, and other expenses to attend ESL classes had a soft range of 0 to 500. A value outside this range could be entered and confirmed as correct by the interviewer as long as it was within the hard range of values (0 to 3,000). "Hard ranges" are those that have a finite set of parameters for the values that can be entered into the CATI system. Out-of-hard-range values for either open- or closed-ended questions were not accepted. If the respondent insisted that a response outside the hard range was correct, the interviewer could enter the information in a comments data file. These comments were reviewed by data preparation and project staff. Out-of-hard-range values were accepted if the comments supported the response. For example, one respondent insisted that he/she attended a real estate course for 54 hours per week (WRHRS1/WRHRUNT1). The edits programmed into the CATI system considered this response to be an out-of-hard-range value that could not be entered directly (50 hours was the upper limit); instead it was entered into the comments data file. This response was judged by data preparation and project staff to be acceptable, since it was confirmed by the respondent, and thus was later entered into the AE database.

After data collection was completed, range edits were rerun against the entire database to ensure that no outliers were inadvertently introduced during the post-data-collection updating process. Therefore, any outliers that exist in the AE data file were reviewed during the data preparation process and most of them originated from information entered into the comments data file. However, outliers also exist in some derived variables that represent the sums of values for several other individual variables. For example, a respondent may have reported taking three other structured courses, each of which was attended for 300 hours. The total number of hours for these courses, SATOTIME, would be 900 hours, which is unusually high. Outliers such as these for derived variables were also reviewed during the data preparation process.

5.1.2 Consistency Checks (Logic Edits)

Consistency or logic checks examine the relationships between responses to ensure that they do not conflict with one another or that the response to one item does not make the response to another unlikely. Logic specifications for the NHES:95 interviews were contained within the CATI system. For example, the CATI system was programmed to control skip patterns so that inappropriate items were not asked. Additional consistency (logic) checks for the NHES:95 interviews were also included. For example, if a respondent reported that he/she was born in 1970 and then reported that he/she moved to the U.S. at the age of 30, an error message was displayed on the interviewer's computer screen. The birth year indicates that the respondent was only 25 years old at the time of interview administration. If the logic check was violated, a special message appeared that explained the discrepancy and allowed the interviewer to enter a correction. If the interviewer passed through the check message once and information was still inconsistent, the interviewer was asked to reverify the information. After the second attempt, the inconsistent information was accepted. At several points during data collection, logic edits were also checked against the entire data base. Cases violating the edits were examined and either the information violating the edit was kept or it was coded "not ascertained" and later replaced with imputed data.

5.1.3 Structural Edits

Because of the survey's complexity, the CATI database was a highly complex, hierarchical file. The relationships of database records were often dependent on values of variables contained in other database records; therefore, structural edit specifications were developed to check the structural integrity of the database. This ensured that all variables that should exist did exist and those that should not exist did not exist in the database. For example, if there is a completed AE interview for an adult, the data record that contains the adult education items must exist in the database. Structural edits were run against the entire database during the data preparation.

5.1.4 Frequency and Cross-Tabulation Review

The frequencies of responses to all data items (both individual and in conjunction with related data items) were reviewed to ensure that appropriate skip patterns were followed. Members of the data preparation team checked each item to make sure the correct number of responses was represented for all items. If a discrepancy was discovered, the problem case was identified and reviewed. If necessary, the audit trail for the interview, which provided a keystroke-by-keystroke record of an interview, was retrieved to determine the appropriate response. If the audit trail revealed no additional information, either a data retrieval effort was made or the item was coded as "not ascertained," and later imputed.

5.1.5 Frequency Review of "Other, specify" Items

The "other, specify" open-ended text responses were reviewed to determine if they should be coded into one of the existing code categories. When a respondent selected an "other" response, the interviewer entered text into a "specify" overlay that appeared on the screen. The "specify" responses were reviewed by the data preparation staff and, where appropriate, coded into one of the existing response categories. New response categories were developed for some of the "other, specify" responses,

if the number of responses warranted. The variables to which categories were added are ESLEARN (B5), BSREASON (C2), and BSLEARN (C4). For example, "school" was added in ESLEARN (B5) and the new category is indicated in the questionnaire in appendix A with italicized text.

In the ABE/GED, ESL, and career- or job-related sections of the AE interview, nonparticipants were asked about barriers to participation in these types of adult education, if they indicated that they had an interest in participating. A proportionally large number of "other, specify" responses were obtained. Three new variables, ESPROTHC (B22), BSPROTHC (C21), and WRPROTHC (F21), were created to categorize "other specify" responses. These new categories are indicated in the questionnaire in appendix A with italicized text.

5.1.6 Coding of Open-Ended Items

Some of the open-ended items in the NHES:95 AE interview were coded using coding schemes developed specifically for the NHES:95 AE component. These items include the industry and occupation of jobs reported by the respondent and major fields of study for credential programs. Codes for industry and occupation are included in the public data file (FSIC1 through FSIC5 for industry; FSOC1 through FSOC5 for occupation). The coding manual for industry and occupation is found in appendix E. Codes for major fields of study are included in the public data file (CIPF1 through CIPF3) and the Major Field of Study coding manual is found in appendix F. Verbatim strings used in coding industry and occupation and major field of study are included in the proprietary file of the NHES:95 AE. In NHES:95, the names of courses respondents took in credential programs, career- or job-related activities, and other formal structured activities were also collected. Codes for these courses will be available in the near future.

6. GUIDE TO THE DATA FILE AND CODEBOOK

6.1 Content and Organization of the Data Files

This section describes the content of the public release data file constructed for the NHES:95 AE component. This file contains data from all completed AE interviews. There are four records for each AE interview completed, so the file contains 78,888 records for the 19,722 completed interviews. The file is organized so that logically related sets of variables are grouped together. The data items are listed in the file in the following order: system variables, household membership information, questionnaire item variables, derived variables, weighting and variance estimation variables, imputation flag variables, and other flag variables.

A list of all the variables contained in the data file is shown in appendix B. The VARIABLE NAME column displays the unique identifier in the data file. The VARIABLE LABEL column displays a short label associated with the variable. The FORMAT column indicates if a variable has a numeric ("N") or a character ("A") format. Only one variable in the AE file, MAINRSLT (main result), has a character format. The RECORD NUMBER column indicates whether the variable is located in the first, second, third, or fourth record (also see section 6.1.8 that describes the RECNUM variable). The LENGTH column indicates the length of the variable by the number of digits. The length descriptor also includes the number of digits found after the decimal point for noninteger numeric variables (e.g., weight variables). The position of the variable is indicated in the START and END columns and indicates the position on the data record where the variable begins and ends.

The NHES:95 data files are provided on CD-ROM and are accessible through an Electronic Codebook (ECB) that allows data users to view variable frequencies, tag variables for extraction, and create the SAS, SPSS for DOS, or SPSS for Windows code needed to create an extract file for analysis purposes. The ECB contains both NHES:95 data sets, the Adult Education (AE) file and the Early Childhood Program Participation (ECPP) file as well as data sets from the NHES:91 and the NHES:93. Instructions for using the CD-ROM and ECB are provided in a separate document, *National Household Education Survey: NHES:91/93/95 Electronic CodeBook (ECB) User's Guide* (Collins and Chandler 1996). The sections that follow describe the contents of the AE data file.

6.1.1 System Variables

System variables are created during the conduct of an interview and are instrumental in the successful administration of the interview. Their creation is transparent to the interviewer and to the respondent. System variables fall into two categories: linking variables (record identifiers or IDs) and interview status variables. Linking variables are record identifiers that provide a link to other interviews completed in the same household. Status variables are set at the completion of each interview to define completion status.

BASMID is the 12-digit interview identifier variable. It is composed of the eight-digit household identifier, the two-digit person number of the adult, and a two-digit interview type identifier. For example, a household (ID = 10001234) may contain two adults and two children. If the adult listed second on the matrix (person 02) was sampled for an AE interview, the BASMID would be 100012340201 (household 10001234, person 2). The last two digits of the BASMID (01) indicate that

the interview record is an original interview and not a reinterview. The first eight digits of BASMID provide the link between household members. Thus, BASMID can be used to identify AE interviews from the same household, but it can also be used with ENUMID in the ECPP data file to identify AE and ECPP interviews from the same household (by comparing the first eight digits of BASMID in the AE data file with the first eight digits of ENUMID in the ECPP data file).

MAINRSLT (main result) is the variable that holds the final completion code for the interview.

The values for MAINRSLT are:

CP = Complete AE interview; sampled as participant, completed as participant
CU = Complete AE interview; sampled as non-participant, completed as non-participant
CX = Complete AE interview; sampled as participant, completed as non-participant
CY = Complete AE interview; sampled as non-participant, completed as participant

ENGLSPAN is the variable that indicates whether the interview was conducted in English or in Spanish.

The values for ENGLSPAN are:

1 = Interview was conducted in English
2 = Interview was conducted in Spanish

6.1.2 Household Membership Variables

All household members were enumerated in the Screener interview. Data collected included the age and sex of each household member. The gender data collected during the household enumeration in the Screener interview were used to drive the gender-based wording of subsequent questions throughout the AE interview.

The household membership information is stored on the public release data file in the following order: information about the sampled adult, and information on all other household members. The variables appear on the data file as follows.

AGE is the adult's age.

SEX is the adult's sex.

AGE1 through AGE14 indicate the age of each enumerated household member other than the sampled adult.

SEX1 through SEX14 indicate the sex of each enumerated household member other than the sampled adult.

6.1.3 Questionnaire Item Variables

The questionnaire item variables appear on the file in the same order as they were asked. Refer to the questionnaires in appendix A for the order. The items on enrollment, grade/year of school, and high school diploma status appear in the Basic and Expanded Screener questionnaires and the AE questionnaire. If the AE respondent was the Screener respondent, questions such as diploma status were asked only once in the Screener. The AE responses have been retained, since they are responses given by the adult him/herself.

Some variables were excluded from the file for confidentiality reasons. These include the names of household members, verbatim string responses that might identify persons or places, and the individual ZIP Codes (HZIPCODE). Some of these variables are included in a separate restricted-use data file (see section 6.3 below). The Basic Screener, Expanded Screener, and AE questionnaires appear in appendix A; variable names are provided to the left of each question. Where an asterisk (*) appears to the left of a question in the AE questionnaire, it indicates that the variable is not available on either a public or restricted-use file. These are variables that were used for survey administration purposes only, such as items asking if the adult had any more courses of a particular type before ending that section of the interview.

"Code all that apply" questions allowed the respondent to select more than one of the answer categories given. As the responses were given, the interviewer coded the number appearing on the screen that corresponded to each response given. The numbered responses were recoded into one variable for each response category as "yes/no" codes. If the respondent gave the particular response, the associated variable was coded "yes." Otherwise, the associated variable was coded "no." An example of this type of question in the AE survey is I18, "What have you been doing in the past 4 weeks to find work?"

The code -1 indicates a legitimate skip, that is, that the item was not applicable to the case. For example, if the adult learned English as his/her first language, the question about what language he/she speaks most at home would equal -1, since the adult speaks English.

There are repeating segments in the Credential, Career- or Job-related Activities, and Other Formal Structured Activities sections. Variable names and labels reflect sequences of the segments in each section. For example, the CR1PRTYP variable indicates the type of instructional provider for the first credential program reported and the WRHRS4 variable indicates the main reasons for the fourth career- or job-related course reported.

If the value for a variable is found in the questionnaire, but is not found in the frequency distribution, no respondent selected that response. The variables that meet this condition include ESPROTHC, ESTIOTH, ESCHCOST, ESTRCOST, ESTRAVAL, ESTROTH, BSPLACE, BSPROTHC, BSCHOTH, BSTRAVAL, BSTROTH, CIPF1, CR1PRTYP, CIPF2, CRSCHLS2, CR2PRTYP, CRDIPLO3, CIPF3, CRREASO3, CRLENUN3, CR3PRTYP, CR3ASSIS, CRAWARE3, CRUNION3, WR5PRTYP, WRREASO6, and WR6PRTYP.

6.1.4 Derived Variables

Derived variables were developed and included in the public use data file to aid users in their analyses. The derived variables fall into three categories: questionnaire item variables, counter variables, and variables linked to other data sources. Questionnaire item-derived variables were created by combining two or more items from the questionnaire. Counter-derived variables were created by counting the number of persons enumerated in the household or numbers of courses. Linked-derived variables were created by using the respondent's ZIP Code or telephone number to extract data from other data sources, most notably the 1990 Census of Population Summary Tape File 3B (STF3B).

The derived variables appear together on the file in their own section. They are shown in position order below with an explanation of how they were derived. The actual SAS code to create many of these variables appears in appendix C[4]. All of the variables that begin with the prefix ZIP were taken from the 1990 Census of Population Summary Tape File 3B (STF3B). All unique NHES:95 ZIP Codes were matched to ZIP Codes on the STF3B to extract urbanicity, the percent black or Hispanic, and the percent of persons under age 18 living in poverty.

AELABOR classifies the adult's labor force status. This variable was created from the variables IBWORK (I15), IBLEAVE (I16), and JOBLOOK (I17) JOBPUBL (I18), JOBPRIV (I18), JOBEMPL (I18), JOBREL (I18), JOBANSAD (I18), JOBREAD (I18).

The values for AELABOR are:

1 = Employed in labor force
2 = Unemployed in labor force
3 = Not in labor force

AELABOR2 is an alternate variable classifying the adult's labor force status. This derived variable is closer to the labor force status variable used by the Bureau of Labor Statistics (BLS) survey, because it includes an item asking if the adult could have taken a job if one had been offered. This was created from the variables IBWORK (I15), IBLEAVE (I16), and JOBLOOK (I17), JOBPUBL (I18), JOBPRIV (I18), JOBEMPL (I18), JOBREL (I18), JOBANSAD (I18), JOBREAD (I18), JOBTAKE (I20).

The values for AELABOR2 are:

1 = Employed in labor force
2 = Unemployed in labor force
3 = Not in labor force

[4] There is no SAS code provided for counter-derived variables (including CRDIPNEW, CRPTNEW1 through CRPTNEW3, HHTOTAL, HHUNDR18, HH18OVER, NUMKID10, SANEW, and WRNEW) or for linked-derived variables (i.e., ZIP code variables and CENREG). SAS code for derived variables linking employer support to programs or courses (i.e., BSEMPSEG, CENREG, ESEMPSEG, CEMPSEG1 through CEMPSEG3, and WEMPSEG1 through WEMPSEG6) is not included because this was done with a string matching procedure and cannot be replicated with variables in the public data file.

AEPARTIC indicates whether the adult participated in adult education activities in the previous 12 months, excluding full-time credential programs. This was created from the variables ESLANG (B1), BSIMPROV (C1a), BSGED (C1b), BSHSEQUV (C1c), CRTRMPT1 (D7), CRTRMPT2 (D7), CRTRMPT3 (D7), APPRENTI (E1), WRACTY (F1), and SAACTY (G1).

The values for AEPARTIC are:

0 = No
1 = Yes

AEPARANY indicates whether the respondent participated in any types of adult education activities in the previous 12 months, including full-time credential programs in the past 12 months. This was created from the variables ESLANG (B1), BSIMPROV (C1a), BSGED (C1b), BSHSEQUV (C1c), CRDEGREE (D1a), CRVOCDIP (D1b), APPRENTI (E1), WRACTY (F1), and SAACTY (G1).

The values for AEPARANY are:

0 = No
1 = Yes

ANYSUPP indicates whether the respondent's employer provided support, including providing instruction, giving time off with or without pay, providing classroom space, or paying all or part of the cost, for English as a Second Language classes, ABE/GED classes, credential programs, and career- or job-related courses. Adults who are participants in these types of activities and did not work in the previous 12 months are coded 0 (No) on this derived variable. Apprenticeship programs and other formal structured activities are not included in this derived variable, because comparable items on employer support were not asked for those activities. Thus, this item is inapplicable (-1) in those cases in which the adult did not participate in any of the relevant types of AE. The measure of employer support was created from the derived variables ESSUPP, BSSUPP, CRDIPSUP, and WRSUPP (described below).

The values for ANYSUPP are:

0 = No
1 = Yes
-1 = Nonparticipant in basic skills/ESL/credential/career- or job-related courses

BSPARTIC identifies whether the respondent has participated in any ESL or ABE/GED classes in the past 12 months. This was created from the variables ESLANG (B1), BSIMPROV (C1a), BSGED (C1b), and BSHSEQUV (C1c).

The values for BSPARTIC are:

0 = No
1 = Yes

BSSUPP indicates whether the respondent's employer provided support, including providing instruction, for ABE/GED classes. Adults are coded 0, No, if they are ABE/GED class participants and did not work in the previous 12 months. Adults are coded -1, inapplicable, if they are not participants in basic skills activities. The measure of support for participating adults was created from the variables BSIMPROV (C1a), BSGED (C1b), BSHSEQUV (C1c), BSPROVEM (C12), BSEMPWP (C14b), BSEMPSPA (C14c), and BSEMPPAY (C14d).

The values for BSSUPP are:

0 = No
1 = Yes
-1 = No ABE/GED classes

BSTIMED gives the hours per week of participation in ABE/GED classes. This continuous variable was derived from BSIMPROV (C1a), BSGED (C1b), BSHSEQUV (C1c), BSWHEN (C5), BSWHENUN (C5), BSHRS (C6), and BSHRSUNT (C6). Time reported in units other than hours per week was converted as shown in the derived variable code. See section 7.1.7 for additional discussion of the conversion of time units to hours per week. Adults are coded -1, inapplicable, if they are not participants in basic skills activities.

BSWEEK designates the number of weeks the respondent attended ABE/GED classes or programs. This continuous variable was derived from the variables BSIMPROV (C1a), BSGED (C1b), BSHSEQUV (C1c), BSWHEN (C5), BSWHENUN (C5), and BSWKS (C5OV). Program or course length reported in units other than weeks were converted as shown in the derived variable code. Adults are coded -1, inapplicable, if they are not participants in basic skills activities.

BSEMPSEG links the employer who provided or supported the adult's participation in ABE/GED classes to the employment segment associated with that employer. In this way, the data user can link the support of basic skills activities to the industry (FSIC1-FSIC5) and occupation (FSOC1-FSOC5) of the job through which employer support was provided. In some cases (about 8 percent of participants), it was not possible to match the employer to the ABE/GED classes because the employer was not identified; these cases are coded 6 as shown below. No cases in the basic skills section had other nonmatches to employers. BSEMPSEG was created from the variables BSPROVEM (C12), BSEMPWP (C14b), BSEMPSPA (C14c), BSEMPPAY (C14d), BSPROVCO (C15), and EMPLNAM1 through EMPLNAM5 (I31a and b), using a verbatim string matching procedure. It should be noted that the BSPROVCO and EMPLNAM1 through EMPLNAM5 variables are found only in the proprietary data file and are not available in the public data file. This variable cannot be replicated using public data file variables.

The values for BSEMPSEG are:

1 = Employer #1
2 = Employer #2
3 = Employer #3
4 = Employer #4
5 = Employer #5
6 = Employer not identified
7 = Other nonmatch
-1 = No ABE GED/No employer support/No job in the past 12 months

CENREG is a linked-derived variable that identifies Census region for each record. This variable was created by linking states and telephone area codes of the sampled adults. Once the link between states and adults was established, the Census regions were assigned as given below.

The following states and the District of Columbia are in each Census region:

Northeast: CT, MA, ME, NH, NJ, NY, PA, RI, VT
South: AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV
Midwest: IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI
West: AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY

The values for CENREG are:

1 = Northeast
2 = South
3 = Midwest
4 = West

CRDIPART is a composite variable that identifies whether the respondent has participated in college and university degree programs or vocational/technical diploma or certificate programs in either part-time or full-time status in the past 12 months. This was created from the variables CRDEGREE (D1a) and CRVOCDIP (D1b).

The values for CRDIPART are:

0 = No
1 = Yes

CRDIPNEW is the counter-derived variable that indicates the total number of credential programs in which the respondent participated. This variable was created using the counts of the verbatim strings (as well as don't know or refused responses) for major fields of study, CRMAJOR1 through CRMAJOR3 (D4), i.e., counts those responses that were not legitimate skips (-1). It should be noted that CRMAJOR1 through CRMAJOR3 contain string text are found only in the proprietary data file and are not available in the public data file.

This variable could be recreated with public file variables using CRREASO1 through CRREASO3 (D5), because the main reason question was asked for all credential programs. If CRREASO1 = -1, the respondent is a nonparticipant in credential programs. If CRREASO3 => 1 then the respondent has three credential program. Else if CRREASO2 => 1 then the respondent has two credential programs. Else if CRREASO1 => 1 the respondent has one credential program. Respondents who did not participate in credential programs in the past 12 months are coded -1 on this variable.

CRDIPSUP is a composite variable that indicates whether the respondent's employer provided support, including providing instruction, giving time off with or without pay, providing classroom space, or paying all or part of the cost for credential programs. Adults who are credential program participants and did not work in the previous 12 months are coded 0 (No) on this derived variable. Adults were coded as -1 if CRVOCDIP (D1a) and CRDEGREE (D1b), the credential participation items, were both no. The measure of support was created from the variables CR1PREMP (D16), CR1EMPWP (D18b), CR1EMSPA (D18c), CR1EMPAY (D18d), CR2PREMP (D16), CR2EMPWP (D18b), CR2EMSPA (D18c), CR2EMPAY (D18d), CR3PREMP (D16), CR3EMPWP (D18b), CR3EMSPA (D18c), and CR3EMPAY (D18d).

The values for CRDIPSUP are:

0 = No
1 = Yes
-1 = No credential program

CEMPSEG1 through CEMPSEG3 link the employer who provided or supported the adult's participation in credential programs to the employment segment associated with that employer. In this way, the data users can link the support of credential activities to the industry (FSIC1-FSIC5) and occupation (FSOC1-FSOC) of the job through which the employer support was provided. In some cases (3 to 6 percent for the first two credential programs, none for the third), it was not possible to match the employer to the credential program because the employer was not identified. An additional 2 to 3 percent were other nonmatches.

Other nonmatches may have resulted from respondent misunderstanding of the question. For example, an adult may have reported that an employer provided a particular adult education course or program, but in reality the provider was not the employer, but a person or organization paid by the employer. It is also possible that the actual provider or supporter of the activity was a parent company to the respondent's employer, resulting in a nonmatch of the provider or supporting company name with the respondent's employer name.

CEMPSEG1 through CEMPSEG3 were created from CR1PREMP through CR3PREMP (D16), CR1EMPWP through CR3EMPWP (D18b), CR1EMSPA through CR3EMSPA (D18c), CR1EMPAY through CR3EMPAY (D18d), CRPROVC1 through CRPROVC3 (D19), and EMPLNAM1 through EMPLNAM5 (I31 a and b) using a text string matching procedure. It should be noted that the CRPROVC1 through CRPROVC3 and EMPLNAM1 through EMPLNAM5 variables are found only in the proprietary data file and are not available in the public data file. This variable cannot be replicated using public data file variables.

The values for CEMPSEG1-CEMPSEG3 are:

1 = Employer #1
2 = Employer #2
3 = Employer #3
4 = Employer #4
5 = Employer #5
6 = Employer not identified
7 = Other nonmatch
-1 = No credential program/No employer support/No job in the past 12 months

CRPTNEW1 through CRPTNEW3 are counter-derived variables that indicate the total number of courses taken as a part-time credential program participant. These variables are created by using the counts of the verbatim strings (plus don't know and refused responses) for the courses reported in CR1CLS1 through CR1CLS14 (D10), CR2CLS1 through CR2CLS14 (D10), and CR3CLS1 through CR3CLS14 (D10). It should be noted that the names of courses are found only in the proprietary data file and are not available in the public data file. This variable cannot be replicated using variables contained in the public data file. Respondents who did not participate in credential programs in the past 12 months have a code of -1 on this variable.

ESEMPSEG links the employer who provided or supported the adult's participation in ESL classes to the employment segment associated with that employer. In this way, the data user can link the support of ESL classes to the industry (FSIC1-FSIC5) and occupation (FSOC1-FSOC5) of the job through which the employer support was provided. This was created from the variables ESPROVEM (B13), ESEMPWP (B15b), ESEMPSPA (B15c), ESEMPPAY (B15d), ESPROVCO (B16), and EMPLNAM1 through EMPLNAM5 (I31a and b). It should be noted that the ESPROVCO and EMPLNAM1 through EMPLNAM5 are found only in the proprietary data file and are not available in the public data file. This variable cannot be replicated using public data file variables.

The values for ESEMPSEG are:

1 = Employer #1
2 = Employer #2
3 = Employer #3
4 = Employer #4
5 = Employer #5
6 = Employer not identified
7 = Other nonmatch
-1 = No ESL/No employer support/No job in the past 12 months

ESSUPP is a composite variable that identifies whether the respondent's employer provided support, including providing instruction, giving time off with or without pay, providing classroom space, or paying all or part of the cost for ESL classes. This was created by the variables ESLANG (B1), ESPROVEM (B13), ESEMPWP (B15b), ESEMPSPA (B15c), and ESEMPPAY (B15d). Adults who are participants in ESL classes and did not work in the previous 12 months are coded 0 (No) on this derived variable. This variable is inapplicable (-1) for adults who did not participate in ESL activities.

The values for ESSUPP are:

0 = No
1 = Yes
-1 = No ESL classes

ESTIMED shows the hours per week of participation in ESL classes. This variable was derived from ESLANG (B1), ESWHEN (B6), ESWHENUN (B6), ESHRS (B7), and ESHRSUNT (B7). Time reported in units other than hours per week was converted as shown in the derived variable code. See section 7.1.7 for additional discussion of the conversion of time units to hours per week. Adults are coded -1, inapplicable, if they are not participants in ESL activities.

ESWEEK gives the number of weeks the adult attended ESL classes. This was determined from the variables ESLANG (B1), ESWHEN (B6), ESWHENUN (B6), and BSWKS (B6OV). Course or program length given in units other than weeks was converted as shown in the derived variable code. Adults are coded -1, inapplicable, if they are not participants in ESL activities.

HHTOTAL is a counter-derived variable that indicates the total number of household members.

HHUNDR18 is the counter-derived variable that indicates the total number of household members younger than 18 years old.

HH18OVER is the counter-derived variable that indicates the number of household members age 18 and older.

HIGHEDUC categorizes respondents according to the highest degree or credential obtained. It is created using IBGRADE (A1) and IBDIPL (A2).

The values for HIGHEDUC are:

1 = Less than high school diploma
2 = High school diploma or its equivalent
3 = Associate's degree
4 = Bachelor's degree or higher

IBASSIST indicates whether the respondent's employment was an assistantship, a fellowship, or a work study program in the past 12 months. This question was asked only of respondents who worked in the previous 12 months, who participated in any credential programs, and who reported that instructional provider was an educational institution (e.g., colleges, universities, or vocational or trade schools) as well as their employer. As a result, this derived variable does not represent all persons with assistantships, fellowships, or work study programs. This was created from the variables CR1ASSIS, CR2ASSIS, and CR3ASSIS (D16OV).

The values for IBASSIST are:

1 = Respondent has assistantship/fellowship/work study
-1 = No assistantship/fellowship/work study/not a credential participant

IBCURAST indicates, among those who had an assistantship, a fellowship, or a work study program in the previous 12 months, whether the respondent had the assistantship, fellowship, or work study program at the time of the interview. Like IBASSIST, this derived variable does not represent all persons with assistantships, fellowships, or work study programs. This was created from the variables CRCURAS1, CRCURAS2, and CRCURAS3 (D16OV2).

The values for IBASSIST are:

1 = Respondent has assistantship/fellowship/work study currently
-1 = No current assistantship/fellowship/work study currently/not a credential participant

NUMKID10 is a counter-derived variable that indicates the number of children in the household who are 10 years old or younger. The screener responses to AGE1 through AGE14 (S6) were counted for this variable.

RACEETHN classifies the race and ethnicity of the adult in a single measure. This variable is created from ARACE (I2) and AHISPANI (I3).

The values for RACEETHN are:

1 = White, non-Hispanic
2 = Black, non-Hispanic
3 = Hispanic
4 = All other races (e.g., American Indian or Alaska Native, Asian or Pacific Islander), non-Hispanic

RACEETH2 is an alternative measure of the respondent's race and ethnicity, with a separate category for Asian or Pacific Islander. This variable was created using ARACE (I2) and AHISPANI (I3).

The values for RACEETH2 are:

1 = White, non-Hispanic
2 = Black, non-Hispanic
3 = Hispanic
4 = Asian or Pacific Islander
5 = All other races (e.g., American Indian or Alaska Native, Asian or Pacific Islander), non-Hispanic

SANEW is a counter-derived variable that indicates the number of other formal structured courses in which the respondent has participated. Nonparticipants in other formal structured courses were set to inapplicable (-1) using SAACTY (G1). Verbatim strings for course names (SANAME(n), G3) and don't know or refused responses were counted for this variable. This counter is not limited to sampled courses on which data were collected, but includes all courses named. Thus, it cannot be constructed from variables in the public data file.

SATIME1 through SATIME3 show the hours per week for each other formal structured course. These variables were derived from SAREASO1 through SAREASO3 (G4), SAWHEN1 through SAWHEN3 (G10), SAWHNUN1 through SAWHNUN3 (G10), SAHRS1 through SAHRS3 (G11), and SAHRUNT1 through SAHRUNT3 (G11). Units other than hours per week were converted as shown in the derived variable code. See section 7.1.7 for additional discussion of the conversion of time units to hours per week. Nonparticipants in other formal structured activities are coded -1 on this variable.

SATMONEY represents the total amount of education-related expenses for other formal structured courses. This variable was created from SAACTY (G1), SATUITO1 through SATUITO3 (G9), and SAWGT (weight variable). Nonparticipants in other formal structured activities are coded -1 on this variable.

SATOTEMP represents the number of other formal structured courses the adult took that were provided by his/her employer. This variables was created from SAACTY (G1) and SA1PREMP through SA3PREMP (G8). Nonparticipants in other formal structured activities are coded -1 on this variable.

SATOTIME indicates the total amount of instructional time for other formal structured courses. This variable was created from SAACTY (G1), SATIME1 through SATIME3 (derived variables), and SAWGT (weight variable). Nonparticipants in other formal structured activities are coded -1 on this variable.

SAWEEK1 through SAWEEK3 designate the number of weeks the adult attended other structured courses. This variable was created from SAREASO1 through SAREASO3 (G4), SAWHEN1 through SAWHEN3 (G10), SAWHNUN1 through SAWHNUN3 (G10), and SAWKS1 through SAWKS3 (G10OV). If course length was reported in units other than weeks, it was converted as shown in the derived variable code. Nonparticipants in other formal structured activities are coded -1 on this variable.

WEMPSEG1 through WEMPSEG6 links the employer who provided or supported the adult's participation in career- or job-related courses to the employment segment associated with that employer. In this way, the data user can link the support of career- or job-related courses to the industry (FSIC1-FSIC5) and occupation (FSOC1-FSOC5) of the job through which employer support was received. In some cases (about 1 to 2 percent), it was not possible to match the employer to the course because the employer was not identified. About 0 to 1 percent of cases had other nonmatches. Other nonmatches may have resulted from respondent misunderstanding of the question. For example, an adult may have reported that an employer provided a particular adult education course or program, but in reality the provider was not the employer, but a person or organization paid by the employer. It is also possible that the actual provider or supporter of the activity was a parent company to the respondent's employer, resulting in a nonmatch of the provider or supporting company name with the respondent's employer name. These variables were created from the variables WR1PREMP through WR6PREMP (F11), WR1EMPWP through WR6EMPWP (F13b), WR1EMSPA through WR6EMSPA (F13c), WR1EMPAY through WR6EMPAY (F13d), WRPROVC1 through WRPROVC6 (F14), and EMPLNAM1 through EMPLNAM5 (I31a and b) using a text string matching procedure. It should be noted that the WRPROVC1 through WRPROVC6 and EMPLNAM1 through EMPLNAM5 variables are found only in the proprietary data file and are not available in the public data file. These variables cannot be recreated using public data file variables.

Values for WEMPSEG1-WEMPSEG6 are:

1 = Employer #1
2 = Employer #2
3 = Employer #3
4 = Employer #4
5 = Employer #5
6 = Employer not identified
7 = Other nonmatch
-1 = No work course/No employer support/No job in the past 12 months

WRNEW is the counter-derived variable that counts the number of career- or job-related courses in which the respondent has participated. Note that this variable is not limited to sampled courses and which data were collected, but includes all reported courses. Nonparticipants in career- or job-related courses were set to inapplicable (-1) using WRACTY (F1). Verbatim strings for course names (WRNAME(n), F3) and don't know and refused responses were counted for this variable. It should be noted that course names are available only on the proprietary data file. This variable cannot be created from variables on the public data file.

WRSUPP is the composite variable that measures whether the respondent's employer provided support, including providing instruction, giving time off with or without pay, providing classroom space, or paying all or part of the cost for career- or job-related courses. This was created using the variables WRACTY (F1), WR1PREMP (F11), WR1EMPWP (F13b), WR1EMSPA (F13c), WR1EMPAY (F13d), WR2PREMP (F11), WR2EMPWP (F13b), WR2EMSPA (F13c), WR2EMPAY (F13d), WR3PREMP (F11), WR3EMPWP (F13b), WR3EMSPA (F13c), WR3EMPAY (F13d), WR4PREMP (F11), WR4EMPWP (F13b), WR4EMSPA (F13c), WR4EMPAY (F13d), WR5PREMP (F11), WR5EMPWP (F13b), WR5EMSPA (F13c), WR5EMPAY (F13d), WR6PREMP (F11), WR6EMPWP (F13b), WR6EMSPA (F13c), and WR6EMPAY (F13d). Adults who are participants in career- or job-related courses and did not work in the past 12 months are coded 0 (No) on this derived variable. Nonparticipants in career- or job-related activities are coded -1 on this variable.

The values for WRSUPP are:

0 = No
1 = Yes
-1 = No career- or job-related courses

WRTIME1 through WRTIME6 indicate the hours per week for each career- or job-related course. These variables were derived from WRREASO1 through WRREASO6 (F4), WRWHEN1 through WRWHEN6 (F6), WRWHNUN1 through WRWHNUN6 (F6), WRHRS1 through WRHRS6 (F7) and WRHRUNT1 through WRHRUNT6 (F7). Units other than hours per week were converted to as shown in the derived variable code. See section 7.1.7 for additional discussion of the conversion of time units to hours per week. Nonparticipants in career- or job-related activities are coded -1 on this variable.

WRTMONEY represents the total amount of education-related expenses for career- or job-related courses. This variable was created from WRACTY (F1), WRTUITO1 through WRTUITO6 (F8), and WRWGT (weight variable). Nonparticipants in career- or job-related activities are coded -1 on this variable.

WRTOTEMP represents the number of sampled career- or job-related courses the adult took that were provided by his/her employer. The variable was created using WRACTY (F1) and WR1PREMP through WR6PREMP (F11). Nonparticipants in career- or job-related activities are coded -1 on this variable.

WRTOTIME represents the total amount of instructional time for career- or job-related courses. This variable was created using WRACTY (F1), derived variables WRTIME1 through WRTIME6, and WRWGT (weight variable). Nonparticipants in career- or job-related activities are coded -1 on this variable.

WRWEEK1 through WRWEEK6 designate the number of weeks the adult attended each career- or job-related course. This was determined from the variables WRREASO1 through WRREASO6 (F4), WRWHEN1 through WRWHEN6 (F6), WRWHNUN1 through WRWHNUN6 (F6), and WRWKS1 through WRWKS6 (F6OV). Units other than weeks were converted to weeks as shown in the derived variable code. Nonparticipants in career- or job-related activities are coded -1 on this variable.

ZIP18PO2 is a linked-derived variable that categorizes the percentage of families with children under age 18 in the subject's ZIP Code who are below the 1989 poverty line. It was created using the respondent's ZIP Code to extract data from the 1990 Census of Population Summary Tape File 3B (STF3B). The Census Bureau has at the core of its poverty line definition the 1961 economy food plan, the least costly of four nutritionally adequate food plans designed by the Department of Agriculture. It was determined from the Agriculture Department's 1955 survey of food consumption that families of three or more persons spend approximately one-third of their income on food; hence, the poverty line for these families was set at three times the cost of the economy food plan. For smaller families and persons living alone, the cost of the economy food plan was multiplied by factors that were slightly higher to compensate for the relatively larger fixed expenses for these smaller households. The poverty line cut-offs are revised annually to allow for changes in the cost of living, as reflected in the Consumer Price Index.

The values for ZIP18PO2 are:

1 = Less than 5 percent
2 = 5 - 9 percent
3 = 10 - 19 percent
4 = 20 percent or more

ZIPBLHI2 is a linked-derived variable that categorizes the percentage of persons in the subject's ZIP Code who are black or Hispanic. It was created using the respondent's ZIP Code to extract data from the 1990 Census of Population Summary Tape File 3B (STF3B).

The values for ZIPBLHI2 are:

1 = Less than 6 percent
2 = 6 - 15 percent
3 = 16 - 40 percent
4 = 41 percent or more

ZIPURBAN is a linked-derived variable that categorizes the subject's ZIP Code as urban or rural. It was created using the respondent's ZIP Code to extract data from the 1990 Census of Population Summary Tape File 3B (STF3B). Urban is further broken down into inside urbanized area (UA) and outside of UA.

The definitions for these categories are taken directly from the 1990 Census of Population. A UA comprises a place and the adjacent densely settled surrounding territory that together have a minimum population of 50,000 people. The term "place" in the UA definition includes both incorporated places, such as cities and villages, and Census-designated places (unincorporated population clusters for which the Census Bureau delineated boundaries in cooperation with state and local agencies to permit the tabulation of data for Census Bureau products). The "densely settled surrounding territory" adjacent to the place consists of contiguous and noncontiguous territory of relatively high population density within short distances. The specific density and distance requirements are defined in the *Federal Register*, Vol. 55, No. 204.

The second category is urban, outside of UA. This category includes incorporated or unincorporated places outside of a UA with a minimum population of 2,500 people. One exception is for those who live in extended cities[5]. Persons living in rural portions of extended cities are classified as rural rather than urban. Places not classified as urban are rural.

Since a ZIP Code can cut across geographic areas that are classified in any of the three categories, the ZIPURBAN variable is classified into the category that has the largest number of persons. For example, if a ZIP Code has 5,000 persons in the first category (urban, inside UA), 0 persons in the second category (urban, outside UA), and 1,200 persons in the third category (rural), it is classified as inside UA.

The values for ZIPURBAN are:

1 = Urban, inside UA
2 = Urban, outside UA
3 = Rural

6.1.5 Weighting and Variance Estimation Variables

The first variable in this section of the file is AEWEIGHT. It is the variable that should be used as the weight variable to estimate the characteristics of adults. This weight contains all of the adjustments for the probabilities of selection, nonresponse, and undercoverage as described in chapter 3.

When adults reported more than six career- or job-related courses, six courses were randomly sampled for collecting detailed information. For other formal structured courses, if more than three courses were reported, three courses were randomly sampled. In order to reduce the bias in course estimates, weight variables were attached to the nonmissing courses to adjust for the incompleteness. The course weight variables are WRWGT for career- or job-related courses and SAWGT for other formal structured courses. A more complete discussion of the course weights is given in chapter 3.

The 50 replicate weights, ARPL1 to ARPL50, are the next variables in this section. These replicate weights can be used with WesVarPC (Brick et al. 1995) procedure to produce estimates of the sampling errors of the estimates. The JK1 option of WesVarPC must be used to correctly estimate the sampling errors using this approach. More details on how the replicate weights were created are given in chapter 3, along with an approximate method that does not involve using the WesVar procedure.

The remaining two variables in this section are STRATUM and PSU. These variables are provided to enable users to compute sampling errors using Taylor Series approximations, such as the SUDAAN procedure (Shah et al. 1995). The methods used to construct the values for STRATUM and PSU are also discussed in chapter 3.

[5] An extended city is either an incorporated place of any population size inside a UA, or an incorporated place with a population of 2,500 or more people outside a UA that contains one or more component rural areas. Each component rural area must have a population density of less than 100 people per square mile, consist of at least one entire Census block, and include at least 5 square miles of continuous area. An extended city can have both urban and rural population and land areas.

6.1.6 Imputation Flag Variables

Item nonresponse occurred when some, but not all, of the responses were missing from an otherwise cooperating respondent. For all the items on the public use file, the missing data were imputed, or "filled in," to help users of the data. For each variable involved in imputation, an imputation flag variable was created. If there is no imputation flag, then no imputation was performed on that variable. This flag can be used to identify imputed values. Section 3.6 discusses the meaning of values assigned to the imputation flags.

The naming convention for the imputation flag variables was to drop the last letter of the variable name and replace it with an "f." The imputation flags appear on the file in the same order as the items appear in the questionnaire. This naming convention holds true for all AE variables except for variables that originally end in "f," variables that will become confused with other variables when the last letter is dropped, or variables that end in a number. In these cases, the letter before the last digit is dropped and replaced with an "f."

Although the ZIP Code variable (HZIPCODE, J6) is not included on the public use data file, there was an imputation flag variable (HZIPCODF) created to indicate that the data were imputed. The HZIPCODE variable was used to create the variables ZIPURBAN, ZIPBLHI2, and ZIP18PO2.

6.1.7 Other Flag Variables

Additional flag variables were created to enable users to identify cases in which special assumptions have been made in classifying cases or where there are apparent anomalies for which the data user might wish to recode or reimpute a case. These flags are discussed in detail in Chapter 7, Data Considerations and Anomalies.

6.1.8 RECNUM (record number)

RECNUM is a variable that appears in the last column of each record in the AE data file (i.e., column 1024). Its value equals the record on which it appears. In the AE data file, there are four records.

6.1.9 Numeric and Character Variables

MAINRSLT is the only variable in the AE public data file that has a character format.

6.2 Guide to the Codebook

The codebook, shown in appendix D, contains complete descriptions of the contents of the data file. There is a single codebook for the Adult Education file. The codebook contains system variables, household membership variables, questionnaire variables, derived variables, weighting and variance estimation variables, and imputation flag variables. The codebook provides all the pertinent information for the variables in the files, including the variable name, the question wording, the position and format of the variable in the file, and the responses to the item. The unweighted frequency, unweighted percent, and weighted percent are provided along with each response. Figure 6-1 provides a description of each of the items appearing in the codebook.

6.3 Public and Proprietary Data Files

This manual is designed to assist users of the public use AE data file. The public use file contains all the variables detailed above but does not contain certain variables excluded from the file for confidentiality reasons. These include the names of household members, verbatim string responses that might identify persons or employers, and respondents' individual ZIP Codes (HZIPCODE). Some of these variables (e.g., verbatim strings of other-specify categories, HZIPCODE) that are excluded from the public file are included on a separate proprietary, or restricted-use, file. These variables are indicated with a "/R" on the AE questionnaire in appendix A. The proprietary data file also contains close to 100 "ZIP code" variables from the 1990 Census of Population Summary Tape File 3B (STF3B), including the median household income of the area, the level of community mobility in the area, and the percentage of owner-occupied households in the area. The proprietary data file may be obtained through a special licensing agreement with NCES. Contact NCES for details on how to become licensed.

Figure 6-1.--Example of the codebook format

(1) IBSELFEM = (2) A7-SELF-EMPLOYED IN PAST 12 MO

(3) A7 Were you self-employed at any time in the past 12 months?

(4) RECORD: 1 POSITION: 96-97
(5) FORMAT: N2

(6) RESPONSE	(7) CODES	(8) FREQ	(9) UNWGTD PERCENT	(10) WGTD PERCENT
1 YES	1	2,794	14.2%	19.1%
2 NO	2	12,384	62.8%	80.9%
-1 INAPPLICABLE	-1	4,544	23.0%	(MISS)
TOTALS		19,722	100.0%	100.0%

DESCRIPTIONS:

(1) Variable name: This is the variable name associated with each item. This is the unique identifier present in the SAS or SPSS data file.

(2) Variable label: A short label, which is associated with each of the variables, is presented here. This label appears in the SAS or SPSS data file. Labels contain the questionnaire item numbers. Labels that begin with the letter "D" indicate a derived variable.

(3) Question wording: This is the exact question wording as it appeared in the questionnaire.

(4) Record and position: These provide the record number (1-4) and the starting and ending column position of the variable in the raw (ASCII) data file.

(5) Format: This provides the variable type, its width, and the number of positions after the decimal point, if necessary. A data type of "N" represents numeric variables and "A" represents character variables. In this example, IBSELFEM is a numeric variable with a length of 2.

(6) Response categories: This column provides the response categories for the variable.

(7) Response codes: This column provides the actual numeric/alphanumeric codes present in the data files.

(8) Unweighted frequency counts: This column displays the unweighted frequency counts for this variable. The counts for missing values will also be included for the unweighted values, but not for the weighted values.

(9) Unweighted percentages: This column displays the unweighted frequency counts from the previous column as percentages. This column will also contain percentages for missing values.

(10) Weighted percentages: This column displays the percentages of frequency counts weighted up to the population. This column will not include percentages for missing values.

7. DATA CONSIDERATIONS AND ANOMALIES

The purpose of this section is to bring to the user's attention certain data considerations and data anomalies in the NHES:95 AE survey data; to describe the nature of those anomalies; and, where appropriate, to identify possible means of taking them into account when analyzing the AE data. This section will also describe how the NHES:95 AE survey differs from the AE component of the NHES:91. Information regarding how the AE data compare to data from other sources may be found in a working paper entitled *Comparison of Estimates from the 1995 National Household Education Survey* (Collins et al., forthcoming).

7.1 Specific Data Considerations and Anomalies

7.1.1 Participants in English as a Second Language Classes

In the NHES:95 AE survey administration, interviews were conducted in English and Spanish. As a result, adults who do not speak English or Spanish could not interviewed. The NHES:95 estimate of ESL participants (n = 1,301,334; standard error = 111,541) is slightly lower than that of the U.S. Department of Education's Office of Vocational and Adult Education (n = 1,554,992; standard error not available), which is based on information collected through adult education programs. Therefore, analysts should be aware of possible underreporting as a result of this coverage limitation.

7.1.2 Barriers to Adult Education Participation

In the ABE/GED, ESL, and career- or job-related sections of the AE interview, nonparticipants were asked about barriers to participation in these types of adult education, if they indicated that they had an interest in participating and knew of a class they could have taken. A proportionally large number of "other, specify" responses were obtained, as indicated in the frequencies of the relevant variables, ESPROTOS (B22e), BSPROTOS (C21e), and WRPROTOS (F21e). Some responses were recoded to existing categories, where appropriate. However, many of the responses indicated that the adults did not share the conceptual framework on which the classification of types of barriers was constructed in the AE interview, and the reclassification of these responses within the framework of the barriers question was problematic.

In order to provide a set of categories that would allow these responses to be used meaningfully, three new variables were created, ESPROTHC, BSPROTHC, and WRPROTHC, located after ESPROTOS (B22e), BSPROTOS (C21e), and WRPROTOS (F21e), respectively. Each new variable includes nine response categories:

(1) Personal/family obligation or problem, including caring for an elderly or sick relation, wanting to spend time with children, and so on;
(2) Health problem, that is, the respondent him/herself had a health problem or disability that prevented his/her participation;
(3) Distance/location of the classes;
(4) Age, usually given in reference to the respondent being elderly;

(5) Motivation, including responses such as lack of motivation, lack of energy, and so on;
(6) Availability of courses, including responses such as course canceled or course full;
(7) Qualifications/requirements, for example, needing a diploma or GED to participate, needing to pass a test, or needing to be a citizen;
(8) Work-related reasons; and
(9) Other, including a wide range of miscellaneous answers.

While not all of these possible answers appear in each section (i.e., in ABE/GED, ESL, and career- or job-related sections), the same set of codes was used so that analysts could combine responses across sections if they wish to do so.

7.1.3 Types of Credential Programs

In the credential section, respondents were asked to identify the type of credential program in which they were enrolled, for example, associate degree, vocational diploma, bachelor's degree, and so on. Respondents reported numerous credential programs that were coded as "other, specify" credentials, variables CRDIPLO1, CRDIPLO2, and CRDIPLO3 (D3). In the course of data preparation, some cases were reclassified to existing categories. However, in many other cases, there was not sufficient information to make decisions about reclassifying the responses. In most of these cases, the respondent reported a substantive area rather than a type of credential. As a result, about 10 percent of the credential programs were classified as "other, specify" degrees or diplomas in the AE file.

7.1.4 Coding Major Fields of Study Associated with Personal Improvement and Leisure Programs

In the *Classification of Instructional Programs* (*CIP*) manual introduction, Personal Improvement and Leisure Programs are defined as "programs that are not offered for credit and that may or may not lead to any recognized completion." These codes include 32, Basic Skills; 33, Citizenship Activities; 34, Health-Related Knowledge and Skills; 35, Interpersonal and Social Skills; 36, Leisure and Recreational Activities; and 37, Personal Awareness and Self-Improvement.

A total of 43 cases (1 percent) were coded between 32 and 37 in the NHES:95 AE. More specifically, 1 case was coded 32, Basic Skills; 5 cases were coded 34, Health-Related Knowledge & Skills; and 37 cases were coded 36, Leisure & Recreational Activities. No cases were assigned to 33, Citizenship Activities; 35, Interpersonal & Social Skills; or 37, Personal Awareness & Self-Improvement.

When examining cases with these codes in the NHES:95, it can be seen that the vast majority of the MFOS were bachelor's or higher degree programs and were provided by 4-year colleges and universities. These programs could have been coded 50, Visual & Performing Arts if the providers and types of degree information had been available to the coders. However, when coding MFOS, the coders only used verbatim strings of the MFOS reported by respondents. Prior to manual coding, a computer string match program was implemented to identify any cases in which reported verbatim strings of the MFOS exactly matched the CIP categories. For example, if the verbatim strings of the MFOS were

"music" or "reading," they were automatically coded 36, Leisure & Recreational Activities on the bases of the verbatim match. It is arguable that it is important to look at the degree and provider associated with the codes included in the Personal Improvement and Leisure Programs group of categories. Analysts may come to different coding decisions based on this additional information. Further information can be found in the Major Field of Study coding manual in appendix F.

7.1.5 Assistantships and Work-Study

In the NHES:95, work-study positions, assistantships, and fellowships were considered to be financial aid and not employment. As a result, skip patterns in the questionnaire were designed to eliminate these positions from items that collected employment information. For example, persons who reported that they had one job in the previous year and that they had an assistantship skipped many employment-related items. However, a small number of adults reported jobs that were clearly work-study or assistantships. Those work-study positions and assistantships that were reported in the employment section were "cleaned out." However, data users should be aware that this concept of financial aid versus employment does not appear to be shared by some respondents, and may be reflected in the numbers of jobs adults reported having held in the previous year.

7.1.6 Full-Time and Part-Time Students in Credential Programs

In the NHES:95, information about whether the respondents were full-time or part-time students in a credential program was not collected through direct questions about full-time/part-time status. However, respondents were asked the number of months they attended a credential program on a full-time basis and the number of months they attended on a part-time basis. If CRTRMFT1 or CRTRMFT2 or CRTRMFT3 > 0 then the adult participated in a credential program on a full time basis at some time during the previous 12 months. If CRTRMPT1 or CRTRMPT2 or CRTRMPT3 > 0 then the adult participated in a credential program on a part-time basis at some time in the previous 12 months. For some adults, both conditions are true. This is not an anomaly, but a data structure that data users should be aware of.

7.1.7 Hours Per Week of Instruction and Flag Variables

In the NHES:95, participants in adult education (i.e., ESL, ABE/GED, career- or job-related courses, or other formal structured courses) were asked about the number of hours they attended classes or courses. To allow the respondents to answer this question in a time unit for which they were most comfortable, two time units were used in the CATI--"per week" or "per day."

While creating a derived variable indicating instructional hours per week, cases in which the unit of "per day" was reported by the respondents were converted into weekly instructional hours. For the vast majority of cases, the conversions were simple and straightforward. However, there was a total of 105 cases in the career- or job-related and other formal structured sections for which assumptions were employed to make the conversions; no case was involved in the ESL and ABE/GED sections. The following are examples of cases for which the assumptions were employed.

- If a respondent reported that he/she attended a course 5 hours per day for 3 weeks, the assumption was made that the respondent went to the course 5 hours per day, once a week, for 3 weeks.

- If a respondent reported that he/she attended a course 1 hour for 5 months, the assumption was made that the respondent went to the course 1 hour per week for 5 months.

- If the respondent reported that he/she attended a course for 1 to 3 hours per day for one week, the assumption was made that the respondent attended the course 5 days a week for 1 to 3 hours. That is, if it was 1 hour per day, then weekly instructional hours will be 5 hours (1 hour x 5 days); if it was 2 hours per day, weekly instructional hours will be 10 hours (2 hours x 5 days); or if it was 3 hours per day, weekly instructional hours will be 15 hours (3 hours x 5 days).

Flag variables were created to enable users to identify these 105 cases. The flag variables are: WRTFLAG1, WRTFLAG2, WRTFLAG3, WRTFLAG4, WRTFLAG5, WRTFLAG6, SATFLAG1, SATFLAG2, and SATFLAG3. Users can employ the flag variables to delete these cases or to recalculate instructional hours per week using their own assumptions.

7.1.8 Amounts of Time and Money

When the amount of time that adults spent in educational activities is added together (e.g., the amount of time for all career- or job-related courses identified by the derived variable WRTOTIME), there are small numbers of cases for which the total time is very high. These outliers represent very small percentages of adults. For example, only 1 percent of all adults reported that they spent 216 hours or more in career- or job-related courses (the equivalent of about 10 percent or more of a working year of 2,080 hours). Only 0.3 percent of all adults reported spending more than 500 hours (about one quarter of a work year) in career- or job-related courses. Similar outliers are observed in items associated with time and money in other types of adult education (e.g., the derived variable SATOTIME). For each adult education activity or course, a range check was included in the CATI system, and values outside those ranges had to be confirmed with the respondent and reentered. Data users may wish to leave these total values as they are, or may wish to truncate the distributions of WRTOTIME and SATOTIME at some level before conducting analyses.

7.1.9 AGE and Year of Birth

In the NHES:95, respondents were asked to report the ages of all household members in the Screener; after an adult was sampled for the AE interview, that person was asked his/her month and year of birth. There are discrepancies between the variable AGE (i.e., respondent's age at Screener) (S6) and adults' calculated ages using the variable ADOBYY (i.e., year of birth) (I1). Some of these discrepancies are to be expected if using ADOBYY to calculate adults' ages without considering the month of birth. For instance, using December 31, 1994 as a reference point, an adult's age is calculated by subtracting the year of birth from 1994. This results in a large number of cases with discrepancies because those respondents with early birthdays (January through early April) may have actually turned one year older than the December 31, 1994 calculated age by the date of the interview in early 1995. Therefore, this

anomaly focuses on those cases in which the discrepancy is greater than one year. Another potential source of discrepancies is changes in respondents between the Screener and extended interview, which could result in discrepancies of any size.

There are 958 cases (3.3 percent of the cases in the file) in which the discrepancy is 2 or more years. These cases have been examined and it has been determined that these discrepancies did not occur in the imputation process. In addition, the year of birth variable was examined to identify any respondents who were younger than 16 years, and no such cases were found.

These discrepancies suggest some combination of nonsampling errors (i.e., respondent error and recording error). Because there is no direct evidence to favor one report over the other, updating of the age information for these 958 cases was not performed. As a result, data users of the AE file may want to employ their own judgment when using these two variables.

7.1.10 Numbers of Jobs Reported and JOBFLAG

The variable JOBMORE (I26) contains the response to the question that asks whether a respondent worked for more than one employer in the previous week; this is a yes/no question in which an answer of "yes" indicates that the respondent worked for more than one employer. Of the 1,101 respondents who reported that they had more than one job in the previous week (i.e., JOBMORE is "yes"), 254 adults (23.1 percent) reported only one job when they were asked for the names of their employers (INDUSTR1 through INDUSTR5, I31, found only in the proprietary data file).

There may be a problem with the JOBMORE question itself that led to this anomaly. It may be, for example, that some respondents said "one," meaning they worked for one employer, and the interviewer entered "1," which indicates "yes, worked for more than one employer." If the problem is with the item itself, an error rate of this magnitude (1.3 percent) would be within reason.

A variable called JOBFLAG was created to identify these cases, and was set to 1 if JOBMORE = 1 (worked for more than one employer in the past week) and the number of jobs reported was one. For each of these cases, the occupation and industry variables for a second job were imputed (i.e., FSIC2 and FSOC2 were imputed). Data users can use the JOBFLAG variable to identify these cases and may include or exclude the imputed second job in their analyses.

7.1.11 Complexities Associated with Employment-Related Variables

The AE questionnaire includes a number of very complex skip patterns associated with the respondent's employment. These skip patterns are, in general, driven by six considerations: 1) whether the respondent was employed in the previous 12 months; 2) whether the respondent held one or more than one job in the previous 12 months; 3) whether the respondent had a work-study position, graduate assistantship, or fellowship in the previous 12 months; 4) whether the respondent was self-employed in the previous 12 months; 5) whether a self-employed adult also had another employer; and 6) whether the respondent was retired.

As noted in section 7.1.5, work-study positions, assistantships, and fellowships were not treated as employment, and any such positions that were found in the employment items were removed. If an adult had only one job in the previous 12 months and had a work-study, assistantship or fellowship, subsequent items about employer sponsorship of adult education were skipped. In addition, some questions in the instrument do not make sense if the respondent is self-employed only, for example, items about employer provision or support of adult education. As a result, there are skip patterns associated with self-employment for employment-related items.

In addition to the skip patterns associated with employer support noted above, there are also complex skip patterns associated with the collection of information on employment in section I of the questionnaire. These include, in addition to the considerations above, whether the respondent reported at I15 (worked for pay in the past week) that he/she was retired.

Data users who are conducting analyses involving employment-related items are advised to carefully review the skip patterns and skip boxes in the questionnaire in order to familiarize themselves with the items in question.

7.1.12 Truncation of Adults' Earnings Reported and EARNFLAG

EARNAMT (adults' earnings, I30) was truncated at $100,000 per year to limit the disclosure of the identities of adults participating in the survey. For cases in which adults' earnings were reported in units other than "per year," adults' yearly earnings were approximated assuming full-year employment. Then, for all cases with earnings higher than $100,000 per year, EARNAMT was set to $100,000 and EARNUNT (I30) was set to 6 (per year). There is a flag variable on the data file that identifies the cases for which EARNAMT was truncated, called EARNFLAG (1 = truncated; 0 = not truncated). As EARNFLAG indicates, EARNAMT was truncated for 237 cases.

7.1.13 Response Variance

A reinterview was conducted for the NHES:95 Adult Education component, where sampled adults were asked the same questions as in the original interview. A measure of the response variance for a question is the gross difference rate, which is the percentage of times the respondents gave different answers in the two interviews. Table 7-1 presents the gross difference rates (GDRs) for the adult education items that were included in the reinterview. GDRs of 20 percent or higher were concluded to be indicative of response problems. Variables with GDRs of this size include CREMPWP (D18b), WRKNOW (F20), WRPRTRAN (F21d), WRTIWORK (F23Ad), WRTIACTI (F23Ae), and WRMOOTH (F23Be). Variables with moderate GDR's (10 to 20 percent) included IBVOCDIP (A1OV), CRAWARE (D17), CREMPSPA (D18), CREMPPAY (D18), WRACTY (F1), WRINTRST (F18), WRPRCOST (F21), WRHOWINT (F19), WRPRGEN (money) (F22), WRTITRAV (F23Af), WRTIOTH (F23Ag), WREMPOFF (F25), SAACTY (G1), CVONLY (H1), REQUIRMN (I14), and UNEMLOOK (I25).

As shown in table 7-1, many of the barriers questions had either high or moderate gross difference rates, although many of the estimates were not statistically significant because of large standard errors. For the question that asked adults if they knew of any career- or job-related courses that they could have taken (WRKNOW, F20), a large gross difference rate was observed. This question is very important because it is part of a series of questions used in screening respondents before asking about the barriers to participation. The gross difference rates for the other two questions in this series are also moderately large: WRINTRST (whether interested in taking career- or job-related courses, F18) and WRHOWINT (level of interest in taking career- or job-related courses, F19). These results suggest that the questions used to determine which adults were asked the barriers questions are subject to response variation.

For the questions that asked about the intensity of the obstacle (i.e., major obstacle, minor obstacle, or not an obstacle), the "major" and "minor" response categories were collapsed together to form a binary variable for analysis. This form of the analysis addresses the question of how consistently adults classified thing as an obstacle, regardless of the intensity of the obstacle. Relatively large gross difference rates were observed.

Taken as a whole, the analysis indicates that the barriers questions and other questions related to them may be subject to important response variability. The size of the standard errors of the estimates limits the ability to determine if the estimates are statistically significant, but the point estimates for many of these questions are large. Data users should be aware of the potential response problems with these questions so that they can take this information into account in their analyses. Further information can be found in a Working Paper, *The 1995 National Household Education Survey: Reinterview Results for the Adult Education Component* (Brick et al. 1996).

Table 7-1.-- Adult education public file variables and gross difference rates based on unreconciled reinterview responses

Variable	Label	Gross difference rate	
		estimate	s.e.
IBGRADE	A1-HIGHEST GRADE/YR OF SCHL COMPLETED	1.2	.5
IBVOCDIP	A1OV-RECEIVED VOC/TECH DIPLOMA	17.0	10.9
IBDIPL	A2-HIGH SCHOOL DIPLOMA	.9	2.8
IBUSDIPL	A3-HIGH SCHOOL DIPLOMA IN U.S.	4.0	10.2
IBDIPLYR	A4-HS DIP/EQUIV HS DIP IN LAST 12 MO	2.0	3.9
IBGED	A5-HIGH SCHOOL DIPLOMA THROUGH GED	4.9	.7
IBWORK12	A6-WORK AT A JOB IN PAST 12 MONTHS	5.2	7.1
IBSELFEM	A7-SELF-EMPLOYED IN PAST 12 MO	3.9	2.0
IBOTHEMP	A8-OTHER EMPLYR BESIDES SELF-EMPLYMNT	6.3	11.7
IBEMPL12	A9-NUMBER OF EMPLOYERS IN PAST 12 MO	.3	.2
IBLANG	A10-FIRST LANGUAGE LEARNED TO SPEAK (English)	1.0	.7
IBLANG	A10-FIRST LANGUAGE LEARNED TO SPEAK (Spanish)	.3	1.0
IBLANG	A10-FIRST LANGUAGE LEARNED TO SPEAK (Other)	.7	.3
IBSPEAK	A11-LANGUAGE SPOKEN MOST AT HOME (English)	1.1	1.2
IBSPEAK	A11-LANGUAGE SPOKEN MOST AT HOME (Spanish)	.7	1.7
IBSPEAK	A11-LANGUAGE SPOKEN MOST AT HOME (Other)	.6	.1
ESLANG	B1-ESL CLASSES	0.0	0.0[1]
BSIMPROV	C1A-BASIC SKILLS CLASSES	3.6	13.5
BSGED	C1B-GED PREPARATION CLASSES	2.3	8.7
BSHSEQUV	C1C-OTHER HS EQUIVALENCY PROGRAM	1.2	4.6
CRDEGREE	D1A-COLLEGE OR UNIVERSITY PROGRAM	2.8	5.5
CRVOCDIP	D1B-VOC/TECH PROGRAM	4.0	10.2
CRAWARE[2]	D17-EMPLOYER AWARE CRED PROGRAM	13.8	8.4
CREMPREQ[2]	D18A-EMPLOYER REQUIRED CRED PROGRAM	5.0	3.9
CREMPWP[2]	D18B-EMPLOYER GAVE TIME OFF W/WO PAY	22.9	11.5
CREMPSPA[2]	D18C-EMPLYER PROVIDED CLASSROOM SPACE	10.2	36.9
CREMPPAY[2]	D18D-EMPLOYER PAID ALL/PART OF COSTS	17.3	11.5
APPRENTI	E1-APPRENTICESHIP PROGRAM	1.7	2.6
WRACTY	F1-CAREER OR JOB RELATED COURSES	12.5	15.2
WRINTRST	F18-INTERESTED IN TAKING WORK-REL CRSE	16.0	5.0
WRHOWINT	F19-LEVEL OF INTEREST IN WORK-REL	15.7	1.5
WRKNOW	F20-KNEW OF WORK-REL CRSES TO TAKE	26.8	17.1
WRPRTIME	F21a-TIME WAS BARRIER TO WORK-REL	9.6	28.1
WRPRCOST	F21b-COST WAS A BARRIER TO WORK-REL	10.8	31.9
WRPRCHIL	F21c-CHILD CARE WAS BARRIER TO WORK-REL	7.4	16.8
WRPRTRAN	F21d-TRANSPRTATN BARRIER TO WORK-REL	20.0	58.9

See footnotes at end of table.

Table 7-1.-- Adult education public file variables and gross difference rates based on unreconciled reinterview responses--Continued

Variable	Label	Gross difference rate	
		estimate	s.e.
WRPRGEN	F22-MAIN GENERAL BARRIER TO WORK-REL (time)	8.0	4.9
WRPRGEN	F22-MAIN GENERAL BARRIER TO WORK-REL (money)	13.6	5.5
WRPRGEN	F22-MAIN GENERAL BARRIER TO WORK-REL (child care)	5.6	3.5
WRTIFAM	F23Aa-DESIRE TO SPEND TIME WITH FAMILY	6.2	8.5
WRTICHOR	F23Ab-NEED TO DO HOUSEHOLD CHORES	6.0	8.1
WRTICLHR	F23Ac-UNABL TO TAKE CLSSES DURNG WRK	5.0	6.9
WRTIWORK	F23Ad-WORK RESPONSBLTS DO NOT PERMITF	33.3	38.0
WRTIACTI	23Ae-ACTIVITIES OUTSIDE WORK CONFLICT	41.3	44.9
WRTITRAV	F23Af-TIME-TRAVEL TIME TO/FROM CLASSES	18.2	20.5
WRTIOTH	F23Ag-ANOTHER TIME RELATED PROBLEM	15.8	18.3
WRMOTUIT	F23Ba-AMOUNT OF TUITION AND FEES	--[3]	--[3]
WRMOBOOK	F23Bb-COST OF BOOKS AND SUPPLIES	0.0	0.0[4]
WRMOTRAN	F23Bd-COST-COST OF TRANSPORTATION	8.7	26.7
WRMOOTH	F23Be-ANOTHER MONEY/COST PROBLEM	31.5	97.0
WREMPOFF	F25-EMPLOYER OFFERED WORK-RELATED CRSES	12.8	1.5
SAACTY	G1-OTHER STRUCTURED COURSES	14.3	20.7
CVONLY	H1-COMPUTER/VIDEO-ONLY INSTRUCTION	12.8	9.4
REQUIRMN	I14-LEGAL/PROFESSIONAL REQRMNTS FOR CPE	14.7	6.0
IBWORKMO	I24-MONTHS WORKED FOR PAY IN PAST YEAR	4.7	4.2
UNEMLOOK	I25-UNEMPLOYED & LOOKING FOR WORK	15.6	19.5
MEDICAL	I28A/I29A-MEDICAL/HOSPITAL INSURANCE	7.6	1.3
SICKPAY	I28B-LEAVE WITH FULL PAY	7.6	3.5
VACATPAY	I28C-VACATION WITH FULL PAY	6.4	3.0
RETIRMNT	I28D/I29B-PENSION PLAN OR RETRMNT PGM	8.6	9.8

[1]The estimate of the standard error is zero, but the estimate is subject to variation due to sampling error.

[2]In the reinterview, data were collected for only one credential program.

[3]The estimate is undefined because the sample in the 'not an obstacle' cell is zero.

[4]The estimate of the standard error is zero, but the estimate is subject to variation due to sampling error.

NOTE: s.e. is standard error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

7.2 Differences from the NHES:91 Adult Education Component

Some users of the NHES:95 AE data may wish to make comparisons with data from the AE component of the NHES:91, the last NHES survey addressing the topic of adult education participation. Therefore, it is important to point out differences between the two studies. The NHES:95 AE interview differed substantially from the NHES:91. The changes in the design of the questionnaire were based on experience with the NHES:91 survey and on cognitive laboratory testing of items collecting information on participation. Below, more information is given regarding the questionnaire differences between the NHES:91 and NHES:95 AE components. Also discussed below are some issues related to variance estimation when using these two data sets.

7.2.1 NHES:91 and NHES:95 Questionnaire Design Differences

In the NHES:91, adults were asked about their participation in various educational activities, including college degree programs and a list of other types of adult education. Following the determination of participation status, information was collected on the four most recent courses taken on a part-time basis. In the NHES:95, items and questionnaire sections focusing on six types of AE were developed: English as a Second Language; basic skills education including adult basic education (ABE) and preparation for the General Educational Development (GED) test; credential programs to earn college or university degrees or vocational, technical, or occupational certificates or diplomas; apprenticeship programs; career- or job-related courses or training; and other formal structured courses, such as personal development, recreation, and so on.

The revisions to the NHES:95 AE interview created a concern about the impact of the restructuring of the instrument and changes in wording on estimates of participation. It was for this reason that the NHES:95 Splice questionnaire was implemented. This approach made it possible to compare estimates using the NHES:91 questions (in the Splice interview) and the new NHES:95 AE questions in a concurrent data collection. This permitted an assessment of any change in participation rates that could be attributed to changes in the items themselves. In fact, however, the participation rates for the NHES:95 AE interview and the NHES:95 Splice interview were identical -- 40 percent each.

There are some derived variables in the file that data users can use to make comparisons between the NHES:91 and the NHES:95. Those variables include AEPARTIC (participation in AE activities excluding full-time credential programs), AEPARANY (participation in any AE activities), AELABOR (labor force status), and RACEETHN (race and ethnicity). Data users can also create new variables. Information about the NHES:91 AE data set is available from the *NHES: 91 Adult and Course Data Files User's Manual* (Brick et al. 1992).

7.2.2 Variance Estimation for the NHES:91 and NHES:95

For both the NHES:91 and NHES:95 AE data sets, the calculation of sampling errors for estimates cannot be based on the assumptions of simple random sampling of adults. The NHES:91 utilized a clustered, random digit dialing design for sampling households and the NHES:95 used a list-assisted sample design. In addition, the methods for sampling adults within households differed between the two surveys (see chapter 3 in this manual and chapter 3 in the *NHES:91 Adult and Course Data Files User's Manual* (Brick et al. 1992) for more details about sampling households and adults for each survey). However, the same methods can be used to compute sampling errors of estimates from the NHES:91 and

NHES:95 data sets. One approach is the jackknife replication method. Replicate weights are available in each data set for use in calculating sampling errors using the WesVarPC Windows-based software. For the NHES:91, these weights are called AEREPL1 - AEREPL50; for the NHES:95 the weights are called ARPL1 - ARPL50. When using the WesVarPC software for both the NHES:91 and NHES:95 data sets, the JK1 option should be used. (Chapter 3 explains how to obtain a copy of WesVarPC free of charge.)

If using the NHES:91 AE data in WesVarPC, note that there are 135 adults in this data set who were identified as members of the armed services and whose weights were consequently set equal to zero. This was done because the inference population for the NHES is the noninstitutionalized, *civilian* population of the United States. **These 135 cases must be excluded from the data set *before* using the NHES:91 AE data in WesVarPC.** One way to do this is to select only cases for whom MILFLG (military flag) equals -1.

Another method for computing sampling errors of estimates from the NHES:91 and NHES:95 data is Taylor series approximation. The software available that utilizes this method, such as SUDAAN, typically requires a stratum and a PSU variable. Both the NHES:91 and NHES:95 data sets contain such variables. However, note that because of differing sample designs, the number of values for the stratum and PSU variables are also different. In the NHES:91 AE data set, the PSU variable (called PSU) has two possible values and the stratum variable (called VSTRAT) has 50 values. In the NHES:95 ECPP data set, the PSU variable (also called PSU) has several thousand possible values and the stratum variable (called STRATUM) has two possible values. As discussed in chapter 3, the appropriate statements to use in SUDAAN for the NHES:95 AE data include DESIGN=WR and NEST STRATUM PSU. For the NHES:91, the following statements should be used in SUDAAN: DESIGN=WR and NEST VSTRAT PSU. Again, more information on sample design and calculation of sampling errors can be found in chapter 3 in the user's manuals for each data set.

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APPENDIX A

BASIC SCREENER, EXPANDED SCREENER, AND ADULT EDUCATION QUESTIONNAIRE

NHES:95 Basic Screener

S1. Hello, my name is (INTERVIEWER) and I'm calling for the U.S. Department of Education. We are conducting a voluntary and confidential study about the educational experiences of both adults and children. These first questions usually take about 5 minutes. Are you a member of this household and at least 18 years old?

YES	1	(GO TO S5)
NO	2	(GO TO S2)
BUSINESS	3	(GO TO S5)
GO TO RESULT	GT	
RETRY AUTODIALER	RT	

S2. May I please speak with a household member who is at least 18 years old?

AVAILABLE	1	(GO TO S1)
NOT AVAILABLE	2	(GO TO RESULT, CALLBACK APPT.)
THERE ARE NONE	3	(GO TO S3)
GO TO RESULT	GT	

S3. May I please speak with the male or female head of this household?

PERSON ON PHONE	1	(GO TO S5)
OTHER PERSON, AVAILABLE	2	(GO TO S4)
OTHER PERSON, NOT AVAILABLE	3	(GO TO RESULT, CALLBACK APPT.)
GO TO RESULT	GT	

S4. Hello, this is (INTERVIEWER) and I'm calling for the U.S. Department of Education. We are conducting a voluntary and confidential study about the educational experiences of both adults and children. This study will help the Department of Education plan educational programs in the U.S. These first questions usually take about 5 minutes. Are you a head of this household?

YES	1	(GO TO S5)
NO	2	(GO TO S3)
GO TO RESULT	GT	

S5. I would like to confirm that this number is for home use rather than only used for business. (Is this a home phone?)

HOME USE	1	(CONTINUE)
HOME AND BUSINESS USE	2	(CONTINUE)
BUSINESS USE ONLY	3	(GO TO THANK1)
GO TO RESULT	GT	

S6. Starting with yourself, please tell me just the first names and ages of all people who normally live in your household. What is your first name, please?

[HOUSEHOLD MEMBERS INCLUDE PEOPLE WHO THINK OF THIS HOUSEHOLD AS THEIR PRIMARY PLACE OF RESIDENCE. IT INCLUDES PERSONS WHO USUALLY STAY IN THE HOUSEHOLD BUT ARE TEMPORARILY AWAY ON BUSINESS, VACATION, IN A HOSPITAL, OR LIVING AT SCHOOL IN A DORMITORY, FRATERNITY, OR SORORITY.]

What is [your first name/the first name of the next person?]	How old [are you/is (he/she)]? 2	Is this person male or female?	SCREENER RESPONDENT
	AGE **AGE1-AGE14**	**SEX** **SEX1-SEX14**	

S6VERF1. [VERIFY THE NUMBER OF HOUSEHOLD MEMBERS LISTED ON THE MATRIX.]
Have we missed anyone else who usually lives here who is temporarily away from home or living in a dorm at school, or any babies or small children?

MATRIX CORRECT 1
RETURN TO MATRIX 2
GO TO RESULT 3

Ask S7-S10 for each person age 3-10 and age 16-19. If none, go to 2nd box after S10.

S7. Is (PERSON) attending (school/nursery school, kindergarten, or school)?

YES ..... 1 (GO TO BOX)
NO ..... 2 (GO TO BOX)

Ask S8 for each person age 5-10. Else, if person is age 3 or 4 or age 16-19 and enrolled in school, go to S9. Else, if not enrolled in school, go to first box after S10.

S8. (READ FIRST TIME: Some parents decide to educate their children at home rather than sending them to school.) Is (CHILD) being schooled at home?

YES ..... 1 (GO TO S10)
NO ..... 2 (GO TO BOX)

If person is enrolled in school, ask S9. Else go to 1st box after S10.

S9. What grade or year is (PERSON) attending?
[PROBE FOR T OR P: Is that before or after kindergarten?]

NURSERY/PRESCHOOL/PREKINDERGARTEN/HEAD START	N	(GO TO BOX AFTER S10)
TRANSITIONAL KINDERGARTEN (BEFORE K)	T	(GO TO BOX AFTER S10)
KINDERGARTEN	K	(GO TO BOX AFTER S10)
PREFIRST GRADE (AFTER K)	P	(GO TO BOX AFTER S10)
FIRST GRADE	1	(GO TO BOX AFTER S10)
SECOND GRADE	2	(GO TO BOX AFTER S10)
THIRD GRADE	3	(GO TO BOX AFTER S10)
FOURTH GRADE	4	(GO TO BOX AFTER S10)
FIFTH GRADE	5	(GO TO BOX AFTER S10)
SIXTH GRADE	6	(GO TO BOX AFTER S10)
SEVENTH GRADE	7	(GO TO BOX AFTER S10)
EIGHTH GRADE	8	(GO TO BOX AFTER S10)
NINTH GRADE/FRESHMAN IN HIGH SCHOOL	9	(GO TO BOX AFTER S10)
TENTH GRADE/SOPHOMORE IN HIGH SCHOOL	10	(GO TO BOX AFTER S10)
ELEVENTH GRADE/JUNIOR IN HIGH SCHOOL	11	(GO TO BOX AFTER S10)
TWELFTH GRADE/SENIOR IN HIGH SCHOOL	12	(GO TO BOX AFTER S10)
UNGRADED ELEMENTARY/SECONDARY	U	(GO TO S10)
SPECIAL EDUCATION	S	(GO TO S10)
VOCATIONAL/TECHNICAL AFTER HIGH SCHOOL	15	(GO TO BOX AFTER S10)
COLLEGE (UNDERGRADUATE)	16	(GO TO BOX AFTER S10)
GRADUATE, PROFESSIONAL SCHOOL	17	(GO TO BOX AFTER S10)

[IF T: In this interview, we will be referring to that as "kindergarten."
IF P: In this interview, we will be referring to that as "prefirst grade."]

S10. What grade would (PERSON) be in if (he/she) were (attending school/attending a school with regular grades)?
[PROBE FOR T OR P: Is that before or after kindergarten?]

NURSERY/PRESCHOOL/PREKINDERGARTEN/HEAD START	N
TRANSITIONAL KINDERGARTEN (BEFORE K)	T
KINDERGARTEN	K
PREFIRST GRADE (AFTER K)	P
FIRST GRADE	1
SECOND GRADE	2
THIRD GRADE	3
FOURTH GRADE	4
FIFTH GRADE	5
SIXTH GRADE	6
SEVENTH GRADE	7
EIGHTH GRADE	8
NINTH GRADE/FRESHMAN IN HIGH SCHOOL	9
TENTH GRADE/SOPHOMORE IN HIGH SCHOOL	10
ELEVENTH GRADE/JUNIOR IN HIGH SCHOOL	11
TWELFTH GRADE/SENIOR IN HIGH SCHOOL	12
UNGRADED/NO EQUIVALENT	U
VOCATIONAL/TECHNICAL AFTER HIGH SCHOOL	15
COLLEGE (UNDERGRADUATE)	16
GRADUATE, PROFESSIONAL SCHOOL	17

[IF T: In this interview, we will be referring to that as "kindergarten."
IF P: In this interview, we will be referring to that as "prefirst grade."]

Ask S7-S10 for next person age 3-10 or 16-19.
After last person, go to next box.

For splice sample, go to the sampling point.
Else, ask S11 and S12 for each person age 16 and older who is not currently enrolled in grade 12 or below, ungraded elementary or secondary, or special education.

S11. Now I have a few questions about [you/you and the other adult(s) in your household]. [Do you/Does (ADULT)] have a high school diploma or its equivalent, such as a GED?

YES 1
NO 2

S12. During the past 12 months [did you/did (ADULT)] take classes, programs, courses, workshops, or seminars of any kind for any reason?

YES 1
NO 2

After last adult, go to next box.

Sampling Point:
Select children and adults for extended interviews.
If any children are selected, go to next box.
If adults only are selected, go to box after S14.
If no one is selected, go to THANK2.

Ask S13 and S14 for each sampled child.
If there is only 1 household member 12 years old or older, autocode S13 to this adult.

S13. We would like to ask some questions about (CHILD'S) (care and) education. [IF SCREENER RESPONDENT IS OBVIOUSLY CHILD'S MOTHER, INSTEAD OF READING QUESTION, VERIFY RELATIONSHIP AND ENTER HER PERSON NUMBER.] Who is the parent or guardian <u>in this household</u> who knows the most about (CHILD'S) (care and) education?
[DISPLAY HOUSEHOLD MEMBERS 12 AND OLDER.]

PERSON NUMBER ..... ☐☐

S14. What is [your/(CAREGIVER'S) relationship to (CHILD)?

MOTHER (BIRTH/ADOPTIVE/STEP/FOSTER) 1
FATHER (BIRTH/ADOPTIVE/STEP/FOSTER) 2
BROTHER/SISTER 3
GRANDPARENT.....4
OTHER RELATIVE.....5
NONRELATIVE 6

Ask S15 for sampled adults other than the Screener respondent who are enrolled in college, graduate school, or vocational/technical school after high school and are age 16 to 19, or are age 20 to 25. For other sampled adults, go to S17.

S15. Is (ADULT) living there, in student housing, or somewhere else?

HERE	1	(GO TO S17)
STUDENT HOUSING [This includes all housing owned, sponsored, or leased by the school such as a dormitory or fraternity or sorority house.]	2	(GO TO S16)
OTHER PRIVATE HOME OR APARTMENT	3	(INELIGIBLE)
INSTITUTION OR GROUP QUARTERS [THIS INCLUDES A JAIL OR DETENTION CENTER, MEDICAL FACILITY, REHABILITATION CENTER, MENTAL HEALTH FACILITY, MILITARY BARRACKS, OR GROUP FOSTER CARE.]	4	(INELIGIBLE)

S16. Would you please give me (his/her) last name and telephone number so that we can call (him/her) to talk about (his/her) educational experiences?

LAST NAME_____

PHONE_____

S17. [Are you/Is (ADULT)] currently serving on active duty in the U.S. Armed Forces? [DO NOT INCLUDE RESERVES OR NATIONAL GUARD.]

YES	1	(INELIGIBLE)
NO	2	(GO TO BOX)

Go to HHSELECT screen to select interview

THANK1. Thank you, but we are only interviewing in private residences.

THANK2. Thank you, but no one in your household has been selected for this study.

NHES:95 Expanded Screener

S1. Hello, my name is (INTERVIEWER) and I'm calling for the U.S. Department of Education. We are conducting a voluntary and confidential study about the educational experiences of both adults and children. These first questions usually take about 5 minutes. Are you a member of this household and at least 18 years old?

YES	1	(GO TO S5)
NO	2	(GO TO S2)
BUSINESS	3	(GO TO S5)
GO TO RESULT	GT	
RETRY AUTODIALER	RT	

S2. May I please speak with a household member who is at least 18 years old?

AVAILABLE	1	(GO TO S1)
NOT AVAILABLE	2	(GO TO RESULT, CALLBACK APPT.)
THERE ARE NONE	3	(GO TO S3)
GO TO RESULT	GT	

S3. May I please speak with the male or female head of this household?

PERSON ON PHONE	1	(GO TO S5)
OTHER PERSON, AVAILABLE	2	(GO TO S4)
OTHER PERSON, NOT AVAILABLE	3	(GO TO RESULT, CALLBACK APPT.)
GO TO RESULT	GT	

S4. Hello, this is (INTERVIEWER) and I'm calling for the U.S. Department of Education. We are conducting a voluntary and confidential study about the educational experiences of both adults and children. This study will help the Department of Education plan educational programs in the U.S. These first questions usually take about 5 minutes. Are you a head of this household?

YES	1	(GO TO S5)
NO	2	(GO TO S3)
GO TO RESULT	GT	

S5. I would like to confirm that this number is for home use rather than only used for business. (Is this a home phone?)

HOME USE	1	(CONTINUE)
HOME AND BUSINESS USE	2	(CONTINUE)
BUSINESS USE ONLY	3	(GO TO THANK1)
GO TO RESULT	GT	

S6. Starting with yourself, please tell me the just the first names and ages of all the people who normally live in your household. What is your first name, please?

[HOUSEHOLD MEMBERS INCLUDE PEOPLE WHO THINK OF THIS HOUSEHOLD AS THEIR PRIMARY PLACE OF RESIDENCE. IT INCLUDES PERSONS WHO USUALLY STAY IN THE HOUSEHOLD BUT ARE TEMPORARILY AWAY ON BUSINESS, VACATION, IN A HOSPITAL, OR LIVING AT SCHOOL IN A DORM, FRATERNITY, OR SORORITY.]

What is [your first name/the first name of the next person]?	How old [are you/ is (he/she)]?	Is this person male or female?	SCREENER RESPONDENT
	AGE **AGE1-AGE14**	**SEX** **SEX1-SEX14**	

S6VERF1. [VERIFY THE NUMBER OF HOUSEHOLD MEMBERS LISTED ON THE MATRIX.] Have we missed anyone else who usually lives here who is temporarily away from home or living in a dorm at school, or any babies or small children?

MATRIX CORRECT 1
RETURN TO MATRIX.....2
GO TO RESULT.....GT

Ask SX7 for each person age 3 and older.

SX7. [Are you/Is (PERSON)] attending (school/nursery school, kindergarten, or school)?

YES 1
NO 2

If AGE = 5-16, then ask SX8.
Else, if SX7 = 1 (person is enrolled in school), go to SX9. Else, go to first box after SX15.

SX8. (READ FIRST TIME: Some parents decide to educate their children at home rather than sending them to school.) Is (CHILD) being schooled at home?

YES .....1 (GO TO SX13)
NO .....2 (GO TO BOX)

If SX7 = 1 (person is enrolled in school), go to SX9.
Else, go to first box after SX15.

SX9. What grade or year of school [are you/is (PERSON)] attending?
[PROBE FOR T OR P: Is that before or after kindergarten?]

NURSERY/PRESCHOOL/PREKINDERGARTEN/HEAD START	N	(GO TO SX14)
TRANSITIONAL KINDERGARTEN (BEFORE K)	T	(GO TO SX14)
KINDERGARTEN	K	(GO TO SX14)
PREFIRST GRADE (AFTER K)	P	(GO TO SX14)
FIRST GRADE	1	(GO TO SX14)
SECOND GRADE	2	(GO TO SX14)
THIRD GRADE	3	(GO TO SX14)
FOURTH GRADE	4	(GO TO SX14)
FIFTH GRADE	5	(GO TO SX14)
SIXTH GRADE	6	(GO TO SX14)
SEVENTH GRADE	7	(GO TO SX14)
EIGHTH GRADE	8	(GO TO SX14)
NINTH GRADE/FRESHMAN IN HIGH SCHOOL	9	(GO TO SX14)
TENTH GRADE/SOPHOMORE IN HIGH SCHOOL	10	(GO TO SX14)
ELEVENTH GRADE/JUNIOR IN HIGH SCHOOL	11	(GO TO SX14)
TWELFTH GRADE/SENIOR IN HIGH SCHOOL	12	(GO TO SX14)
UNGRADED ELEMENTARY/SECONDARY	U	(GO TO SX13)
SPECIAL EDUCATION	S	(GO TO SX13)
VOCATIONAL/TECHNICAL AFTER HIGH SCHOOL	15	(GO TO SX10)
COLLEGE (UNDERGRADUATE)	16	(GO TO SX11)
GRADUATE, PROFESSIONAL SCHOOL	17	(GO TO SX12)

[IF T: In this interview, we will be referring to that as "kindergarten."
IF P: In this interview, we will be referring to that as "prefirst grade."]

SX10. In terms of credits earned and requirements fulfilled, what year of the vocational/technical program [are you/is (PERSON)] in now?

FIRST	1	(GO TO SX14)
SECOND OR HIGHER	2	(GO TO SX14)

SX11. What is [your/(PERSON's)] class standing? That is, [are you/is (PERSON)] a freshman, sophomore, junior, or senior?

FRESHMAN	1	(GO TO SX14)
SOPHOMORE	2	(GO TO SX14)
JUNIOR	3	(GO TO SX14)
SENIOR	4	(GO TO SX14)

SX12. In terms of credits earned and requirements fulfilled, what year of graduate or professional school [are you/is (PERSON)] in now?

FIRST	1	(GO TO SX14)
SECOND	2	(GO TO SX14)
THIRD	3	(GO TO SX14)
FOURTH OR HIGHER	4	(GO TO SX14)

SX13. What grade would [you/(PERSON)] be in if [you/(he/she)] were (attending a school/attending a school with regular grades)?
[PROBE FOR T OR P: Is that before or after kindergarten?]

NURSERY/PRESCHOOL/PREKINDERGARTEN/HEAD START	N
TRANSITIONAL KINDERGARTEN (BEFORE K)	T
KINDERGARTEN	K
PREFIRST GRADE (AFTER K)	P
FIRST GRADE	1
SECOND GRADE	2
THIRD GRADE	3
FOURTH GRADE	4
FIFTH GRADE	5
SIXTH GRADE	6
SEVENTH GRADE	7
EIGHTH GRADE	8
NINTH GRADE/FRESHMAN IN HIGH SCHOOL	9
TENTH GRADE/SOPHOMORE IN HIGH SCHOOL	10
ELEVENTH GRADE/JUNIOR IN HIGH SCHOOL	11
TWELFTH GRADE/SENIOR IN HIGH SCHOOL	12
UNGRADED/NO EQUIVALENT	U
VOCATIONAL/TECHNICAL AFTER HIGH SCHOOL	15
COLLEGE (UNDERGRADUATE)	16
GRADUATE, PROFESSIONAL SCHOOL	17

[IF T: In this interview, we will be referring to that as "kindergarten."
IF P: In this interview, we will be referring to that as "prefirst grade."]

If SX8 = 1 (in home school), go to first box after SX15.
Else, ask SX14.

SX14. [Do you/Does (PERSON)] go to a public or a private school?

PUBLIC	1
PRIVATE	2

If SX9 or SX13 = N, T, or K or SX7 = 1 and AGE ≥ 16 (person enrolled in nursery school or kindergarten or age 16 or older and currently enrolled in school), then ask SX15. Else, go to first box after SX15.

SX15. [Are you/Is (PERSON)] now enrolled in school full time or part time?

FULL TIME	1
PART TIME	2

Ask SX7 to SX15 for next person enrolled in school.
After last person, go to next box.

If SX7 = 2 or SX9 or SX13 = 15, 16, 17, and AGE ≥ 16 (person age 16 and older who is not currently enrolled in grade 12 or below, ungraded elementary or secondary, or special education), then ask SX16 to SX18. Else, go to first box after SX18.

SX16. Now I have a few questions about [you/you and the other adults(s) in your household]. What is the highest grade or year of school that [you/(ADULT)] completed?

UP TO 8TH GRADE	1	(ENTER ACTUAL GRADE, GO TO SX17)
9TH TO 11TH GRADE	2	(ENTER ACTUAL GRADE, GO TO SX17)
12TH GRADE BUT NO DIPLOMA	3	(GO TO SX17)
HIGH SCHOOL DIPLOMA/EQUIVALENT	4	(GO TO SX18)
VOC/TECH PROGRAM AFTER HIGH SCHOOL BUT NO VOC/TECH DIPLOMA	5	(GO TO SX17)
VOC/TECH DIPLOMA AFTER HIGH SCHOOL	6	(GO TO SX17)
SOME COLLEGE BUT NO DEGREE	7	(GO TO SX16OV)
ASSOCIATE'S DEGREE	8	(GO TO SX17)
BACHELOR'S DEGREE	9	(GO TO SX18)
GRADUATE OR PROFESSIONAL SCHOOL BUT NO DEGREE	10	(GO TO SX18)
MASTER'S DEGREE (MA, MS)	11	(GO TO SX18)
DOCTORATE DEGREE (PHD, EDD)	12	(GO TO SX18)
PROFESSIONAL SCHOOL DEGREE AFTER BACHELOR'S DEGREE (MEDICINE/MD; DENTISTRY/DDS; LAW/JD/LLB; ETC.)	13	(GO TO SX18)

SX16OV. [Did you/did (ADULT)] earn a vocational or technical diploma after leaving high school?

YES	1
NO	2

SX17. [Do you/Does (ADULT)] have a high school diploma or its equivalent, such as a GED?

YES	1
NO	2

If SX7 = 1 (enrolled in school), autocode SX18 = 1.

SX18. During the past 12 months, [did you/did (ADULT)] take classes, programs, courses, workshops, or seminars of any kind for any reason?

YES	1
NO	2

Ask SX16 to SX18 for next person age 16 and older who is not currently enrolled in grade 12 or below, ungraded elementary or secondary, or special education. After last person, go to next box.

If AGE ≥ 16 (person age 16 or older), then ask SX21.
After last person, go to SX22.

SX21. What is [your/(ADULT'S)] marital status? [VERIFY IF KNOWN.]

MARRIED/REMARRIED.....1
SEPARATED.....2
DIVORCED.....3
WIDOWED.....4
NEVER MARRIED.....5

SX22. (Are you/Is any member of your household) currently serving on active duty in the U.S. Armed Forces? [DO NOT INCLUDE RESERVES OR NATIONAL GUARD.]

YES. .....1 (GO TO SX22OV)
NO .. ..2 (GO TO SX23)

SX22OV. Who is that? [DISPLAY HOUSEHOLD MEMBERS AGE 16 AND OLDER. CODE ALL THAT APPLY.]

PERSON NUMBER..... ☐☐ (INELIGIBLE)

SX23. (Were you/Was everyone in your household) born in this country, that is, in one of the 50 States or the District of Columbia?

YES. .....1 (GO TO SX24)
NO .. ..2 (GO TO BOX AFTER SX24)

SX24. (Did you/Did every member of your household) learn English as (your/their) first language?

YES. .....1 (GO TO BOX AFTER SX26)
NO .. ..2 (GO TO BOX)

If SX23 = 2 (not every household member was born in the U.S.), then ask SX25 for each person in the household; also ask SX26 for each person age 3 or older.
If SX24 = 2 (not every household member learned English as their first language), ask SX26 for each person age 3 or older.

SX25. In what country [were you/was (PERSON)] born?

50 STATES OR THE DISTRICT OF COLUMBIA 1
U.S. TERRITORIES: PUERTO RICO, GUAM, AMERICAN SAMOA, U.S. VIRGIN ISLANDS, MARIANA ISLANDS, OR SOLOMON ISLANDS.....2
(SPECIFY) _____
SOME OTHER COUNTRY.....3
(SPECIFY) _____

SX26. What was the first language [you/(PERSON)] learned to speak?

ENGLISH 1
SPANISH 2
OTHER LANGUAGE 91
(SPECIFY)_____

Ask SX27 and SX28 for each person. After last person, go to first box after SX28 (Sampling Point).

SX27. [Are you/Is (PERSON)] white, black, American Indian or Alaska Native, Asian or Pacific Islander, or some other race?

WHITE.....1
BLACK.....2
AMERICAN INDIAN OR ALASKA NATIVE.....3
ASIAN OR PACIFIC ISLANDER.....4
SOME OTHER RACE.....91
What is that?_____

SX28. [Are you/Is (PERSON)] of Hispanic origin?

YES 1
NO 2

Sampling Point:
Select children and adults for extended interviews.
If any children are selected, go to next box.
If adults only are selected, go to box after SX30.
If no one is selected, go to LINTRO.

Ask SX29 and SX30 for each sampled child.
If there is only 1 household member 12 years old or older, autocode SX29 to this adult.

SX29. We would like to ask some questions about (CHILD'S) (care and) education. [IF SCREENER RESPONDENT IS OBVIOUSLY CHILD'S MOTHER, INSTEAD OF READING QUESTION, VERIFY RELATIONSHIP AND ENTER HER PERSON NUMBER.] Who is the parent or guardian in this household who knows the most about (CHILD'S) (care and) education?
[DISPLAY HOUSEHOLD MEMBERS 12 AND OLDER.]

PERSON NUMBER.....☐☐

SX30. What is [your/(CAREGIVER'S)] relationship to (CHILD)?

MOTHER (BIRTH/ADOPTIVE/STEP/FOSTER).....1
FATHER (BIRTH/ADOPTIVE/STEP/FOSTER).....2
BROTHER/SISTER 3
GRANDPARENT 4
OTHER RELATIVE 5
NONRELATIVE.....6

Ask SX31 for sampled adults other than the Screener respondent for whom AGE = 16 to 25, SX7 = 1 and SX9 = 15, 16, 17 (enrolled in college, graduate school or vocational/technical school after high school and age 16 to 25). Else, go to LINTRO.

SX31. Is (ADULT) living there, in student housing, or somewhere else?

HERE	1	(GO TO LINTRO)
STUDENT HOUSING [This includes all housing owned, sponsored, or leased by the school such as a dormitory or fraternity or sorority house.]	2	(GO TO SX32)
OTHER PRIVATE HOME OR APARTMENT	3	(INELIGIBLE)
INSTITUTION OR GROUP QUARTERS [THIS INCLUDES A JAIL OR DETENTION CENTER, MEDICAL FACILITY, REHABILITATION CENTER, MENTAL HEALTH FACILITY, MILITARY BARRACKS, OR GROUP FOSTER CARE.]	4	(INELIGIBLE)

SX32. Would you please give me (his/her) last name and telephone number so that we can call (him/her) to talk about (his/her) educational experiences?

LAST NAME_____

PHONE_____

1995 Topical component: Public library use

LINTRO. These next questions are about public libraries. This does not include school or college libraries, or special research libraries.

L1. About how far would you say it is from your home to the closest public library? Would you say...

Less than 1 mile,	1
1 or 2 miles,	2
3 to 5 miles,	3
6 to 10 miles,	4
11 to 25 miles, or	5
More than 25 miles?	6

L2. People use public libraries in a number of ways. In the past month, that is, since (MONTH) (DAY), [have you/has any member of your household] used a public library in the following ways? How about...

		YES	NO
a.	Going to a public library to borrow or drop off books or tapes, attend a lecture or story hour, use their equipment, or for any other purpose?	1	2
b.	Visiting a bookmobile in person?	1	2
c.	Making a phone call to the public library to renew books or to ask for information, other than information about library hours or directions to the library?	1	2
d.	Linking to a public library by computer?	1	2
e.	Having library materials sent to you by mail or delivered to your home in person?	1	2

If L2a through L2e = No, ask L3. Else, go to L4.

L3. [Have you/Has anyone in your household] used a public library in any of those ways in the past year?

YES.....1 (GO TO BOX AFTER L4)
NO.....2 (GO TO BOX AFTER L4)

L4. In the past month, that is since (MONTH) (DAY), [have you/has any member of your household] used a public library for the following purposes? How about...

		YES	NO
a.	For a school or class assignment?	1	2
b.	[IF CHILD 6 TO 12 IN HOUSEHOLD] To attend a program or activity designed for children age 6 to 12?	1	2
c.	[IF CHILD UNDER 6 IN HOUSEHOLD] To attend a program or activity for children under 6 that introduces them to books and reading, including a story hour?	1	2
d.	To get books or tapes or attend (any other) events for enjoyment or for hobbies?	1	2
e.	To help find a job?	1	2
f.	For a work assignment or to keep up to date at work?	1	2
g.	For information about personal business such as consumer or health issues, home repairs, or investments?	1	2
h.	To work with a tutor or take a class to learn to read?	1	2

If any L2 a-e = yes (used services in last month), OR if L1 = 6 (>25 miles) and L3 = no (no services in last year), go to K1_P1. Else, ask L5.

L5. Have any of the following things kept you (and other members of your household) from using the services of a public library (more often)? How about...

		YES	NO
a.	Lack of information about public library services, materials, or programs?	1	2
b.	Lack of services, materials, or programs you are interested in?	1	2
c.	Inconvenient public library hours?	1	2
d.	Problems with getting help from library staff?	1	2
e.	A disability that limits access to the public library?	1	2
f.	Concern about the possible cost of fines or lost library materials?	1	2
g.	Lack of transportation, either public transportation, your own car, or someone to drive you?	1	2
h.	Lack of parking?	1	2
i.	Something else? (SPECIFY:_____)	1	2

End of topical component

J1_P1. Now a few more questions about your household. Do you...

Own your home, ... 1
Rent your home, or 2
Have some other arrangement? 3

J2_P2. Besides (PHONE NUMBER), do you have other telephone numbers in your household?

YES ..... 1 (GO TO J3_P3)
NO ..... 2 (GO TO J4_P4)

J3_P3. How many of these additional telephone numbers are for home use?

NUMBER ..... ☐☐

J4_P4. During the past 12 months, has your household ever been without telephone service for more than 24 hours?

YES.....1 (GO TO J5_P5)
NO.....2 (GO TO J6_P6)

J5_P5. What was the total amount of time your household was without telephone service in the past 12 months?

NUMBER..... ☐☐

DAYS 1
WEEKS.....2
MONTHS.....3

J6_P6. So that we can group households geographically, may I have your ZIP code?

ZIP CODE..... ☐☐☐☐☐

Ask J7_P7 if NUMKID10 >= 1 (number of children age 10 or younger). Else, go to J8_P8.

J7_P7. In the past 12 months, has your family received funds or services from any of the following programs? How about...

		YES	NO
a.	Women, Infants, and Children, or WIC?	1	2
b.	Food Stamps?	1	2
c.	AFDC, or Aid to Families with Dependent Children?	1	2

J8_P8. In studies like this, households are sometimes grouped according to income. What was the total income of all persons in your household over the past year, including salaries or other earnings, interest, retirement, and so on for all household members?

Was it...

$25,000 or less, or .....1 (READ SET 1)
More than $25,000?.....2 (READ SET 2)

Was it...

[SET 1]
$5,000 or less 1
$5,001 to $10,000.....2
$10,001 to $15,000.....3
$15,001 to $20,000, or.....4
$20,001 to $25,000?.....5

[SET 2]
$25,001 to $30,000.....6
$30,001 to $35,000.....7
$35,001 to $40,000.....8
$40,001 to $50,000.....9
$50,001 to $75,000, or.....10
Over $75,000? 11

Ask J8OV_P8OV if
(Number in HH = 2 and HINCOME = 2) or
(Number in HH = 3 and HINCOME = 3) or
(Number in HH = 4 and HINCOME = 3) or
(Number in HH = 5 and HINCOME = 4) or
(Number in HH = 6 and HINCOME = 4) or
(Number in HH = 7 and HINCOME = 5) or
(Number in HH = 8 and HINCOME = 5) or
(Number in HH = 9 and HINCOME = 6) or
(Number in HH = 10 and HINCOME = 6) or
(Number in HH = 11 and HINCOME = 7) or
(Number in HH = 12 and HINCOME = 7).
Else, go to THANK2.

J8OV_P8OV. What was your total income last year, to the nearest thousand?

AMOUNT.....$☐☐,☐☐☐

Go to HHSELECT screen to select interview.

THANK1. Thank you, but we are only interviewing in private residences.

THANK2. Those are all the questions I have about your household. Thank you for your time.

NHES:95 Adult Education Interview

INTRO1. [READ DISPLAY IF RESPONDENT WAS NOT SCREENER RESPONDENT.] Hello, this is (INTERVIEWER) calling for the U.S. Department of Education. We are conducting a voluntary and confidential national study about the education of adults.
[SCREENER RESPONDENTS: The purpose of our study is to learn what kinds of educational activities adults take part in and why some adults do not participate. These questions usually take about 15 to 20 minutes.

INTRO2. First, I have a few questions about your education, your work experience, and your language background.

A. INITIAL BACKGROUND

A1. What is the highest grade or year of school that you completed?

IBGRADE **IBGRAD1**	UP TO 8TH GRADE 1	(ENTER ACTUAL GRADE, GO TO A2)
IBGRAD2	9TH TO 11TH GRADE 2	(ENTER ACTUAL GRADE, GO TO A2)
	12TH GRADE BUT NO DIPLOMA 3	(GO TO A2)
	HIGH SCHOOL DIPLOMA/EQUIVALENT 4	(GO TO A3)
	VOC/TECH PROGRAM AFTER HIGH SCHOOL BUT NO VOC/TECH DIPLOMA 5	(GO TO A2)
	VOC/TECH DIPLOMA AFTER HIGH SCHOOL 6	(GO TO A2)
	SOME COLLEGE BUT NO DEGREE 7	(GO TO A1OV)
	ASSOCIATE'S DEGREE 8	(GO TO A2)
	BACHELOR'S DEGREE 9	(GO TO A5)
	GRADUATE OR PROFESSIONAL SCHOOL BUT NO DEGREE .. 10	(GO TO A5)
	MASTER'S DEGREE (MA, MS) 11	(GO TO A5)
	DOCTORATE (PHD, EDD) 12	(GO TO A5)
	PROFESSIONAL DEGREE BEYOND BACHELOR'S DEGREE (MEDICINE/MD; DENTISTRY/DDS; LAW/JD/LLB; ETC.) 13	(GO TO A5)

Do not ask A2 of Screener respondents.
Copy answer from Screener.

A1OV. Did you earn a vocational or technical diploma after leaving high school?

IBVOCDIP	YES 1	
	NO 2	

NOTE: Response categories shown in mixed cases (upper and lower) are read to the respondent by the interviewer. Those shown in all upper case are not read. Those shown in italics were added during data cleaning (i.e., additional codes were created from among the "specify" responses.

NOTE: In general, variables designated by /R appear on the restricted file only. However, some variables with this designation contained no responses and therefore were not included on the restricted file. Please consult the Proprietary Data File User's Guide for a specification of which variables were excluded from the file.

NOTE: Questions designated by * do not appear on any data file. They were used for administrative, verification, or coding purposes only.

A2. Do you have a high school diploma or its equivalent, such as a GED?

IBDIPL
YES ..... 1 (GO TO A3)
NO ..... 2 (GO TO A6)

A3. Did you receive your high school diploma or its equivalent in the U.S.?

IBUSDIPL
YES 1
NO 2

A4. Did you receive your high school diploma or its equivalent in the past 12 months?

IBDIPLYR
YES 1
NO 2

A5. Did you complete your high school requirements through a GED test?

IBGED
YES 1
NO 2

A6. Did you work at a job for pay or income at any time in the past 12 months?

IBWORK12
YES ..... 1 (GO TO A7)
NO ..... 2 (GO TO A10)

A7. Were you self-employed at any time in the past 12 months?

IBSELFEM
YES ..... 1 (GO TO A8)
NO ..... 2 (GO TO A9)

A8. Did you also work for another employer in the past 12 months?

IBOTHEMP
YES ..... 1 (GO TO A9)
NO ..... 2 (GO TO A10)

If A7 = 1 and A8 NE 1 (self-employed only), then autocode A9 (# of employers) = 1.

A9. (Counting your self-employment,) For how many different employers did you work in the past 12 months?

IBEMPL12
NUMBER ..... ☐☐

A10. Now, about your language background. What was the first language you learned to speak?

IBLANG
ENGLISH ..... 1 (GO TO INTRO3)
SPANISH ..... 2 (GO TO A11)
ANOTHER LANGUAGE ..... 91 (GO TO A11)

IBLANGOS/R
SPECIFY _____

Autocode A11 = 1 if A10 = 1.

A11. What language do you speak most at home now?

IBSPEAK

ENGLISH 1
SPANISH 2
ANOTHER LANGUAGE 91

IBSPEAOS/R SPECIFY _____

INTRO3. Now, I'd like to ask you about different kinds of education and training programs, courses, workshops, and seminars you may have taken during the past 12 months. (Please don't include day-time high school programs.)

Ask B1 if A11 NE 1 (main language is other than English). Else, go to box before C1.

B. ENGLISH AS A SECOND LANGUAGE

B1. These first questions are about English as a Second Language only. Please do not include other classes here. During the past 12 months, did you have a tutor or take any classes to learn English as a Second Language?

ESLANG
YES ..... 1 (GO TO B1OV)
NO ..... 2 (GO TO B19)

For Participants

B1OV. Is this ESL class a part of a college program?

ESCOLL
YES 1
NO 2

If B1OV = 1, ask B6 and B7; then go to box before C1. Else, go to B2.

B2. How many different ESL programs did you take in the past 12 months?

ESDIFF
ONE 1
TWO 2
THREE OR MORE 3

B3. What was the main reason you took English as a Second Language classes? [PROBE: READ LIKELY ANSWER(S)]

ESREASON
TO IMPROVE, ADVANCE, OR KEEP UP TO DATE ON CURRENT JOB 1
TO TRAIN FOR A NEW JOB OR A NEW CAREER 2
TO IMPROVE YOUR BASIC READING, WRITING, OR MATH SKILLS 3
TO MEET A REQUIREMENT FOR A DIPLOMA, DEGREE, OR CERTIFICATE OF COMPLETION 4
ESREAOS1/R SPECIFY_____
A PERSONAL, FAMILY, OR SOCIAL REASON 5
TO IMPROVE COMMUNICATION SKILLS 6
SOME OTHER MAIN REASON 91
ESREAOS2/R SPECIFY_____

B4. During the past 12 months, were you a full-time or part-time student in ESL classes or both?

ESTIME
FULL-TIME 1
PART-TIME 2
BOTH 3

B5. How did you learn about the ESL classes?

ESLEARN

FAMILY 1
FRIEND/NEIGHBOR 2
NEWSPAPER/RADIO/*TV* 3
POSTER/FLYER/MAIL/CATALOGUE 4
EMPLOYER 5
SCHOOL 6
OTHER 91

ESLEAROS/R SPECIFY_____

B6. In the past 12 months, how many weeks did you attend ESL classes? [DO NOT ROUND - USE DECIMAL IF NEEDED]

ESWHEN UMBER ..... ☐☐

ESWHENUN Unit

DAYS	1	(GO TO B7)
WEEKS	2	(GO TO B7)
MONTHS	3	(GO TO B7)
SEMESTER	4	(GO TO B7)
QUARTER	5	(GO TO B7)
OTHER	91	(GO TO B6OV)

ESWHENOS/R SPECIFY_____

B6OV. How many weeks was that?

ESWKS WEEKS ..... ☐☐

Collect number; autocode unit.

B7. For about how many hours (per day/per week) did you attend during the time you were going to ESL classes?

ESHRS NUMBER ..... ☐☐

ESHRSUNT Unit

PER DAY 1
PER WEEK 2

B8. In the past 12 months, about how much of your own money would you estimate you paid for tuition, books, transportation, child care, and other expenses to take ESL classes?

ESTUITON AMOUNT ..... $☐☐,☐☐☐

B9. What school, organization, or business provided (most of) the instruction for the ESL classes?

ESPROVID/R [IF MORE THAN ONE PROVIDER, PROBE FOR ORGANIZATION THAT PROVIDED MAJORITY OF INSTRUCTION IN THE PAST 12 MONTHS. RECORD OTHER PROVIDERS IN COMMENTS.]

INSTRUCTIONAL PROVIDER_____

B10. [DISPLAY PROVIDER STRING]
Would that be...?
ESPROVTY [READ LIKELY ANSWER(S)]

	SCHOOL	An elementary school, junior high school, or high school 1
		A 2-year community or junior college 2
		A public 2-year vocational school or technical institute 3
		A 4-year college or university 4
		A private vocational, trade, business, hospital, or flight school 5
		An adult learning center..... 6
	BUS/ASSO	A business or industry 7
		A professional association..... 8
	GOVMT	A federal, state, county, or local government agency 9
		A public library 10
	PRIVATE	A private community organization 11
		A church or religious organization 12
		A tutor or private instructor 13
	OTHER	Some other organization 91

ESPROVOS/R SPECIFY_____

B11. [DISPLAY PROVIDER PREVIOUSLY CODED. IF SAME, ENTER NUMBER.]
Where did you take the ESL classes?

ESPLACID/R LOCATION_____

If B11 = B9, autocode B12

B12. [DISPLAY LOCATION STRING]
Would that be...?
ESPLACE [READ LIKELY ANSWER(S)]

	SCHOOL	An elementary school, junior high school, or high school 1
		A 2-year community or junior college 2
		A public 2-year vocational school or technical institute 3
		A 4-year college or university 4
		A private vocational, trade, business, hospital, or flight school 5
		An adult learning center..... 6
	BUS/ASSO	A business or industry 7
		A professional association..... 8
	GOVMT	A federal, state, county, or local government agency 9
		A public library 10
	PRIVATE	A private community organization 11
		A church or religious organization 12
		A tutor or private instructor 13
	OTHER	Some other organization 91

ESPLACOS/R SPECIFY_____

If B10 = 2,3,4,5 then go to B12OV.
Else, go to box before B13.

B12OV. In what city and state is the school located?

ESPROVCI/R CITY_____
ESPROVST/R STATE_____

If A6 NE 1 (not worked in the past 12 months), then go to B18.
If A7 = 1 and A8 NE 1 (self-employed only), then go to B18.

B13. Was (DISPLAY PROVIDER STRING) also your employer?

ESPROVEM
YES ..... 1 (GO TO B15)
NO ..... 2 (GO TO B14)

If B13 = 1, then autocode B14 = 1.

B14. (Not counting your self-employment,) Was your employer aware that you were taking or took the ESL class?

ESAWARE
YES 1
NO 2

If B14 NE 1 (employer was not aware), then go to box after B15.

B15. Did your employer...

			YES	NO
ESEMPREQ	a.	Require you to take these classes?	1	2
ESEMPWP	b.	Give you time off from work with or without pay?	1	2
ESEMPSPA	c.	Provide classroom space?	1	2
ESEMPPAY	d.	Pay all or part of the cost, including tuition, books, and other costs like transportation?	1	2

If B13 NE 1 and no B15b-d = 1 (no support for ESL), then go to B18.
If B13 = 1 (employer provided instruction) or any B15b-d = 1 (support for ESL) and A9 => 2 (more than one employer in the past 12 months), then go to B16.
If (B13 = 1 (employer provided instruction) or any B15b-d = 1 (support for ESL)) and A9 = 1 (one employer), then go to B17.

B16. [DISPLAY COMPANY THAT PROVIDED INSTRUCTION/SUPPORT IN PREVIOUS SECTION, IF ANY. ENTER COMPANY NUMBER IF SAME COMPANY.]
What was the name of the company that provided the support (, including the instruction)?

ESPROVCO/R NAME OF COMPANY_____

B17. Did you receive any of this employer support because it was part of a union agreement?

ESUNION
YES 1
NO 2

B18. If you had it to do again, would you take the ESL class?

ESAGAIN
YES 1
NO 2

Go to box before C1.

For Non-Participants

B19. In the past 12 months, did you have an interest in taking any English as a Second Language classes?

ESINTRST
YES ..... 1 (GO TO B20)
NO ..... 2 (GO TO BOX BEFORE C1)

B20. Would you say that you were very interested, somewhat interested, or slightly interested in taking ESL classes?

ESHOWINT
VERY INTERESTED.....1
SOMEWHAT INTERESTED.....2
SLIGHTLY INTERESTED.....3

B21. Of the ESL classes that you were interested in, did you know of any classes you could have taken in the past 12 months?

ESKNOW
YES .....1 (GO TO BOX BEFORE B22)
NO .....2 (GO TO BOX BEFORE C1)

If NUMKID10 = 0, do not display B22c.

B22. Now, I'm going to read a short list of things that may have prevented you from taking ESL classes. For each one, please tell me if it was a major obstacle, a minor obstacle, or not an obstacle. How about...
[PROBE: Was that a major, minor, or not an obstacle?]
[IF RESPONDENTS ANSWER "NO" IN B22e, ENTER "3" AND GO TO BOX BEFORE B23.
ELSE, PROBE: Was that a major or minor obstacle? THEN, COLLECT VERBATIM RESPONSE.]

			MA	MI	NOT
ESPRTIME	a.	Time	1	2	3
ESPRCOST	b.	Money or cost	1	2	3
ESPRCHIL	c.	Child care	1	2	3
ESPRTRAN	d.	Transportation	1	2	3
ESPROTH	e.	Was there any other obstacle?	1	2	3
ESPROTOS/R		What was that?			

ESPROTHC

PERSONAL/FAMILY PROBLEM	1
HEALTH PROBLEM	2
DISTANCE/LOCATION	3
AGE	4
MOTIVATION	5
AVAILABILITY OF COURSES	6
QUALIFICATION/REQUIREMENTS	7
WORK	8
OTHER	9

If only one major in B22,
autocode B23 = B22 major.
Else, display categories rated major in B22.
If only one minor and no major in B22,
autocode B23 = B22 minor.
Else, display categories rated minor in B22.
If no major and no minor in B22, go to box before C1.

B23. [DISPLAY RESPONSES IN B22]
Of the reasons you said were (major/minor) obstacles, what was the main thing that prevented you from taking ESL classes?

ESPRGEN

TIME	1	(GO TO B24A)
MONEY OR COST	2	(GO TO B24B)
CHILD CARE	3	(GO TO B24C)
TRANSPORTATION	4	(GO TO B24D)
(RESPONSE IN B22e)	5	(GO TO BOX BEFORE C1)

If A6 NE 1 (not worked in the past 12 months),
do not display B24Ac and B24Ad.
If NUMKID10 = 0, do not display B24Bc.
If B24Ag, B24Be, B24Cc, B24Dd = 1 or 2,
collect verbatim responses.

B24. [DISPLAY LIST ASSOCIATED WITH MAIN OBSTACLE IN B23]
Now, I'm going to read a short list of (time/money or cost/child care/transportation) related problems that may have prevented you from taking ESL classes. For each statement, please tell me if it was a major obstacle, a minor obstacle, or not an obstacle for you. How about...
[PROBE: Was that a major, minor, or not an obstacle?]
[IF RESPONDENTS ANSWER "NO" IN B24Ag, B24Be, B24Cc, B24Dd, ENTER "3" AND GO TO BOX BEFORE B25.
ELSE, PROBE: Was that a major or minor obstacle? THEN, COLLECT VERBATIM RESPONSE.]

		MA	MI	NOT
	A. TIME			
ESTIFAM	a. A desire to spend time with your family	1	2	3
ESTICHOR	b. A need to take care of family duties or chores around the house	1	2	3
ESTICLHR	c. Being unable to take classes offered only during work hours.	1	2	3
ESTIWORK	d. Work responsibilities that do not permit you to take classes either during or after work hours.	1	2	3
ESTIACTI	e. Activities outside of work that conflict with class schedule	1	2	3
ESTITRAV	f. The travel time to and from classes	1	2	3
ESTIOTH	g. Another time related problem	1	2	3
ESSPOTOS/R	What was that?			
	B. MONEY OR COST			
ESMOTUIT	a. The amount of tuition and fees for classes	1	2	3
ESMOBOOK	b. The cost of books and supplies for classes	1	2	3
ESMOCHIL	c. The cost of child care	1	2	3
ESMOTRAN	d. The cost of transportation.	1	2	3
ESMOOTH	e. Another money or cost related problem	1	2	3
ESSPOTOS/R	What was that?			
	C. CHILD CARE			
ESCHCOST	a. The cost of child care	1	2	3
ESCHAVAL	b. The availability of child care.	1	2	3
ESCHOTH	c. Another problem with child care.	1	2	3
ESSPOTOS/R	What was that?			
	D. TRANSPORTATION			
ESTRCOST	a. The cost of transportation.	1	2	3
ESTRAVAL	b. The availability of transportation.	1	2	3
ESTRTIME	c. The travel time to and from courses.	1	2	3
ESTROTH	d. Another problem with transportation.	1	2	3
ESSPOTOS/R	What was that?			

If only one major in B24, autocode B25 = B24 major.
Else, display only categories rated major in B24.
If only one minor and no major in B24,
autocode B25 = B24 minor.
Else, display only categories rated minor in B24.
If no major and no minor in B24,
go to box before C1.

B25. [DISPLAY CATEGORIES IN B24]
Among the (time/money or cost/transportation/child care) related problems you indicated as (major/minor) obstacles, what was the most important obstacle?

ESPRSPEC [IF NECESSARY, USE DISPLAY AS PROBES]

A. TIME
- A DESIRE TO SPEND TIME WITH YOUR FAMILY. 1
- A NEED TO TAKE CARE OF FAMILY DUTIES OR CHORES AROUND THE HOUSE. 2
- BEING UNABLE TO TAKE CLASSES OFFERED ONLY DURING WORK HOURS. 3
- WORK RESPONSIBILITIES THAT DO NOT PERMIT YOU TO TAKE CLASSES EITHER DURING OR AFTER WORK HOURS. 4
- ACTIVITIES OUTSIDE OF WORK THAT CONFLICT WITH CLASS SCHEDULE. 5
- THE TRAVEL TIME TO AND FROM CLASSES. 6
- (VERBATIM RESPONSE IN B24Ag) 7

B. MONEY OR COST
- THE AMOUNT OF TUITION AND FEES FOR CLASSES 8
- THE COST OF BOOKS AND SUPPLIES FOR CLASSES 9
- THE COST OF CHILD CARE 10
- THE COST OF TRANSPORTATION 11
- (VERBATIM RESPONSE IN B24Be) 12

C. CHILD CARE
- THE COST OF CHILD CARE 13
- THE AVAILABILITY OF CHILD CARE 14
- (VERBATIM RESPONSE IN B24Cc) 15

D. TRANSPORTATION
- THE COST OF TRANSPORTATION 16
- THE AVAILABILITY OF TRANSPORTATION 17
- THE TRAVEL TIME TO AND FROM CLASSES. 18
- (VERBATIM RESPONSE IN B24Dd) 19

Ask C1 if A2 NE 1 (no high school diploma) or A4 = 1 (received high school diploma in the last 12 months).
If A3 NE 1 (foreign high school diploma), ask C1.
Else, go to D1.

C. BASIC SKILLS AND GED PREPARATION

C1. Not including regular day-time high school classes, during the past 12 months, did you have a tutor or take any classes:

			YES	NO
BSIMPROV	a.	To improve your basic reading, writing, and math skills?	1	2
BSGED	b.	To prepare to take the General Educational Development, or GED?	1	2
BSHSEQUV	c.	In some other high school equivalency program or adult high school program?	1	2

If any C1a, b, or c = 1, then ask C2.
If A3 NE 1 (foreign high school diploma) and C1a-c NE 1, go to D1.
Else, go to C18.

For Participants

C2. What was the main reason you took basic skills or high school completion classes? [PROBE: READ LIKELY ANSWER(S)]

BSREASON

- TO IMPROVE, ADVANCE, OR KEEP UP TO DATE ON CURRENT JOB 1
- TO TRAIN FOR A NEW JOB OR A NEW CAREER 2
- TO IMPROVE YOUR BASIC READING, WRITING, OR MATH SKILLS 3
- TO MEET A REQUIREMENT FOR A HIGH SCHOOL DIPLOMA OR GED 4

BSREAOS1/R SPECIFY _____

- A PERSONAL, FAMILY, OR SOCIAL REASON 5
- *TO MEET A REQUIREMENT FOR A DIPLOMA, DEGREE, OR CERTIFICATE OTHER THAN A HIGH SCHOOL DIPLOMA OR GED* 6
- SOME OTHER MAIN REASON 91

BSREAOS2/R SPECIFY _____

C3. During the past 12 months, were you a full-time or part-time student in these classes or both?

BSTIME

- FULL-TIME 1
- PART-TIME 2
- BOTH 3

C4. How did you learn about the classes?

BSLEARN

FAMILY 1
FRIEND/NEIGHBOR 2
NEWSPAPER/RADIO/*TV* 3
POSTER/FLYER/MAIL/CATALOGUE 4
EMPLOYER 5
SCHOOL 6
SOCIAL AGENCY 7
OTHER 91

BSLEAROS/R SPECIFY _____

C5. In the past 12 months, how many weeks did you attend basic skills or high school completion classes?
[DO NOT ROUND - USE DECIMAL IF NEEDED]

BSWHEN NUMBER ..... ☐☐

BSWHENUN Unit

DAYS	1	(GO TO C6)
WEEKS	2	(GO TO C6)
MONTHS	3	(GO TO C6)
SEMESTER	4	(GO TO C6)
QUARTER	5	(GO TO C6)
OTHER	91	(GO TO C5OV)

BSWHENOS/R SPECIFY _____

C5OV. How many weeks was that?

BSWKS NUMBER ..... ☐☐

Collect number; autocode unit.

C6. For about how many hours (per day/per week) did you attend during the time you were going to the classes?

BSHRS NUMBER ..... ☐☐

BSHRSUNT Unit

PER DAY 1
PER WEEK 2

C7. In the past 12 months, about how much of your own money would you estimate you paid for tuition, books, transportation, child care, and other expenses to take basic skills or high school completion classes?

BSTUITON AMOUNT ..... $☐☐,☐☐☐

C8. [DISPLAY PREVIOUS PROVIDER, IF ANY. ENTER PROVIDER NUMBER IF SAME PROVIDER.]
What school, organization, or business provided the instruction for these basic skills or high school completion classes?
[IF MORE THAN ONE PROVIDER, PROBE FOR ORGANIZATION THAT PROVIDED MAJORITY OF INSTRUCTION IN THE PAST 12 MONTHS. RECORD OTHER PROVIDERS IN COMMENTS.]

BSPROVID/R INSTRUCTIONAL PROVIDER _____

If provider is same and previously coded, copy information to C9.

C9. [DISPLAY PROVIDER STRING]
Would that be...?

BSPROVTY [READ LIKELY ANSWER(S)]

	SCHOOL	An elementary school, junior high school, or high school 1
		A 2-year community or junior college 2
		A public 2-year vocational school or technical institute 3
		A 4-year college or university 4
		A private vocational, trade, business, hospital, or flight school 5
		An adult learning center..... 6
	BUS/ASSO	A business or industry 7
		A professional association..... 8
	GOVMT	A federal, state, county, or local government agency 9
		A public library 10
	PRIVATE	A private community organization 11
		A church or religious organization 12
		A tutor or private instructor 13
	OTHER	Some other organization 91

BSPROVOS/R SPECIFY_____

C10. [DISPLAY PROVIDER AND LOCATION PREVIOUSLY CODED. IF SAME, ENTER NUMBER.]
Where did you take the basic skills or high school completion classes?

BSPLACID/R LOCATION_____

If same and previously coded location, copy information to C11.

C11. [DISPLAY LOCATION STRING]
Would that be...?

BSPLACE [READ LIKELY ANSWER(S)]

SCHOOL	An elementary school, junior high school, or high school	1
	A 2-year community or junior college	2
	A public 2-year vocational school or technical institute	3
	A 4-year college or university	4
	A private vocational, trade, business, hospital, or flight school	5
	An adult learning center	6
BUS/ASSO	A business or industry	7
	A professional association	8
GOVMT	A federal, state, county, or local government agency	9
	A public library	10
PRIVATE	A private community organization	11
	A church or religious organization	12
	A tutor or private instructor	13
OTHER	Some other organization	91

BSPLACOS/R SPECIFY_____

If C9 = 2,3,4,5, then go to C11OV.
Else go to box before C12.
If provider is a school previously mentioned, copy information to C11OV and, if A6 = 1 (worked in the past 12 months), to C12.

C11OV. In what city and state is the school located?

BSPROVCI/R CITY_____
BSPROVST/R STATE_____

If A6 NE 1 (not worked in the past 12 months), then go to C17.
If A7 = 1 and A8 NE 1 (self-employed only), then go to C17.

C12. Was (DISPLAY PROVIDER STRING) also your employer?

BSPROVEM	YES	1	(GO TO C14)
	NO	2	(GO TO C13)

If C12 =1, then autocode C13 = 1.

C13. (Not counting your self-employment,) Was your employer aware that you were taking or took the basic skills or high school completion class?

BSAWARE	YES	1
	NO	2

If C13 NE 1 (employer was not aware), then go to box after C14.

C14. Did your employer . . .

			YES	NO
BSEMPREQ	a.	Require you to take these classes?	1	2
BSEMPWP	b.	Give you time off from work with or without pay?	1	2
BSEMPSPA	c.	Provide classroom space?	1	2
BSEMPPAY	d.	Pay all or part of the cost, including tuition, books, and supplies, and other costs like transportation?	1	2

If C12 NE 1 and no C14b-d = 1 (no support for basic skills), then go to C17. If C12 = 1 (employer provided instruction) or any C14b-d = 1 (support for basic skills) and A9 => 2 (more than one employer in the past 12 months), then go to C15. If C12 = 1 (employer provided instruction) or any C14b-d = 1 (support for basic skills) and A9 = 1 (one employer), then go to C16.

C15. [DISPLAY COMPANY THAT PROVIDED INSTRUCTION/SUPPORT IN PREVIOUS SECTION, IF ANY. ENTER COMPANY NUMBER IF SAME COMPANY.]
What was the name of the company that provided the support (, including the instruction)?

BSPROVCO/R NAME OF COMPANY_____

C16. Did you receive any of this employer support because it was part of a union agreement?

BSUNION
YES 1
NO 2

C17. If you had it to do again, would you take the basic skills or high school completion class?

BSAGAIN
YES 1
NO 2

Go to D1.

For Non-Participants

C18. In the past 12 months, did you have an interest in taking any basic skills or high school completion classes?

BSINTRST

YES	1	(GO TO C19)
NO	2	(GO TO D1)

C19. Would you say that you were very interested, somewhat interested, or slightly interested in taking basic skills or high school completion classes?

BSHOWINT

VERY INTERESTED	1
SOMEWHAT INTERESTED	2
SLIGHTLY INTERESTED	3

C20. Of the basic skills or high school completion classes you were interested in, did you know of any classes you could have taken in the past 12 months?

BSKNOW

YES	1	(GO TO C21)
NO	2	(GO TO D1)

If NUMKID10 = 0, do not display C21c.

C21. Now, I'm going to read a short list of things that may have prevented you from taking basic skills or high school completion classes. For each one, please tell me if it was a major obstacle, a minor obstacle, or not an obstacle. How about...
[PROBE: Was that a major, minor, or not an obstacle?]
[IF RESPONDENTS ANSWER "NO" IN C21e, ENTER "3" AND GO TO BOX BEFORE C22.
ELSE, PROBE: Was that a major or minor obstacle? THEN, COLLECT VERBATIM RESPONSE.]

			MA	MI	NOT
BSPRTIME	a.	Time	1	2	3
BSPRCOST	b.	Money or cost	1	2	3
BSPRCHIL	c.	Child care	1	2	3
BSPRTRAN	d.	Transportation	1	2	3
BSPROTH	e.	Was there any other obstacle?	1	2	3
BSPROTOS/R		What was that?			

BSPROTHC

PERSONAL/FAMILY PROBLEM	1
HEALTH PROBLEM	2
DISTANCE/LOCATION	3
AGE	4
MOTIVATION	5
AVAILABILITY OF COURSES	6
QUALIFICATION/REQUIREMENTS	7
WORK	8
OTHER	9

If only one major in C21,
autocode C22 = C21 major.
Else, display categories rated major in C21.
If only one minor and no major in C21,
autocode C22 = C21 minor.
Else, display categories rated minor in C21.
If no major and no minor in C21, go to D1.

C22. [DISPLAY RESPONSES IN C21]
Of the reasons you said were (major/minor) obstacles, what was the main thing that prevented you from taking basic skills or high school completion classes?

BSPRGEN

TIME	1	(GO TO C23A)
MONEY OR COST	2	(GO TO C23B)
CHILD CARE	3	(GO TO C23C)
TRANSPORTATION	4	(GO TO C23D)
(RESPONSE IN C21e)	5	(GO TO D1)

If A6 NE 1 (not worked in the past 12 months),
do not display C23Ac and C23Ad.
If NUMKID10 = 0, do not display C23Bc.
If C23Ag, C23Be, C23Cc, C23Dd = 1 or 2,
collect verbatim responses.

C23. [DISPLAY LIST ASSOCIATED WITH MAIN OBSTACLE IN C22]
Now, I'm going to read a short list of (time/money or cost/child care/transportation) related problems that may have prevented you from taking basic skills or high school completion classes. For each statement, please tell me if it was a major obstacle, a minor obstacle, or not an obstacle for you. How about...
[PROBE: Was that a major, minor, or not an obstacle?]
[IF RESPONDENTS ANSWER "NO" IN C23Ag, C23Be, C23Cc, C23Dd, ENTER "3" AND GO TO BOX BEFORE C24.
ELSE, PROBE: Was that a major or minor obstacle? THEN, COLLECT VERBATIM RESPONSE.]

		MA	MI	NOT
	A. TIME			
BSTIFAM	a. A desire to spend time with your family	1	2	3
BSTICHOR	b. A need to take care of family duties or chores around the house	1	2	3
BSTICLHR	c. Being unable to take classes offered only during work hours.	1	2	3
BSTIWORK	d. Work responsibilities that do not permit you to take classes either during or after work hours.	1	2	3
BSTIACTI	e. Activities outside of work that conflict with class schedule	1	2	3
BSTITRAV	f. The travel time to and from classes	1	2	3
BSTIOTH	g. Another time related problem	1	2	3
BSSPOTOS/R	What was that?			
	B. MONEY OR COST			
BSMOTUIT	a. The amount of tuition and fees for classes	1	2	3
BSMOBOOK	b. The cost of books and supplies for classes	1	2	3
BSMOCHIL	c. The cost of child care	1	2	3
BSMOTRAN	d. The cost of transportation.	1	2	3
BSMOOTH	e. Another money or cost related problem	1	2	3
BSSPOTOS/R	What was that?			
	C. CHILD CARE			
BSCHCOST	a. The cost of child care	1	2	3
BSCHAVAL	b. The availability of child care.	1	2	3
BSCHOTH	c. Another problem with child care.	1	2	3
BSSPOTOS/R	What was that?			
	D. TRANSPORTATION			
BSTRCOST	a. The cost of transportation.	1	2	3
BSTRAVAL	b. The availability of transportation.	1	2	3
BSTRTIME	c. The travel time to and from classes	1	2	3
BSTROTH	d. Another problem with transportation.	1	2	3
BSSPOTOS/R	What was that?			

If only one major in C23, autocode C24 = C23 major.
Else, display only categories rated major in C23.
If only one minor and no major in C23,
autocode C24 = C23 minor.
Else, display only categories rated minor in C23.
If no major and no minor in C23,
go to D1.

C24. [DISPLAY CATEGORIES IN C23]
Among the (time/money or cost/transportation/child care) related problems you indicated as (major/minor) obstacles, what was the most important obstacle?

BSPRSPEC [IF NECESSARY, USE DISPLAY AS PROBES]

A. TIME
- A DESIRE TO SPEND TIME WITH YOUR FAMILY. 1
- A NEED TO TAKE CARE OF FAMILY DUTIES OR CHORES AROUND THE HOUSE. 2
- BEING UNABLE TO TAKE CLASSES OFFERED ONLY DURING WORK HOURS. 3
- WORK RESPONSIBILITIES THAT DO NOT PERMIT YOU TO TAKE CLASSES EITHER DURING OR AFTER WORK HOURS. 4
- ACTIVITIES OUTSIDE OF WORK THAT CONFLICT WITH CLASS SCHEDULE. 5
- THE TRAVEL TIME TO AND FROM CLASSES. 6
- (VERBATIM RESPONSE IN C23Ag) 7

B. MONEY OR COST
- THE AMOUNT OF TUITION AND FEES FOR CLASSES 8
- THE COST OF BOOKS AND SUPPLIES FOR CLASSES 9
- THE COST OF CHILD CARE 10
- THE COST OF TRANSPORTATION 11
- (VERBATIM RESPONSE IN C23Be) 12

C. CHILD CARE
- THE COST OF CHILD CARE 13
- THE AVAILABILITY OF CHILD CARE 14
- (VERBATIM RESPONSE IN C23Cc) 15

D. TRANSPORTATION
- THE COST OF TRANSPORTATION 16
- THE AVAILABILITY OF TRANSPORTATION 17
- THE TRAVEL TIME TO AND FROM CLASSES. 18
- (VERBATIM RESPONSE IN C23Dd) 19

D. CREDENTIAL

D1. (Not including the classes you told us about earlier,) During the past 12 months, did you take any courses that are part of a program, or a series of courses associated with a program leading toward...

			YES	NO
CRDEGREE	a.	A college or university degree, such as an associate's, bachelor's, or graduate degree?	1	2
CRVOCDIP	b.	A diploma or certificate from a vocational or technical school after high school or a formal vocational training program	1	2

If D1a or b = 1, then ask D2. Else, go to E1.

For Participants

D2. In how many of these degree, diploma, or certificate programs were you enrolled during the past 12 months?

*(**see note below**) NUMBER ..... ☐☐

D3. In what type of degree, diploma, or certificate program(s) were you working?
[CODE UP TO 5 - CATEGORIES CAN BE ENTERED MORE THAN ONCE FOR MULTIPLE PROGRAMS OF THE SAME PROGRAM TYPE.]

CRDIPLO1-CRDIPLO3

VOC/TECH DIPLOMA AFTER HIGH SCHOOL, BUT BELOW BACHELOR'S DEGREE 1
ASSOCIATE'S DEGREE..... 2
BACHELOR'S DEGREE 3
MASTER'S DEGREE 4
DOCTORATE (PHD, EDD) 5
PROFESSIONAL DEGREE BEYOND BACHELOR'S DEGREE (MEDICINE/MD; DENTISTRY/DDS; LAW/JD/LLB; ETC.)..... 6
ANOTHER DEGREE..... 91

CRDIPOS1-CRDIPOS3/R SPECIFY_____

Ask D4 for each program coded in D3.

D4. What was the major subject or field of study of your (CREDENTIAL)?

CRMAJOR1-CRMAJOR3/R SPECIFY_____

NOTE: Respondents' answers to item D2 do not exist on the data file. Instead, a derived variable called CRDIPNEW is included on the file which is a count of the number of entries at item D4. CRDIPNEW indicates the actual number of credential programs the respondent reported and appears in the derived variable section of the data file.

For Each Program Mentioned

Now let's talk about your (CREDENTIAL) in (SUBJECT).

Ask D5 - D20 for each program mentioned.
For second program on, if D6 = 1 (same main reason),
go to box after D6.

D5. What was the main reason you were working on the (CREDENTIAL) in (SUBJECT)?
[PROBE: READ LIKELY ANSWER(S)]

CRREASO1-CRREASO3

TO IMPROVE, ADVANCE, OR KEEP UP TO DATE ON CURRENT JOB 1
TO TRAIN FOR A NEW JOB OR A NEW CAREER 2
TO IMPROVE YOUR BASIC READING, WRITING, OR MATH SKILLS 3
TO MEET A REQUIREMENT FOR A DIPLOMA, DEGREE, OR CERTIFICATE OF COMPLETION 4
A PERSONAL, FAMILY, OR SOCIAL REASON, ... 5
SOME OTHER MAIN REASON 91

CR1RSN2-CR3RSN2/R

SPECIFY_____

If D2 = 1 (one credential program), then go to D7.
Else, ask D6 only for first program cycle.

D6. Did you have the same main reason for participating in your other program(s)?

*****

YES 1
NO 2

If D6 = 1 (same main reason),
autocode D5 for each additional program.

D7. a. In the past 12 months, how many months were you enrolled in this program on a full-time basis?

CRTRMFT1-CRTRMFT3

MONTHS ..... ☐☐

b. How about on a part-time basis?

CRTRMPT1-CRTRMPT3

MONTHS ..... ☐☐

Ask D7c if D7a+D7b => 13 months. Else, go to D8.

c. Were you going to two or more different schools at the same time?

CRSCHLS1-CRSCHLS3

YES 1
NO 2

D8. How many courses have you taken for your (CREDENTIAL) in (SUBJECT) in the past 12 months?

CR12NUM1-CR12NUM3 NUMBER ..... ☐☐

If D7b => 1 (more than one month on part-time basis), then ask D9. If D7a = 0 (only part-time), then autocode D9 = D8 and go to box before D10. Else, go to box before D10.

D9. How many of these (NUMBER FROM D8) courses did you take as a part-time student in the past 12 months?

CRPTNUM1-CRPTNUM3 (**see note below**) NUMBER ..... ☐☐

If D7b = 0 (full-time only), then go to box before D12. Else, ask D10.

D10. Let's talk about courses you took as a part-time student in the past 12 months. What (was/were) the name(s) of the course(s) and what was the general subject matter for each course in (CREDENTIAL) in (SUBJECT)?

CR1CLS1-CR1CLS14/R	NAME_____	SUBJECT
CR2CLS1-CR2CLS14/R	NAME_____	SUBJECT
CR3CLS1-CR3CLS14/R	NAME_____	SUBJECT
CR1SUB1-CR1SUB14/R	NAME_____	SUBJECT
CR2SUB1-CR2SUB14/R		
CR3SUB1-CR3SUB14/R		

If D3 = 1 (vocational diploma or certificate program), then ask D11. Else, go to box before D12.

D11. How long does the vocational diploma or certificate program last?

CR1LENUM-CR3LENUM NUMBER ..... ☐☐

CRLENUN1-CRLENUN3

Unit

HOURS 1
DAYS 2
WEEKS 3
MONTHS 4
YEARS 5

If full-time only, ask D12a.
If part-time only, ask D12b.
If full-time and part-time, ask D12a and D12b.

NOTE: In addition, the derived variables CRPTNEW1, CRPTNEW2 and CRPTNEW3 are counts of the number of entries at item D10. These variables appear in the derived variable section of the data file.

D12. a. (When you were attending full-time,) How many hours per week were you scheduled to attend school for your (CREDENTIAL) in (SUBJECT)?
[IF RESPONDENT REPORTS CREDIT HOURS: We are interested in the actual hours you scheduled rather than credit hours.]

CRFTHRS1-CRFTHRS3 HOURS PER WEEK FULL-TIME ..... ☐☐

b. (When you were attending part-time,) How many hours per week were you scheduled to attend school for your (CREDENTIAL) in (SUBJECT)?)
[IF RESPONDENT REPORTS CREDIT HOURS: We are interested in the actual hours you scheduled rather than credit hours.]

CRPTHRS1-CRPTHRS3 HOURS PER WEEK PART-TIME..... ☐☐

D13. In the past 12 months, about how much of your own money would you estimate you paid for tuition, books, transportation, child care, and other expenses to take (CREDENTIAL) in (SUBJECT)?

CRTUITO1-CRTUITO3 AMOUNT ..... $☐☐,☐☐☐

D14. [DISPLAY PREVIOUS PROVIDER. ENTER PROVIDER NUMBER IF SAME PROVIDER.]
What school, organization, or business provided the instruction for your (CREDENTIAL) in (SUBJECT)?

CRPROVI1-CRPROVI3/R INSTRUCTIONAL PROVIDER_____

If provider is same and previously coded, copy information to D15, D15OV2, and, if A6 = 1 (worked in the past 12 months), to D16.

D15. [DISPLAY PROVIDER STRING]
Would that be...?
CR1PRTYP-CR3PRTYP [READ LIKELY ANSWER(S)]

SCHOOL	An elementary school, junior high school, or high school	1	(GO TO BOX BEFORE D16)
	A 2-year community or junior college	2	(GO TO D15OV)
	A public 2-year vocational school or technical institute	3	(GO TO D15OV)
	A 4-year college or university	4	(GO TO D15OV)
	A private vocational, trade, business, hospital, or flight school	5	(GO TO D15OV)
	An adult learning center	6	(GO TO BOX BEFORE D16)
BUS/ASSO	A business or industry	7	(GO TO BOX BEFORE D16)
	A professional association	8	(GO TO BOX BEFORE D16)
GOVMT	A federal, state, county, or local government agency	9	(GO TO BOX BEFORE D16)
	A public library	10	(GO TO BOX BEFORE D16)
PRIVATE	A private community organization	11	(GO TO BOX BEFORE D16)
	A church or religious organization	12	(GO TO BOX BEFORE D16)
	A tutor or private instructor	13	(GO TO BOX BEFORE D16)
OTHER	Some other organization	91	(GO TO BOX BEFORE D16)

CR1PRVOS-CR3PRVOS/R SPECIFY_____

D15OV. In what city and state is the school located?

CR1PRCTY-CR3PRCTY/R CITY_____
CR1PRVST-CR3PRVST/R STATE_____

If A6 NE 1 (not worked in the past 12 months), then go to D21.
If A7 = 1 and A8 NE 1 (self-employed only), then go to D21.

D16. Was that also your employer?

CR1PREMP-CR3PREMP
YES 1
NO 2

If D16 NE 1, go to D17.
If D15 = 2,3,4,5 and D16 = 1 (provider is educational institute and employer), ask D16OV.

D16OV. Was your employment an assistantship, a fellowship, or part of a work study program?

CR1ASSIS-CR3ASSIS
YES ..... 1 (GO TO D16OV2)
NO ..... 2 (GO TO BOX)

D16OV2. Are you currently receiving an assistantship, a fellowship, or work study support?

CRCURAS1-CRCURAS3
YES ..... 1 (GO TO D21)
NO ..... 2 (GO TO BOX)

If D16OV = 1, go to D21.
Else, if D16 = 1, autocode D17 = 1.

D17. (Not counting your self employment,) Was your employer aware that you were taking or took the (CREDENTIAL) in (SUBJECT)?

CRAWARE1-CRAWARE3
YES 1
NO 2

If D17 NE 1, then go to box after D18.

D18. Did your employer . . .

		YES	NO
CR1EMREQ-CR3EMREQ	a. Require you to take a (CREDENTIAL) in (SUBJECT)?	1	2
CR1EMPWP-CR3EMPWP	b. Give you time off from work with or without pay?	1	2
CR1EMSPA-CR3EMSPA	c. Provide classroom space?	1	2
CR1EMPAY-CR3EMPAY	d. Pay all or part of the cost, including tuition, books, and other costs like transportation?	1	2

If D16 NE 1 (no instruction) and no D18b-d = 1 (no support), go to D21.
If D16 = 1 (employer provided instruction) or any D18b-d = 1 (support for credential) and A9 => 2 (more than one employer in the past 12 months), then go to D19.
If D16 = 1 (employer provided instruction) or any D18b-d = 1 (support for credential) and A9 = 1 (one employer in the past 12 months), then go to D20.

D19. [DISPLAY COMPANY THAT PROVIDED INSTRUCTION/SUPPORT IN PREVIOUS SECTION, IF ANY. ENTER COMPANY NUMBER IF SAME COMPANY.]
What was the name of the company that provided the support (, including the instruction)?

CRPROVC1-CRPROVC3/R NAME OF COMPANY_____

D20. Did you receive any of this employer support because it was part of a union agreement?

CRUNION1-CRUNION3
YES 1
NO 2

Return to D3 for next listed program.
After last D3 program has been cycled through, go to D21.

D21. Did you participate in any other degree, diploma, or certificate programs during the past 12 months?

*****
YES .....1 (BACK TO D3)
NO .....2 (GO TO E1)

E. APPRENTICESHIP

E1. During the past 12 months, were you in a formal apprenticeship program leading to journeyman status in a skilled trade or craft?

APPRENTI
YES ..... 1 (GO TO E1OV)
NO ..... 2 (GO TO F1)

For Participants

E1OV. Are you still in that program?

APSTILL
YES 1
NO 2

E2. In what trade or craft (are you an/did you) apprentice?

APTRADE/R SPECIFY _____

E3. Did you have to take an admission test to get into the program?

APTEST
YES 1
NO 2

E4. Who sponsors the program? Is it...

			YES	NO
APEMPLOY	a.	An employer?	1	2
APUNION	b.	A labor union?	1	2
APSTAGOV	c.	The local or state government?	1	2
APFEDGOV	d.	The federal government?	1	2
APOTHER	e.	Anyone else?	1	2
APOTHEOS/R		Who was that? _____		

E5. How long does the whole apprenticeship program last?

APLENNUM NUMBER ..... ☐☐

APLENUNT Unit
WEEKS 1
MONTHS 2
YEARS 3

E6. How many hours per week are scheduled for on-the-job training?

APOJTHRS NUMBER ..... ☐☐

E7. How many hours per week of formal classroom instruction are scheduled?

APOTHHRS NUMBER ..... ☐☐

F. CAREER OR JOB RELATED ACTIVITIES

F1. Now, I'd like to ask about courses related to a job or career, whether or not you had a job when you took the courses. (Please don't include courses you already told me about.) Some examples are courses taken at your job, courses taken somewhere else that relate to your job or a new career, or courses for a license or certification you need for your job. Have you taken any of these in the past 12 months?

WRACTY
YES ..... 1 (GO TO F2)
NO ..... 2 (GO TO F18)

For Participants

F2. (Not counting courses you took for a credential program,) how many career or job related courses did you take during the past 12 months?

*(**see note below**) NUMBER ..... ☐☐

WRCOURSE. Now, I'm going to ask about the name(s) and general subject matter of the course(s) you took. By general subject matter we mean the broad topic area, such as business management, computer software, auto mechanics, and so on.

F3. What was the course name(s) and what was the general subject matter for (this/each) course?

WRNAME1- NAME_____ SUBJECT
WRNAME6/R NAME_____ SUBJECT
WRSUBJ1- NAME_____ SUBJECT
WRSUBJ6/R NAME_____ SUBJECT

For Each Selected Course

Ask F4 - F16 for each course mentioned.
For second course on, if F5 = 1,
then go to box after F5.

F4. (Rather than asking you to tell us about all these courses, the computer has selected some of them automatically.) Let's start with (COURSE NAME). What was the main reason you took part in (COURSE NAME)?
[PROBE: READ LIKELY ANSWER(S)]

WRREASO1-
WRREASO6
TO IMPROVE, ADVANCE, OR KEEP UP TO DATE ON CURRENT JOB 1
TO TRAIN FOR A NEW JOB OR A NEW CAREER 2
TO IMPROVE YOUR BASIC READING, WRITING, OR MATH SKILLS 3
TO MEET A REQUIREMENT FOR A DIPLOMA, DEGREE, OR CERTIFICATE OF COMPLETION 4
A PERSONAL, FAMILY, OR SOCIAL REASON 5
WR1RSN2-
WR6RSN2/R
SOME OTHER MAIN REASON 91
SPECIFY_____

NOTE: Respondents' answers to item F2 do not exist on the data file. Instead, a derived variable called WRNEW is included on the file which is a count of the number of career- or job-related courses reported at item F3. WRNEW appears in the derived variable section of the data file.

If F2 = 1 (one career or job related course), then go to F6
Else, ask F5 only for first course cycle.

F5. Did you have the same main reason for participating in your other career or job related course(s)?

*

YES 1
NO 2

If F5 = 1, autocode F4 for each additional course.

F6. In the past 12 months, how many weeks did you attend?
[DO NOT ROUND - USE DECIMAL IF NEEDED]

WRWHEN1-WRWHEN6

UMBER ..... ☐☐

WRWHNUN1-WRWHNUN6

Unit

DAYS 1	(GO TO F7)
WEEKS 2	(GO TO F7)
MONTHS 3	(GO TO F7)
SEMESTER 4	(GO TO F7)
QUARTER 5	(GO TO F7)
WR1WHNOS-WR6WHNOS/R OTHER 91	(GO TO F6OV)

SPECIFY_____

F6OV. How many weeks was that?

WRWKS1-WRWKS6 WEEKS ..... ☐☐

Collect Number; autocode unit.

F7. For about how many hours (per day/per week) did you attend?

WRHRS1-WRHRS6

NUMBER ..... ☐☐

WRHRUNT1-WRHRUNT6

Unit

PER DAY 1
PER WEEK 2

F8. In the past 12 months, about how much of your own money would you estimate you paid for tuition, books, transportation, child care, and other expenses to take (COURSE NAME)?

WRTUITO1-WRTUITO6

AMOUNT ..... $☐☐,☐☐☐

F9. [DISPLAY PREVIOUS PROVIDER, IF ANY. ENTER PROVIDER NUMBER IF SAME PROVIDER.]
What school, organization, or business provided the instruction for (COURSE NAME)?

WRPROVI1-WRPROVI6/R

INSTRUCTIONAL PROVIDER_____

If provider is same and previously coded, copy information to F10, F10OV, and, if A6 = 1 (worked in the past 12 months), to F11.

F10. [DISPLAY PROVIDER STRING]
Would that be...?
WR1PRTYP-WR6PRTYP [READ LIKELY ANSWER(S)]

SCHOOL	An elementary school, junior high school, or high school	1	(GO TO BOX AFTER F10OV)
	A 2-year community or junior college	2	(GO TO F10OV)
	A public 2-year vocational school or technical institute	3	(GO TO F10OV)
	A 4-year college or university	4	(GO TO F10OV)
	A private vocational, trade, business, hospital, or flight school	5	(GO TO F10OV)
	An adult learning center	6	(GO TO BOX AFTER F10OV)
BUS/ASSO	A business or industry	7	(GO TO BOX AFTER F10OV)
	A professional association	8	(GO TO BOX AFTER F10OV)
GOVMT	A federal, state, county, or local government agency	9	(GO TO BOX AFTER F10OV)
	A public library	10	(GO TO BOX AFTER F10OV)
	A private community organization	11	(GO TO BOX AFTER F10OV)
	A church or religious organization	12	(GO TO BOX AFTER F10OV)
	A tutor or private instructor	13	(GO TO BOX AFTER F10OV)
OTHER	Some other organization	91	(GO TO BOX AFTER F10OV)

WR1PRVOS-WR6PRVOS/R SPECIFY_____

F10OV. In what city and state is the school located?

WR1PRCTY-WR6PRCTY/R CITY_____
WR1PRVST-WR6PRVST/R STATE_____

If A6 NE 1 (not worked in the past 12 months), then go to box before F17.
If A7 = 1 and A8 NE 1 (self-employed only) or A9 = 1 and D16OV = 1 (work-study only), then go to F16.

F11. Was (DISPLAY PROVIDER STRING) also your employer?

WR1PREMP-WR6PREMP
YES 1
NO 2

If F11 = 1, autocode F12 = 1.
If F11 NE 1, ask F12.

F12. ((Not counting your self-employment,)/(Not counting your assistantships, fellowships, or work-study,)) Was your employer aware that you were taking or took this course?

WRAWARE1-WRAWARE6
YES 1
NO 2

If F12 NE 1, go to box after F13.

F13. Did your employer . . .

		YES	NO
WR1EMREQ-WR6EMREQ	a. Require you to take (COURSE NAME)?	1	2
WR1EMPWP-WR6EMPWP	b. Give you time off from work with or without pay?	1	2
WR1EMSPA-WR6EMSPA	c. Provide classroom space?	1	2
WR1EMPAY-WR6EMPAY	d. Pay all or part of the cost, including tuition, books, and other costs like transportation?	1	2

If F11 NE 1 and no F13b-d = 1 then go to F16.
If F11 = 1 (employer provided instruction) or any F13b-d = 1 (support for career or job related) and A9 => 2 (more than one employer in the past 12 months), then autocode F14 = F9 and go to F15.
If F11 = 1 (employer provided instruction) or any F13b-d = 1 (support for career or job related) and A9 = 1 (one employer), then go to F15.
If F11 = 1, then copy F9 to F14. Do not ask F14.

F14. [DISPLAY COMPANY THAT PROVIDED INSTRUCTION/SUPPORT IN PREVIOUS SECTION, IF ANY. ENTER COMPANY NUMBER IF SAME COMPANY.]
What was the name of the company that provided the support for this course(, including the instruction)?

WRPROVC1-WRPROVC6/R NAME OF COMPANY_____

F15. Did you receive any employer support for this course because it was part of a union agreement?

WRUNION1-WRUNION6
YES 1
NO 2

F16. If you had it to do again, would you take this course?

WRAGAIN1-WRAGAIN6
YES 1
NO 2

Return to box before F4 for next listed course.
After last F4 course has been cycled through, ask F17.

F17. Did you participate in any other formal courses for your job or career during the past 12 months?

*
YES ..... 1 (MODIFY F3, BACK TO F4)
NO ..... 2 (GO TO G1)

For Non-Participants

F18. In the past 12 months, did you have an interest in taking any career or job related courses?

WRINTRST
YES ..... 1 (GO TO F19)
NO ..... 2 (GO TO BOX BEFORE F25)

F19. Would you say you were very interested, somewhat interested, or slightly interested in taking career or job related courses?

WRHOWINT
VERY INTERESTED 1
SOMEWHAT INTERESTED 2
SLIGHTLY INTERESTED 3

F20. Of the career or job related courses that you were interested in, did you know of any courses you could have taken in the past 12 months?

WRKNOW
YES ..... 1 (GO TO F21)
NO ..... 2 (GO TO BOX BEFORE F25)

If NUMKID10 = 0, do not display F21c.

F21. Now, I'm going to read a short list of things that may have prevented you from taking career or job related courses. For each one, please tell me if it was a major obstacle, a minor obstacle, or not an obstacle. How about...
[PROBE: Was that a major, minor, or not an obstacle?]
[IF RESPONDENTS ANSWER "NO" IN F21e, ENTER "3" AND GO TO BOX BEFORE F25.
ELSE, PROBE: Was that a major or minor obstacle? THEN, COLLECT VERBATIM RESPONSE.]

			MA	MI	NOT
WRPRTIME	a.	Time	1	2	3
WRPRCOST	b.	Money or cost	1	2	3
WRPRCHIL	c.	Child care	1	2	3
WRPRTRAN	d.	Transportation	1	2	3
WRPROTH	e.	Was there any other obstacle?	1	2	3
WRPROTOS/R		What was that?			

WRPROTHC
PERSONAL/FAMILY PROBLEM 1
HEALTH PROBLEM 2
DISTANCE/LOCATION 3
AGE 4
MOTIVATION 5
AVAILABILITY OF COURSES 6
QUALIFICATION/REQUIREMENTS 7
WORK 8
OTHER 9

If only one major in F21,
autocode F22 = F21 major.
Else, display categories rated major in F21.
If only one minor and no major in F21,
autocode F22 = F21 minor.
Else, display categories rated minor in F21.
If no major and no minor in F21, go to box before F25.

F22. [DISPLAY RESPONSES IN F21]
Of the reasons you said were (major/minor) obstacles, what was the main thing that prevented you from taking career or job related courses?

WRPRGEN

TIME	1	(GO TO F23A)
MONEY OR COST	2	(GO TO F23A)
CHILD CARE	3	(GO TO F23A)
TRANSPORTATION	4	(GO TO F23A)
(RESPONSE IN F21e)	5	(GO TO BOX BEFORE F25)

If A6 NE 1 (not worked in the past 12 months),
do not display F23Ac and F23Ad.
If NUMKID10 = 0, do not display F23Bc.
If F23Ag, F23Be, F23Cc, F23Dd = 1 or 2,
collect verbatim responses.

F23. [DISPLAY LIST ASSOCIATED WITH MAIN OBSTACLE IN F22]
Now, I'm going to read a short list of (time/money or cost/child care/transportation) related problems that may have prevented you from taking career or job related courses. For each statement, please tell me if it was a major obstacle, a minor obstacle, or not an obstacle for you. How about...
[PROBE: Was that a major, minor, or not an obstacle?]
[IF RESPONDENTS ANSWER "NO" IN F23Ag, F23Be, F23Cc, F23Dd, ENTER "3" AND GO TO BOX BEFORE F25.
ELSE, PROBE: Was that a major or minor obstacle? THEN, COLLECT VERBATIM RESPONSE.]

		MA	MI	NOT
	A. TIME			
WRTIFAM	a. A desire to spend time with your family.	1	2	3
WRTICHOR	b. A need to take care of family duties or chores around the house	1	2	3
WRTICLHR	c. Being unable to take courses offered only during work hours	1	2	3
WRTIWORK	d. Work responsibilities that do not permit you to take courses either during or after work hours	1	2	3
WRTIACTI	e. Activities outside of work that conflict with course schedule	1	2	3
WRTITRAV	f. The travel time to and from courses	1	2	3
WRTIOTH	g. Another time related problem	1	2	3
WRSPOTOS/R	What was that?			
	B. MONEY OR COST			
WRMOTUIT	a. The amount of tuition and fees for courses	1	2	3
WRMOBOOK	b. The cost of books and supplies for courses	1	2	3
WRMOCHIL	c. The cost of child care.	1	2	3
WRMOTRAN	d. The cost of transportation.	1	2	3
WRMOOTH	e. Another money or cost related problem	1	2	3
WRSPOTOS/R	What was that?			
	C. CHILD CARE			
WRCHCOST	a. The cost of child care.	1	2	3
WRCHAVAL	b. The availability of child care.	1	2	3
WRCHOTH	c. Another problem with child care	1	2	3
WRSPOTOS/R	What was that?			
	D. TRANSPORTATION			
WRTRCOST	a. The cost of transportation.	1	2	3
WRTRAVAL	b. The availability of transportation.	1	2	3
WRTRTIME	c. The travel time to and from courses	1	2	3
WRTROTH	d. Another problem with transportation	1	2	3
WRSPOTOS/R	What was that?			

If only one major in F23, autocode F24 = F23 major.
Else, display only categories rated major in F23.
If only one minor and no major in F23,
autocode F24 = F23 minor.
Else, display only categories rated minor in F23.
If no major and no minor in F23,
go to box before F25.

F24. [DISPLAY CATEGORIES IN F23)
Among the (time/money or cost/transportation/child care) related problems you indicated as (major/minor) obstacles, what was the most important obstacle?

WRPRSPEC [IF NECESSARY, USE DISPLAY AS PROBES]

A. TIME
- A DESIRE TO SPEND TIME WITH YOUR FAMILY 1
- A NEED TO TAKE CARE OF FAMILY DUTIES OR CHORES AROUND THE HOUSE 2
- BEING UNABLE TO TAKE COURSES OFFERED ONLY DURING WORK HOURS 3
- WORK RESPONSIBILITIES THAT DO NOT PERMIT YOU TO TAKE COURSES EITHER DURING OR AFTER WORK HOURS 4
- ACTIVITIES OUTSIDE OF WORK THAT CONFLICT WITH COURSE SCHEDULE 5
- THE TRAVEL TIME TO AND FROM COURSES 6
- (VERBATIM RESPONSE IN F23Ag) 7

B. MONEY OR COST
- THE AMOUNT OF TUITION AND FEES FOR COURSES 8
- THE COST OF BOOKS AND SUPPLIES FOR COURSES 9
- THE COST OF CHILD CARE 10
- THE COST OF TRANSPORTATION 11
- (VERBATIM RESPONSE IN F23Be) 12

C. CHILD CARE
- THE COST OF CHILD CARE 13
- THE AVAILABILITY OF CHILD CARE 14
- (VERBATIM RESPONSE IN F23Cc) 15

D. TRANSPORTATION
- THE COST OF TRANSPORTATION 16
- THE AVAILABILITY OF TRANSPORTATION 17
- THE TRAVEL TIME TO AND FROM COURSES 18
- (VERBATIM RESPONSE IN F23Dd) 19

If A6 = 1 (worked in the past 12 months) and (A7 NE 1 or A9 = 1) (not self-employed only), then ask F25. Else, go to G1.

F25. Did your employer offer any career or job related courses?

WREMPOFF
- YES 1
- NO 2

G. OTHER FORMAL STRUCTURED ACTIVITIES

G1. Now, I am going to ask about any other courses where there was an instructor. (Please don't repeat any courses (and programs) you have already told us about.) These might include things like arts and crafts, sports or recreation, first aid or childbirth, Bible study, or any other types of courses we haven't talked about yet. Did you take any of these or other courses in the past 12 months?

SAACTY
YES ..... 1 (GO TO G2)
NO ..... 2 (GO TO BOX BEFORE H1)

For Participants

G2. Altogether, how many of these courses did you take during the past 12 months?

*(**see note below**) NUMBER ..... ☐☐

SACOURSE. Now, I'm going to ask about the name(s) and general subject matter of the course(s) you took. By general subject matter we mean the broad topic area, such as health, arts and crafts, sports, and so on.

G3. What was the course name(s) and what was the general subject matter for (this/each) course?

SANAME1- NAME_____ SUBJECT
SANAME3/R NAME_____ SUBJECT
SASUBJ1- NAME_____ SUBJECT
SASUBJ3/R NAME_____ SUBJECT

For Each Selected Course

G4. (Rather than asking you to tell us about all these courses, the computer has selected some of them automatically.) Let's start with (COURSE NAME). What was the main reason you took part in (COURSE NAME)?
[PROBE: READ LIKELY ANSWER(S)]

SAREASO1-
SAREASO3
TO IMPROVE, ADVANCE, OR KEEP UP TO DATE ON CURRENT JOB 1
TO TRAIN FOR A NEW JOB OR A NEW CAREER 2
TO IMPROVE YOUR BASIC READING, WRITING, OR MATH SKILLS 3
TO MEET A REQUIREMENT FOR A DIPLOMA, DEGREE, OR CERTIFICATE OF COMPLETION 4
A PERSONAL, FAMILY, OR SOCIAL REASON 5
SA1RSN2- SOME OTHER MAIN REASON 91
SA3RSN2/R SPECIFY_____

NOTE: Respondents' answers to item G2 do not exist on the data file. Instead, a derived variable called SANEW is included on the file which is a count of the number of other formal structured courses reported at item G3. SANEW appears in the derived variable section of the data file.

G5. Did you have the same main reason for participating in the other course(s)?

*

YES 1
NO 2

If G5 = 1, autocode G4 for each additional course.

G6. [DISPLAY PREVIOUS PROVIDERS, IF ANY. ENTER PROVIDER NUMBER IF SAME PROVIDER.]
What school, organization, or business provided the instruction for (COURSE NAME)?

SAPROVI1-SAPROVI3/R INSTRUCTIONAL PROVIDER_____

If provider is same and previously coded,
copy information to G7, G7OV and,
if A6 = 1 (worked in the past 12 months), to G8.

G7. [DISPLAY PROVIDER STRING]
Would that be...?
SA1PRTYP-SA3PRTYP [READ LIKELY ANSWER(S)]

SCHOOL	An elementary school, junior high school, or high school	1	(GO TO BOX AFTER G7OV)
	A 2-year community or junior college	2	(GO TO G7OV)
	A public 2-year vocational school or technical institute	3	(GO TO G7OV)
	A 4-year college or university	4	(GO TO G7OV)
	A private vocational, trade, business, hospital, or flight school	5	(GO TO G7OV)
	An adult learning center	6	(GO TO BOX AFTER G7OV)
BUS/ASSO	A business or industry	7	(GO TO BOX AFTER G7OV)
	A professional association	8	(GO TO BOX AFTER G7OV)
GOVMT	A federal, state, county, or local government agency	9	(GO TO BOX AFTER G7OV)
	A public library	10	(GO TO BOX AFTER G7OV)
PRIVATE	A private community organization	11	(GO TO BOX AFTER G7OV)
	A church or religious organization	12	(GO TO BOX AFTER G7OV)
	A tutor or private instructor	13	(GO TO BOX AFTER G7OV)
OTHER	Some other organization	91	(GO TO BOX AFTER G7OV)

SA1PRVOS-SA3PRVOS/R SPECIFY_____

G7OV. In what city and state is the school located?

SA1PRCTY-SA3PRCTY/R CITY_____
SA1PRVST-SA3PRVST/R STATE_____

If A6 NE 1 (not worked in the past 12 months), then go to G9.
If A7 = 1 and A8 NE 1 (self-employed only) or A9 = 1 and D16OV = 1 (work-study only), go to G9.

G8. Was that also your employer?

SA1PREMP-SA3PREMP
YES 1
NO 2

G9. In the past 12 months, about how much of your own money would you estimate you paid for tuition, books, transportation, child care, and other expenses to take (COURSE NAME)?

SATUITO1-SATUITO3
AMOUNT ..... $☐☐,☐☐☐

G10. In the past 12 months, how many weeks did you attend (COURSE NAME)?
[DO NOT ROUND - USE DECIMAL IF NEEDED]

SAWHEN1-SAWHEN3
NUMBER ..... ☐☐

SAWHNUN1-SAWHNUN3
Unit
DAYS ..... 1 (GO TO G11)
WEEKS ..... 2 (GO TO G11)
MONTHS ..... 3 (GO TO G11)
SEMESTER ..... 4 (GO TO G11)
QUARTER ..... 5 (GO TO G11)
SA1WHNOS-SA3WHNOS/R OTHER ..... 91 (GO TO G10OV)
SPECIFY_____

G10OV. How many weeks was that?

SAWKS1-SAWKS3
WEEKS ..... ☐☐

Collect number; autocode unit.

G11. For about how many hours (per day/per week) did you attend?

SAHRS1-SAHRS3
NUMBER ..... ☐☐

SAHRUNT1-SAHRUNT3
Unit
PER DAY 1
PER WEEK 2

After last G3 course has been cycled through, ask G12.

G12. Did you participate in any other courses with an instructor during the past 12 months?

YES ..... 1 (MODIFY G3, BACK TO G4)
* NO ..... 2 (GO TO BOX)

If A6 NE 1 (not worked in the past 12 months),
go to box before H1.
If A7 = 1 and A8 NE 1 (self-employed only) or
A9 = 1 and D16OV = 1 (work-study only),
go to box before H1.

G13. ((Not counting your self-employment,)/(Not counting your assistantships, fellowships, or work-study,)) Did your employer provide any support to take (this course/any of the courses)?

SAEMPSUP
SAEMSUP1-SAEMSUP3/R

YES ..... 1 (GO TO G14)
NO ..... 2 (GO TO BOX BEFORE I1)

G14. Did you receive any employer support to take (this course/any of the courses) because it was part of a union agreement?

SAUNION
SAUNION1-SAUNION3/R

YES 1
NO 2

H. COMPUTER-ONLY OR INTERACTIVE VIDEO-ONLY INSTRUCTION ON THE JOB

If A6 NE 1 (not worked in the past 12 months), then go to I1.

H1. At your job during the past 12 months, did you learn to do any specific tasks for your job using computer-based or interactive video instruction, where you worked only with a computer or interactive video without an instructor present?

CVONLY

COMPUTER INSTRUCTION	1	(GO TO H2)
INTERACTIVE VIDEO INSTRUCTION	2	(GO TO H2)
BOTH	3	(GO TO H2)
NONE	4	(GO TO I1)

For Participants

H2. Altogether, how many of these computer or video activities did you do during the past 12 months?

CVNUM NUMBER ..... ☐☐

H3. (On average,) How many hours did you spend on (each/that) computer or video activity?

CVHRS NUMBER ..... ☐☐

I. REMAINING BACKGROUND

DEMOGRAPHIC AND RELATED CHARACTERISTICS

I1. Now, I would like to ask you some additional background questions. In what month and year were you born?

ADOBMM MONTH ☐☐ YEAR ☐☐
ADOBYY

1	JANUARY	7	JULY
2	FEBRUARY	8	AUGUST
3	MARCH	9	SEPTEMBER
4	APRIL	10	OCTOBER
5	MAY	11	NOVEMBER
6	JUNE	12	DECEMBER

I2. Are you....

ARACE
White,..... 1
Black,..... 2
American Indian or Alaska Native, ... 3
Asian or Pacific Islander, or..... 4
Another race? 91
ARACEOS/R What is that?_____

I3. Are you of Hispanic origin?

AHISPANI
YES 1
NO 2

I4. What is your marital status?

AMARSTAT
MARRIED/REMARRIED 1
SEPARATED 2
DIVORCED..... 3
WIDOWED 4
NEVER MARRIED..... 5

I5. In what country were you born?

BORNUS
UNITED STATES (50 STATES OR D.C.) ..... 1 (GO TO I8)
U.S. TERRITORIES: PUERTO RICO, GUAM, AMERICAN SAMOA, U.S. VIRGIN ISLANDS, MARIANA ISLANDS, OR SOLOMON ISLANDS..... 2 (GO TO I6)
BORNUOS1/R SPECIFY_____
SOME OTHER COUNTRY ..... 3 (GO TO I6)
BORNUOS2/R SPECIFY_____

I6. How old were you when you first moved to the (United States/50 states or the District of Columbia)?

MOVEAGE AGE..... ☐☐

If I5 = 2, then go to I8.

I7. Are you a United States citizen?

CITIZEN
YES ..... 1 (GO TO I8)
NO ..... 2 (GO TO I10)

I8. Did you ever serve in the U.S. Armed Forces on active duty? This does not include the National Guard or Reserves.

MILITARY
YES ..... 1 (GO TO I9)
NO ..... 2 (GO TO I10)

I9. What year were you discharged from active duty?

MILIDISC
YEAR ..... ☐☐

I10. Do you have any certification or licensure for a job you have now?

IBCERNOW
YES ..... 1 (GO TO I11)
NO ..... 2 (GO TO I12)

I11. What is that?

IBCERNOS/R
SPECIFY _____

I12. Do you have any (other) certification or licensure to practice a trade or profession?

IBCERT
YES ..... 1 (GO TO I13)
NO ..... 2 (GO TO I14)

I13. What is that called?

IBCERTOS/R
SPECIFY _____

I14. Does your occupation have legal or professional requirements for continuing training or education?

REQUIRMN
YES 1
NO 2

CURRENT LABOR FORCE STATUS

If A9 = 1 and D16OV = 1 (currently receiving work-study), go to WRINTRO. If A6 = 2 (not worked in the past 12 months), autocode I15 = 2 and I16 = 2, then ask I17.

I15. Now, I would like to ask about your work experience. (Not counting assistantships, fellowships, or work-study,) During the past week, did you work at a job for pay or income?

IBWORK
YES ..... 1 (GO TO BOX BEFORE I23)
NO ..... 2 (GO TO I16)
RETIRED ..... 3 (GO TO I22)

I16. Were you on leave or vacation from a job during the past week?

IBLEAVE	YES	1	(GO TO BOX BEFORE I23)
	NO	2	(GO TO I17)

I17. Have you been actively looking for work in the past 4 weeks?

JOBLOOK	YES	1	(GO TO I18)
	NO	2	(GO TO I19)

I18. What have you been doing in the past 4 weeks to find work?
[CODE ALL THAT APPLY]

JOBPUBL	CHECKED WITH PUBLIC EMPLOYMENT AGENCY	1	(GO TO I20)
JOBPRIV	CHECKED WITH PRIVATE EMPLOYMENT AGENCY	1	(GO TO I20)
JOBEMPL	CHECKED WITH EMPLOYER DIRECTLY/SENT RESUME	1	(GO TO I20)
JOBREL	CHECKED WITH FRIENDS OR RELATIVES	1	(GO TO I20)
JOBANSAD	PLACED OR ANSWERED ADS/SENT RESUME	1	(GO TO I20)
JOBREAD	READ WANT ADS	1	(GO TO I19)
JOBOTHER	SOMETHING ELSE	1	(GO TO I19)
JOBOTHOS/R	What was that?_____		

I19. What were you doing most of last week? Would you say...

JOBACTY	Keeping house or caring for children,	1
	Going to school,	2
	Retired,	3
	Unable to work, or	4
	Something else?	91
JOBACTOS/R	What was that?_____	

If I19 = 3 (Retired), go to I22.
Else if I18 = 91 (Did something else), go to I20.
Else, go to box after I20.

I20. Could you have taken a job last week if one had been offered?

JOBTAKE	YES	1
	NO	2

If A6 = 1 (employed in the past 12 months),
then go to box before I23.

WORK EXPERIENCE IN THE PAST

WRINTRO. Now, a few questions about your work experience in the past. (Please do not include your assistantships, fellowships, or work-study program.)

I21. Have you ever worked at a job for pay or income?

JOBEVER
YES ..... 1 (GO TO I22)
NO ..... 2 (GO TO BOX BEFORE I36)

I22. In what year did you leave your last job?

LEAVEYY
YEAR ..... 19☐☐

If A9 = 1 and D16OV = 1 (work-study only), go to box before I36.
If I22 < 91 (left job in 1990 or earlier), go to box before I36. Else, ask I23.

I23. (For about how long <u>all together</u> (have/did) you work(ed) for your (current/most recent) employer (THE ONE WHERE YOU EARN(ED) THE MOST INCOME)?) (How long have you been self-employed?)

WORKNUM
NUMBER ..... ☐☐

WORKUNT
<u>Unit</u>
WEEKS 1
MONTHS 2
YEARS 3

WORK EXPERIENCE IN THE PAST 12 MONTHS

If A6 NE 1, autocode I24 = 0 and go to box before I36.

I24. How many months have you worked for pay or income in the past 12 months?

IBWORKMO
MONTHS ..... ☐☐

If I24 = 12, then go to box before I26.

I25. At any time during the past 12 months, have you been unemployed and looking for work for as long as a month?

UNEMLOOK
YES 1
NO 2

CHARACTERISTICS OF CURRENT EMPLOYMENT

If I15 NE 1 (not worked in the past week) and I16 NE 1 (not on leave or vacation), go to I30. Else, ask I26.

I26. Were you working at more than one job for pay or income at the same time in the past week?
[IF ON VACATION OR LEAVE, ASK ABOUT LAST WEEK WORKED.]

JOBMORE
YES 1
NO 2

I27. About how many total hours per week do you usually work for pay or income (, counting all jobs)?
[IF HOURS VARY, PROBE FOR AVERAGE PER WEEK.]

PAYHRS WEEKLY HOURS ..... ☐☐

Ask I28 except if A7 = 1 and A8 NE 1 (self-employed only) and go to I30. Else, ask I29 if A7 = 1 and A8 NE 1 (self-employed only).

I28. Are you eligible for the following benefits through (any of) your current job(s)?

			YES	NO
MEDICAL	a.	Medical or hospital insurance?	1	2
SICKPAY	b.	Sick leave with full pay?	1	2
VACATPAY	c.	Vacation with full pay?	1	2
RETIRMNT	d.	Pension plan or retirement program?	1	2

I29. Do you have the following benefits as a part of your business of being self-employed?

			YES	NO
MEDICAL	a.	Medical or hospital insurance?	1	2
RETIRMNT	b.	Pension plan or retirement program?	1	2

CHARACTERISTICS OF CURRENT OR PAST EMPLOYMENT

I30. (Counting all jobs,) About how much (do/did) you earn before taxes and other deductions (, when you last worked)?

EARNAMT AMOUNT ..... $☐☐☐,☐☐☐.☐☐

Per

EARNUNT
HOUR 1
DAY 2
WEEK 3
BI WEEKLY 4
MONTH 5
YEAR 6
EARNUNOS/R OTHER 91
What (is/was) that?_____

Ask I31a or (I31b and I31c) and I32 for all current employers or most recent employer if not employed now.
Ask I31a or (I31b and I31c) and I32 for each reported company which provided instruction or support.
If A9 = 1 (one employer in the past 12 months), display I31a. Else, display I31b and I31c.
If D16OV = 1 and A9 = 1 (only work study), go to box before I36.

I31. a. (Where (do/did) you work (when you were last employed) and what kind of business or industry (is/was) that?) (What (is/was) the name of your company and what kind of business or industry (is/was) that?)
[EMPLOYER PROBE: Name of the company, business, organization, or other employer.]
[BUSINESS/INDUSTRY PROBE: For example, TV and radio manufacturing, retail shoe store, state labor department, or farm.]

EMPLNAM1-EMPLNAM5/R NAME OF COMPANY_____
INDUSTR1-INDUSTR5/R TYPE OF INDUSTRY_____

b. [DISPLAY ALL COMPANIES CODED EARLIER]
For whom (do/did) you work (when you were last employed)?
[PROBE: Name of the company, business, organization, or other employer.]

EMPLNAM1-EMPLNAM5/R NAME OF COMPANY_____

c. Now, let's talk about (COMPANY NAME). What kind of business or industry (is/was) that?
[PROBE: For example, TV and radio manufacturing, retail shoe store, state labor department, or farm.]

INDUSTR1-INDUSTR5/R NAME OF INDUSTRY_____

I32. What (is/was) your job title and what (are/were) your most important duties?
[JOB PROBE: For example, electrical engineer, stock clerk, typist, or farmer]
[IMPORTANT DUTY PROBE: For example, typing, keeping account book, filing, selling cars, operating printing press, and finishing concrete.]

PROFESS1-PROFESS5/R JOB TITLE_____
DUTIES1-DUTIES5/R IMPORTANT DUTY_____

Return to box before I31 for next listed company.
After last company has been cycled through, ask I33.
If A7 = 1 and A8 NE 1 (self-employed only), then to box before I36.

I33. Are you currently a member of a labor union or of a labor organization?

LABUNION
YES ..... 1 (GO TO I34)
NO ..... 2 (GO TO BOX BEFORE I35)

I34. Are you currently covered by a union contract?

UNIONCON

YES 1
NO 2

If currently employed, ask I35.
Else, go to box after I35.

I35. Thinking about the next 12 months, how likely do you think it is that you will lose your job or be laid off? Would you say...

LAIDOFF

Very likely, ... 1
Fairly likely, ... 2
Not too likely, or 3
Not at all likely? 4

LANGUAGE SKILLS

Ask I36 if A11 NE 1 (main language was not English).
Else, ask J1.

I36. Now, a couple of questions about your language skills. How well do you read English? Would you say...

READENGL

Very well, ... 1
Well, ... 2
Not well, or 3
Not at all? 4

I37. How well do you write English? Would you say . . .

WRITENGL

Very well, ... 1
Well, ... 2
Not well, or 3
Not at all? 4

J. HOUSEHOLD CHARACTERISTICS

HHINTRO. Finally, a few questions about your household.

J1. Do you...

HOWNHOME

Own your home, ... 1
Rent your home, or 2
Have some other arrangement? 3

J2. Besides (PHONE NUMBER), do you have other telephone numbers in your household?

HOTHNUM

YES ..... 1 (GO TO J3)
NO ..... 2 (GO TO J4)

J3. How many of these additional telephone numbers are for home use?

HNUMUSE

NUMBER ..... ☐☐

J4. During the past 12 months, has your household ever been without telephone service for more than 24 hours?

HPHONSVC

YES ..... 1 (GO TO J5)
NO ..... 2 (GO TO J6)

J5. What was the total amount of time your household was without telephone service in the past 12 months?

HSVCNUM

NUMBER ..... ☐☐

HSVCUNIT

DAYS 1
WEEKS 2
MONTHS 3

J6. So that we can group households geographically, may I have your ZIP code?

STFZIP/R

ZIP CODE ..... ☐☐☐☐☐

Ask J7 if NUMKID10 > 0 (number of children age 10 or younger). Else, go to J8.

J7. In the past 12 months, has your family received funds or services from any of the following programs? How about...

			YES	NO
HWIC	a.	Women, Infants, and Children, or WIC?	1	2
HFOODST	b.	Food Stamps?	1	2
HAFDC	c.	AFDC, or Aid to Families with Dependent Children?	1	2

J8. In studies like this, households are sometimes grouped according to income. What was the total income of all persons in your household over the past year, including salaries or other earnings, interest, retirement, and so on for all household members?

Was it....

HINCMRNG

$25,000 or less, or 1	(READ SET 1)
More than $25,000? 2	(READ SET 2)

Was it...

HINCOME

[SET 1]

$5,000 or less 1
$5,001 to $10,000 2
$10,001 to $15,000 3
$15,001 to $20,000, or 4
$20,001 to $25,000? 5

[SET 2]

$25,001 to $30,000 6
$30,001 to $35,000 7
$35,001 to $40,000 8
$40,001 to $50,000 9
$50,001 to $75,000, or 10
Over $75,000? 11

Ask J8OV if
(Number in HH = 2 and HINCOME = 2) or
(Number in HH = 3 and HINCOME = 3) or
(Number in HH = 4 and HINCOME = 3) or
(Number in HH = 5 and HINCOME = 4) or
(Number in HH = 6 and HINCOME = 4) or
(Number in HH = 7 and HINCOME = 5) or
(Number in HH = 8 and HINCOME = 5) or
(Number in HH = 9 and HINCOME = 6) or
(Number in HH = 10 and HINCOME = 6) or
(Number in HH = 11 and HINCOME = 7) or
(Number in HH = 12 and HINCOME = 7).

J8OV. What was your household income last year, to the nearest thousand?

HINCMEXT

INCOME ..... $☐☐,☐☐☐

CLOSE. Those are all the questions I have about you. Please hold on for a moment while I check to see if there is anyone else I need to ask about, [or anyone else I need to speak with].

APPENDIX B

ADULT EDUCATION
PUBLIC FILE LAYOUT IN POSITION ORDER

Adult Education
Public File Layout in Position Order

VARIABLE NAME	VARIABLE LABEL	FORMAT	RECORD NUMBER	LENGTH	START COLUMN	END COLUMN
BASMID	ADULT CASE IDENTIFICATION	N	1	12	1	12
MAINRSLT	RESULT CODE FOR EXTENDED	A	1	2	13	14
ENGLSPAN	WHETHER EXTENDED IN ENGLISH OR SPANISH	N	1	2	15	16
AGE	AGE AT SCREENER	N	1	2	17	18
SEX	GENDER AT SCREENER	N	1	2	19	20
AGE1	O/HH MEM - #1'S AGE AT SCREENER	N	1	3	21	23
SEX1	O/HH MEM - #1'S GENDER AT SCREENER	N	1	2	24	25
AGE2	O/HH MEM - #2'S AGE AT SCREENER	N	1	2	26	27
SEX2	O/HH MEM - #2'S GENDER AT SCREENER	N	1	2	28	29
AGE3	O/HH MEM - #3'S AGE AT SCREENER	N	1	2	30	31
SEX3	O/HH MEM - #3'S GENDER AT SCREENER	N	1	2	32	33
AGE4	O/HH MEM - #4'S AGE AT SCREENER	N	1	2	34	35
SEX4	O/HH MEM - #4'S GENDER AT SCREENER	N	1	2	36	37
AGE5	O/HH MEM - #5'S AGE AT SCREENER	N	1	2	38	39
SEX5	O/HH MEM - #5'S GENDER AT SCREENER	N	1	2	40	41
AGE6	O/HH MEM - #6'S AGE AT SCREENER	N	1	2	42	43
SEX6	O/HH MEM - #6'S GENDER AT SCREENER	N	1	2	44	45
AGE7	O/HH MEM - #7'S AGE AT SCREENER	N	1	2	46	47
SEX7	O/HH MEM - #7'S GENDER AT SCREENER	N	1	2	48	49
AGE8	O/HH MEM - #8'S AGE AT SCREENER	N	1	2	50	51
SEX8	O/HH MEM - #8'S GENDER AT SCREENER	N	1	2	52	53
AGE9	O/HH MEM - #9'S AGE AT SCREENER	N	1	2	54	55
SEX9	O/HH MEM - #9'S GENDER AT SCREENER	N	1	2	56	57
AGE10	O/HH MEM - #10'S AGE AT SCREENER	N	1	2	58	59
SEX10	O/HH MEM - #10'S GENDER AT SCREENER	N	1	2	60	61
AGE11	O/HH MEM - #11'S AGE AT SCREENER	N	1	2	62	63
SEX11	O/HH MEM - #11'S GENDER AT SCREENER	N	1	2	64	65
AGE12	O/HH MEM - #12'S AGE AT SCREENER	N	1	2	66	67
SEX12	O/HH MEM - #12'S GENDER AT SCREENER	N	1	2	68	69
AGE13	O/HH MEM - #13'S AGE AT SCREENER	N	1	2	70	71
SEX13	O/HH MEM - #13'S GENDER AT SCREENER	N	1	2	72	73
AGE14	O/HH MEM - #14'S AGE AT SCREENER	N	1	2	74	75
SEX14	O/HH MEM - #14'S GENDER AT SCREENER	N	1	2	76	77
IBGRADE	A1-HIGHEST GRADE/YR OF SCHL COMPLETED	N	1	2	78	79
IBGRAD1	A1-ACTUAL GRADE 0-8 COMPLETED	N	1	2	80	81
IBGRAD2	A1-ACTUAL GRADE 9-11 COMPLETED	N	1	2	82	83
IBVOCDIP	A1OV-RECEIVED VOC/TECH DIPLOMA	N	1	2	84	85
IBDIPL	A2-HIGH SCHOOL DIPLOMA	N	1	2	86	87
IBUSDIPL	A3-HIGH SCHOOL DIPLOMA IN U.S.	N	1	2	88	89
IBDIPLYR	A4-HS DIP/EQUIV HS DIP IN LAST 12 MO	N	1	2	90	91
IBGED	A5-HIGH SCHOOL DIPLOMA THROUGH GED	N	1	2	92	93
IBWORK12	A6-WORK AT A JOB IN PAST 12 MONTHS	N	1	2	94	95
IBSELFEM	A7-SELF-EMPLOYED IN PAST 12 MO	N	1	2	96	97
IBOTHEMP	A8-OTHER EMPLYR BESIDES SELF-EMPLYMNT	N	1	2	98	99
IBEMPL12	A9-NUMBER OF EMPLOYERS IN PAST 12 MO	N	1	2	100	101
IBLANG	A10-FIRST LANGUAGE LEARNED TO SPEAK	N	1	2	102	103
IBSPEAK	A11-LANGUAGE SPOKEN MOST AT HOME	N	1	2	104	105
ESLANG	B1-ESL CLASSES	N	1	2	106	107
ESCOLL	B1OV-ESL IS PART OF COLLEGE PROGRAM	N	1	2	108	109
ESDIFF	B2-NUMBER OF ESL PROGRAMS	N	1	2	110	111
ESREASON	B3-MAIN REASON FOR ESL CLASSES	N	1	2	112	113
ESTIME	B4-PART-TIME OR FULL-TIME ESL STUDENT	N	1	2	114	115
ESLEARN	B5-HOW LEARNED ABOUT ESL CLASSES	N	1	2	116	117
ESWHEN	B6-TIME SPENT IN ESL CLASSES	N	1	4.1	118	121
ESWHENUN	B6-UNIT OF TIME IN ESL CLASSES	N	1	2	122	123
ESWKS	B6OV-HOW MANY WEEKS IN ESL CLASSES	N	1	2	124	125
ESHRS	B7-HRS ATTENDED ESL CLASSES	N	1	2	126	127
ESHRSUNT	B7-UNIT OF TIME ATTENDED ESL	N	1	2	128	129
ESTUITON	B8-EXPENSES FOR ESL CLASSES	N	1	4	130	133
ESPROVTY	B10-TYPE OF INSTRUCTION PROVIDER	N	1	2	134	135
ESPLACE	B12-TYPE OF LOCATION	N	1	2	136	137
ESPROVEM	B13-INSTRUCTION PROVIDER WAS EMPLOYER	N	1	2	138	139
ESAWARE	B14-EMPLOYER AWARE OF ESL CLASSES	N	1	2	140	141
ESEMPREQ	B15A-EMPLOYER REQUIRED ESL CLASSES	N	1	2	142	143
ESEMPWP	B15B-EMPLOYER GAVE TIME OFF W/WO PAY	N	1	2	144	145
ESEMPSPA	B15C-EMPLOYER PROVIDED CLASSROOM SPACE	N	1	2	146	147

VARIABLE NAME	VARIABLE LABEL	FORMAT	RECORD NUMBER	LENGTH	START COLUMN	END COLUMN
ESEMPPAY	B15D-EMPLOYER PAID ALL/PART OF COSTS	N	1	2	148	149
ESUNION	B17-EMPLOYER SUPPORT THRU UNION AGREE	N	1	2	150	151
ESAGAIN	B18-WOULD TAKE ESL CLASS AGAIN	N	1	2	152	153
ESINTRST	B19-INTERESTED IN TAKING ESL CLASSES	N	1	2	154	155
ESHOWINT	B20-LEVEL OF INTEREST IN TAKING ESL	N	1	2	156	157
ESKNOW	B21-KNEW OF ESL CLASSES TO TAKE	N	1	2	158	159
ESPRTIME	B22A-TIME WAS A BARRIER TO ESL	N	1	2	160	161
ESPRCOST	B22B-MONEY/COST WAS A BARRIER TO ESL	N	1	2	162	163
ESPRCHIL	B22C-CHILD CARE WAS A BARRIER TO ESL	N	1	2	164	165
ESPRTRAN	B22D-TRANSPRTATN WAS BARRIER FOR ESL	N	1	2	166	167
ESPROTH	B22E-SOMETHNG ELSE WAS BARRIER FOR ESL	N	1	2	168	169
ESPROTHC	B22-OTHER BARRIER CATEGORIES TO ESL	N	1	2	170	171
ESPRGEN	B23-MAIN GENERAL BARRIER TO ESL	N	1	2	172	173
ESTIFAM	B24AA-DESIRE TO SPEND TIME WITH FAMILY	N	1	2	174	175
ESTICHOR	B24AB-NEED TO DO HOUSEHOLD CHORES	N	1	2	176	177
ESTICLHR	B24AC-UNABL TO TAKE CLSSES DURNG WRK	N	1	2	178	179
ESTIWORK	B24AD-WORK RESPONSBLTS DO NOT PERMIT	N	1	2	180	181
ESTIACTI	B24AE-ACTIVITIES OUTSIDE WORK CONFLICT	N	1	2	182	183
ESTITRAV	B24AF-TIME-TRAVEL TIME TO/FROM CLASSES	N	1	2	184	185
ESTIOTH	B24AG-ANOTHER TIME RELATED PROBLEM	N	1	2	186	187
ESMOTUIT	B24BA-AMOUNT OF TUITION AND FEES	N	1	2	188	189
ESMOBOOK	B24BB-COST OF BOOKS AND SUPPLIES	N	1	2	190	191
ESMOCHIL	B24BC-COST-COST OF CHILD CARE	N	1	2	192	193
ESMOTRAN	B24BD-COST-COST OF TRANSPORTATION	N	1	2	194	195
ESMOOTH	B24BE-ANOTHER MONEY/COST PROBLEM	N	1	2	196	197
ESCHCOST	B24CA-CHILD-COST OF CHILD CARE	N	1	2	198	199
ESCHAVAL	B24CB-AVAILABILITY OF CHILD CARE	N	1	2	200	201
ESCHOTH	B24CC-ANTHR CHILD CARE-RLTD PROBLEM	N	1	2	202	203
ESTRCOST	B24DA-TRANS-COST OF TRANSPORTATION	N	1	2	204	205
ESTRAVAL	B24DB-AVAILABILITY OF TRANSPORTATION	N	1	2	206	207
ESTRTIME	B24DC-TRANS-TRAVEL TIME TO/FROM CLASS	N	1	2	208	209
ESTROTH	B24DD-ANOTHER TRANSPORTATION PROBLEM	N	1	2	210	211
ESPRSPEC	B25-MAIN SPECIFIC BARRIER TO ESL	N	1	2	212	213
BSIMPROV	C1A-BASIC SKILLS CLASSES	N	1	2	214	215
BSGED	C1B-GED PREPARATION CLASSES	N	1	2	216	217
BSHSEQUV	C1C-OTHER HS EQUIVALENCY PROGRAM	N	1	2	218	219
BSREASON	C2-MAIN REASON FOR ABE/GED CLASSES	N	1	2	220	221
BSTIME	C3-PART-TIME OR FULL-TIME STUDENT	N	1	2	222	223
BSLEARN	C4-HOW LEARNED ABOUT ABE/GED CLASSES	N	1	2	224	225
BSWHEN	C5-TIME SPENT IN ABE/GED CLASSES	N	1	5.1	226	230
BSWHENUN	C5-UNIT OF TIME IN ABE/GED CLASSES	N	1	2	231	232
BSWKS	C5OV-HOW MANY WEEKS	N	1	2	233	234
BSHRS	C6-HRS ATTENDED ABE/GED CLASSES	N	1	2	235	236
BSHRSUNT	C6-UNIT FOR HOURS ATTENDED ABE/GED	N	1	2	237	238
BSTUITON	C7-AMT FOR EXPENSES FOR ABE/GED CLASSES	N	1	4	239	242
BSPROVTY	C9-TYPE OF INSTRUCTION PROVIDER	N	1	2	243	244
BSPLACE	C11-TYPE OF LOCATION	N	1	2	245	246
BSPROVEM	C12-INSTRUCTION PROVIDER WAS EMPLOYER	N	1	2	247	248
BSAWARE	C13-EMPL AWARE OF ABE/GED CLASS TAKEN	N	1	2	249	250
BSEMPREQ	C14A-EMPLOYER REQUIRED ABE/GED CLASSES	N	1	2	251	252
BSEMPWP	C14B-EMPLOYER GAVE TIME OFF W/WO PAY	N	1	2	253	254
BSEMPSPA	C14C-EMPLOYER PROVIDED CLASSROOM SPACE	N	1	2	255	256
BSEMPPAY	C14D-EMPLOYER PAID ALL/PART OF COSTS	N	1	2	257	258
BSUNION	C16-EMPLOYER SUPPORT THRU UNION AGREE	N	1	2	259	260
BSAGAIN	C17-WOULD TAKE ABE/GED CLASS AGAIN	N	1	2	261	262
BSINTRST	C18-INTRSTD IN TAKING ABE/GED CLASSES	N	1	2	263	264
BSHOWINT	C19-LEVEL OF INTEREST IN ABE/GED	N	1	2	265	266
BSKNOW	C20-KNEW OF ABE/GED CLASSES TO TAKE	N	1	2	267	268
BSPRTIME	C21A-TIME WAS BARRIER TO ABE/GED	N	1	2	269	270
BSPRCOST	C21B-MONEY/COST WAS BARRIER TO ABE/GED	N	1	2	271	272
BSPRCHIL	C21C-CHILD CARE WAS BARRIER TO ABE/GED	N	1	2	273	274
BSPRTRAN	C21D-TRANSPORTATION BARRIER TO ABE/GED	N	1	2	275	276
BSPROTH	C21E-OTHER GENERAL BARRIER TO ABE/GED	N	1	2	277	278
BSPROTHC	C21-OTHER BARRIER CATEGORIES TO ABE/GED	N	1	2	279	280
BSPRGEN	C22-MAIN GENERAL BARRIER TO ABE/GED	N	1	2	281	282
BSTIFAM	C23AA-DESIRE TO SPEND TIME WITH FAMILY	N	1	2	283	284
BSTICHOR	C23AB-NEED TO DO HOUSEHOLD CHORES	N	1	2	285	286
BSTICLHR	C23AC-CANNOT TAKE CLASSES DURING WORK	N	1	2	287	288
BSTIWORK	C23AD-WORK RESPONSBLTIES DO NOT PERMIT	N	1	2	289	290
BSTIACTI	C23AE-ACTIVITIES OUTSIDE WORK CONFLICT	N	1	2	291	292
BSTITRAV	C23AF-TIME-TRAVEL TO/FROM CLASSES	N	1	2	293	294
BSTIOTH	C23AG-ANOTHER TIME RELATED PROBLEM	N	1	2	295	296

VARIABLE NAME	VARIABLE LABEL	FORMAT	RECORD NUMBER	LENGTH	START COLUMN	END COLUMN
BSMOTUIT	C23BA-AMOUNT OF TUITION AND FEES	N	1	2	297	298
BSMOBOOK	C23BB-COST OF BOOKS AND SUPPLIES	N	1	2	299	300
BSMOCHIL	C23BC-COST-COST OF CHILD CARE	N	1	2	301	302
BSMOTRAN	C23BD-COST-COST OF TRANSPORTATION	N	1	2	303	304
BSMOOTH	C23BE-ANOTHER MONEY/COST PROBLEM	N	1	2	305	306
BSCHCOST	C23CA-CHILD-COST OF CHILD CARE	N	1	2	307	308
BSCHAVAL	C23CB-AVAILABILITY OF CHILD CARE	N	1	2	309	310
BSCHOTH	C23CC-ANOTHER CHILD RELATED PROBLEM	N	1	2	311	312
BSTRCOST	C23DA-TRANS COST OF TRANSPORTATION	N	1	2	313	314
BSTRAVAL	C23DB-AVAILABILITY OF TRANSPORTATION	N	1	2	315	316
BSTRTIME	C23DC-TRANS-TRAVEL TIME TO/FROM CLASSES	N	1	2	317	318
BSTROTH	C23DD-ANOTHER TRANSPORTATION PROBLEM	N	1	2	319	320
BSPRSPEC	C24-MAIN SPECIFIC BARRIER TO ABE/GED	N	1	2	321	322
CRDEGREE	D1A-COLLEGE OR UNIVERSITY PROGRAM	N	1	2	323	324
CRVOCDIP	D1B-VOC/TECH PROGRAM	N	1	2	325	326
CRDIPLO1	D3-TYPE OF DEGREE PROGRAMS-1	N	1	2	327	328
CIPF1	MAJOR FIELD OF STUDY CODE-1	N	1	2	329	330
CRREASO1	D5-MAIN REASON FOR CRED PROGRAM-1	N	1	2	331	332
CRTRMFT1	D7A-MTHS ENROLLED IN CRED FULL-TIME-1	N	1	4.1	333	336
CRTRMPT1	D7B-MTHS ENROLLED IN CRED PART-TIME-1	N	1	4.1	337	340
CRSCHLS1	D7C-DIFFERENT SCHOOLS FOR CRED-1	N	1	2	341	342
CR12NUM1	D8-NUMBER OF CRED COURSES-1	N	1	2	343	344
CRPTNUM1	D9-NUMBER CRED CLASSES PART-TIME-1	N	1	2	345	346
CR1LENUM	D11-LENGTH OF VOC PROGRAM-1	N	1	4.1	347	350
CRLENUN1	D11-UNIT OF LENGTH - VOC PROGRAM-1	N	1	2	351	352
CRFTHRS1	D12A-HRS/WEEK ATTENDED CRED FULL-TIME-1	N	1	2	353	354
CRPTHRS1	D12B-HRS/WEEK ATTENDED CRED PART-TIME-1	N	1	2	355	356
CRTUITO1	D13-EXPENSES FOR CRED-1	N	1	5	357	361
CR1PRTYP	D15-TYPE OF INSTRUCTION PROVIDER-1	N	1	2	362	363
CR1PREMP	D16-CRED INSTRUCT PROVIDER WAS EMPLYR-1	N	1	2	364	365
CR1ASSIS	D16OV-ASSISTSHIPS/FELLOWSHIP/WK-STUDY-1	N	1	2	366	367
CRCURAS1	D16OV2-HAS ASSTSHIP/WK-STDY CURRENTLY-1	N	1	2	368	369
CRAWARE1	D17-EMPLOYER AWARE CRED PROGRAM-1	N	1	2	370	371
CR1EMREQ	D18A-EMPLOYER REQUIRED CRED PROGRAM-1	N	1	2	372	373
CR1EMPWP	D18B-EMPLOYER GAVE TIME OFF W/WO PAY-1	N	1	2	374	375
CR1EMSPA	D18C-EMPLYER PROVIDED CLASSROOM SPACE-1	N	1	2	376	377
CR1EMPAY	D18D-EMPLOYER PAID ALL/PART OF COSTS-1	N	1	2	378	379
CRUNION1	D20-EMPLOYER SUPPORT THRU UNION AGREE-1	N	1	2	380	381
CRDIPLO2	D3-TYPE OF DEGREE PROGRAMS-2	N	1	2	382	383
CIPF2	MAJOR FIELD OF STUDY CODE-2	N	1	2	384	385
CRREASO2	D5-MAIN REASON FOR CRED PROGRAM-2	N	1	2	386	387
CRTRMFT2	D7A-MTHS ENROLLED IN CRED FULL-TIME-2	N	1	4.1	388	391
CRTRMPT2	D7B-MTHS ENROLLED IN CRED PART-TIME-2	N	1	2	392	393
CRSCHLS2	D7C-DIFFERENT SCHOOLS FOR CRED-2	N	1	2	394	395
CR12NUM2	D8-NUMBER OF CRED COURSES-2	N	1	2	396	397
CRPTNUM2	D9-NUMBER CRED CLASSES PART-TIME-2	N	1	2	398	399
CR2LENUM	D11-LENGTH OF VOC PROGRAM-2	N	1	4.1	400	403
CRLENUN2	D11-UNIT OF LENGTH - VOC PROGRAM-2	N	1	2	404	405
CRFTHRS2	D12A-HRS/WEEK ATTENDED CRED FULL-TIME-2	N	1	2	406	407
CRPTHRS2	D12B-HRS/WEEK ATTENDED CRED PART-TIME-2	N	1	2	408	409
CRTUITO2	D13-EXPENSES FOR CRED-2	N	1	5	410	414
CR2PRTYP	D15-TYPE OF INSTRUCTION PROVIDER-2	N	1	2	415	416
CR2PREMP	D16-CRED INSTRUCT PROVIDER WAS EMPLYR-2	N	1	2	417	418
CR2ASSIS	D16OV-ASSISTSHIPS/FELLOWSHIP/WK-STUDY-2	N	1	2	419	420
CRCURAS2	D16OV2-HAS ASSTSHIP/WK-STDY CURRENTLY-2	N	1	2	421	422
CRAWARE2	D17-EMPLOYER AWARE CRED PROGRAM-2	N	1	2	423	424
CR2EMREQ	D18A-EMPLOYER REQUIRED CRED PROGRAM-2	N	1	2	425	426
CR2EMPWP	D18B-EMPLOYER GAVE TIME OFF W/WO PAY-2	N	1	2	427	428
CR2EMSPA	D18C-EMPLYER PROVIDED CLASSROOM SPACE-2	N	1	2	429	430
CR2EMPAY	D18D-EMPLOYER PAID ALL/PART OF COSTS-2	N	1	2	431	432
CRUNION2	D20-EMPLOYER SUPPORT THRU UNION AGREE-2	N	1	2	433	434
CRDIPLO3	D3-TYPE OF DEGREE PROGRAMS-3	N	1	2	435	436
CIPF3	MAJOR FIELD OF STUDY CODE-3	N	1	2	437	438
CRREASO3	D5-MAIN REASON FOR CRED PROGRAM-3	N	1	2	439	440
CRTRMFT3	D7A-MTHS ENROLLED IN CRED FULL-TIME-3	N	1	2	441	442
CRTRMPT3	D7B-MTHS ENROLLED IN CRED PART-TIME-3	N	1	2	443	444
CRSCHLS3	D7C-DIFFERENT SCHOOLS FOR CRED-3	N	1	2	445	446
CR12NUM3	D8-NUMBER OF CRED COURSES-3	N	1	2	447	448
CRPTNUM3	D9-NUMBER CRED CLASSES PART-TIME-3	N	1	2	449	450
CR3LENUM	D11-LENGTH OF VOC PROGRAM-3	N	1	2	451	452
CRLENUN3	D11-UNIT OF LENGTH - VOC PROGRAM-3	N	1	2	453	454
CRFTHRS3	D12A-HRS/WEEK ATTENDED CRED FULL-TIME-3	N	1	2	455	456

VARIABLE NAME	VARIABLE LABEL	FORMAT	RECORD NUMBER	LENGTH	START COLUMN	END COLUMN
CRPTHRS3	D12B-HRS/WEEK ATTENDED CRED PART-TIME-3	N	1	2	457	458
CRTUITO3	D13-EXPENSES FOR CRED-3	N	1	4	459	462
CR3PRTYP	D15-TYPE OF INSTRUCTION PROVIDER-3	N	1	2	463	464
CR3PREMP	D16-CRED INSTRUCT PROVIDER WAS EMPLYR-3	N	1	2	465	466
CR3ASSIS	D16OV-ASSISTSHIPS/FELLOWSHIP/WK-STUDY-3	N	1	2	467	468
CRCURAS3	D16OV2-HAS ASSTSHIP/WK-STDY CURRENTLY-3	N	1	2	469	470
CRAWARE3	D17-EMPLOYER AWARE CRED PROGRAM-3	N	1	2	471	472
CR3EMREQ	D18A-EMPLOYER REQUIRED CRED PROGRAM-3	N	1	2	473	474
CR3EMPWP	D18B-EMPLOYER GAVE TIME OFF W/WO PAY-3	N	1	2	475	476
CR3EMSPA	D18C-EMPLYER PROVIDED CLASSROOM SPACE-3	N	1	2	477	478
CR3EMPAY	D18D-EMPLOYER PAID ALL/PART OF COSTS-3	N	1	2	479	480
CRUNION3	D20-EMPLOYER SUPPORT THRU UNION AGREE-3	N	1	2	481	482
APPRENTI	E1-APPRENTICESHIP PROGRAM	N	1	2	483	484
APSTILL	E1OV-STILL IN APPRENTICESHIP PROGRAM?	N	1	2	485	486
APTEST	E3-ADMISSION TEST REQUIRED	N	1	2	487	488
APEMPLOY	E4A-EMPLOYER SPONSORED APPR	N	1	2	489	490
APUNION	E4B-LABOR UNION SPONSORED APPR	N	1	2	491	492
APSTAGOV	E4C-LOCAL OR STATE GOV SPONSORED APPR	N	1	2	493	494
APFEDGOV	E4D-FED GOV SPONSORED APPR	N	1	2	495	496
APOTHER	E4E-SOMEONE ELSE SPONSORED APPR	N	1	2	497	498
APLENNUM	E5-LENGTH OF APPRENTICESHIP	N	1	4.1	499	502
APLENUNT	E5-UNIT OF TIME FOR APPRENTICESHIP	N	1	2	503	504
APOJTHRS	E6-HRS/WEEK FOR ON-THE-JOB TRAINING	N	1	2	505	506
APOTHHRS	E7-HRS/WEEK FOR CLASS INSTRUCTION	N	1	2	507	508
WRACTY	F1-CAREER OR JOB RELATED COURSES	N	1	2	509	510
WRREASO1	F4-MAIN REASON FOR WORK-REL COURSES-1	N	1	2	511	512
WRWHEN1	F6-TIME SPEND IN WORK-REL COURSES-1	N	1	4.1	513	516
WRWHNUN1	F6-UNIT OF TIME IN WORK-REL COURSES-1	N	1	2	517	518
WRWKS1	F6OV-HOW MANY WEEKS-1	N	1	2	519	520
WRHRS1	F7-HRS ATTENDED WORK-REL COURSES-1	N	1	2	521	522
WRHRUNT1	F7-UNT/TIME ATTENDED WORK-REL COURSES-1	N	1	2	523	524
WRTUITO1	F8-EXPENSES FOR WORK-REL COURSES-1	N	1	5	525	529
WR1PRTYP	F10-TYPE OF INSTRUCTIONAL PROVIDER-1	N	1	2	530	531
WR1PREMP	F11-WORK-REL INSTRUC PROV WAS EMPLYR-1	N	1	2	532	533
WRAWARE1	F12-EMPLYR AWARE WORK-REL CRSE TAKEN-1	N	1	2	534	535
WR1EMREQ	F13A-EMPLYR REQUIRED WORK-REL COURSES-1	N	1	2	536	537
WR1EMPWP	F13B-EMPL GAVE TIME OFF W/WO PAY-1	N	1	2	538	539
WR1EMSPA	F13C-EMPL PROVIDED CLASSROOM SPACE-1	N	1	2	540	541
WR1EMPAY	F13D-EMPL PAID ALL/PART OF COSTS-1	N	1	2	542	543
WRUNION1	F15-EMPLOYER SUPPORT THRU UNION-1	N	1	2	544	545
WRAGAIN1	F16-WOULD TAKE WORK-REL CRSE AGAIN-1	N	1	2	546	547
WRREASO2	F4-MAIN REASON FOR WORK-REL COURSES-2	N	1	2	548	549
WRWHEN2	F6-TIME SPEND IN WORK-REL COURSES-2	N	1	4.1	550	553
WRWHNUN2	F6-UNIT OF TIME IN WORK-REL COURSES-2	N	1	2	554	555
WRWKS2	F6OV-HOW MANY WEEKS-2	N	1	2	556	557
WRHRS2	F7-HRS ATTENDED WORK-REL COURSES-2	N	1	2	558	559
WRHRUNT2	F7-UNT/TIME ATTENDED WORK-REL COURSES-2	N	1	2	560	561
WRTUITO2	F8-EXPENSES FOR WORK-REL COURSES-2	N	1	4	562	565
WR2PRTYP	F10-TYPE OF INSTRUCTIONAL PROVIDER-2	N	1	2	566	567
WR2PREMP	F11-WORK-REL INSTRUC PROV WAS EMPLYR-2	N	1	2	568	569
WRAWARE2	F12-EMPLYR AWARE WORK-REL CRSE TAKEN-2	N	1	2	570	571
WR2EMREQ	F13A-EMPLYR REQUIRED WORK-REL COURSES-2	N	1	2	572	573
WR2EMPWP	F13B-EMPL GAVE TIME OFF W/WO PAY-2	N	1	2	574	575
WR2EMSPA	F13C-EMPL PROVIDED CLASSROOM SPACE-2	N	1	2	576	577
WR2EMPAY	F13D-EMPL PAID ALL/PART OF COSTS-2	N	1	2	578	579
WRUNION2	F15-EMPLOYER SUPPORT THRU UNION-2	N	1	2	580	581
WRAGAIN2	F16-WOULD TAKE WORK-REL CRSE AGAIN-2	N	1	2	582	583
WRREASO3	F4-MAIN REASON FOR WORK-REL COURSES-3	N	1	2	584	585
WRWHEN3	F6-TIME SPEND IN WORK-REL COURSES-3	N	1	4.1	586	589
WRWHNUN3	F6-UNIT OF TIME IN WORK-REL COURSES-3	N	1	2	590	591
WRWKS3	F6OV-HOW MANY WEEKS-3	N	1	2	592	593
WRHRS3	F7-HRS ATTENDED WORK-REL COURSES-3	N	1	2	594	595
WRHRUNT3	F7-UNT/TIME ATTENDED WORK-REL COURSES-3	N	1	2	596	597
WRTUITO3	F8-EXPENSES FOR WORK-REL COURSES-3	N	1	4	598	601
WR3PRTYP	F10-TYPE OF INSTRUCTIONAL PROVIDER-3	N	1	2	602	603
WR3PREMP	F11-WORK-REL INSTRUC PROV WAS EMPLYR-3	N	1	2	604	605
WRAWARE3	F12-EMPLYR AWARE WORK-REL CRSE TAKEN-3	N	1	2	606	607
WR3EMREQ	F13A-EMPLYR REQUIRED WORK-REL COURSES-3	N	1	2	608	609
WR3EMPWP	F13B-EMPL GAVE TIME OFF W/WO PAY-3	N	1	2	610	611
WR3EMSPA	F13C-EMPL PROVIDED CLASSROOM SPACE-3	N	1	2	612	613
WR3EMPAY	F13D-EMPL PAID ALL/PART OF COSTS-3	N	1	2	614	615
WRUNION3	F15-EMPLOYER SUPPORT THRU UNION-3	N	1	2	616	617

VARIABLE NAME	VARIABLE LABEL	FORMAT	RECORD NUMBER	LENGTH	START COLUMN	END COLUMN
WRAGAIN3	F16-WOULD TAKE WORK-REL CRSE AGAIN-3	N	1	2	618	619
WRREASO4	F4-MAIN REASON FOR WORK-REL COURSES-4	N	1	2	620	621
WRWHEN4	F6-TIME SPEND IN WORK-REL COURSES-4	N	1	4.1	622	625
WRWHNUN4	F6-UNIT OF TIME IN WORK-REL COURSES-4	N	1	2	626	627
WRWKS4	F6OV-HOW MANY WEEKS-4	N	1	2	628	629
WRHRS4	F7-HRS ATTENDED WORK-REL COURSES-4	N	1	2	630	631
WRHRUNT4	F7-UNT/TIME ATTENDED WORK-REL COURSES-4	N	1	2	632	633
WRTUITO4	F8-EXPENSES FOR WORK-REL COURSES-4	N	1	4	634	637
WR4PRTYP	F10-TYPE OF INSTRUCTIONAL PROVIDER-4	N	1	2	638	639
WR4PREMP	F11-WORK-REL INSTRUC PROV WAS EMPLYR-4	N	1	2	640	641
WRAWARE4	F12-EMPLYR AWARE WORK-REL CRSE TAKEN-4	N	1	2	642	643
WR4EMREQ	F13A-EMPLYR REQUIRED WORK-REL COURSES-4	N	1	2	644	645
WR4EMPWP	F13B-EMPL GAVE TIME OFF W/WO PAY-4	N	1	2	646	647
WR4EMSPA	F13C-EMPL PROVIDED CLASSROOM SPACE-4	N	1	2	648	649
WR4EMPAY	F13D-EMPL PAID ALL/PART OF COSTS-4	N	1	2	650	651
WRUNION4	F15-EMPLOYER SUPPORT THRU UNION-4	N	1	2	652	653
WRAGAIN4	F16-WOULD TAKE WORK-REL CRSE AGAIN-4	N	1	2	654	655
WRREASO5	F4-MAIN REASON FOR WORK-REL COURSES-5	N	1	2	656	657
WRWHEN5	F6-TIME SPEND IN WORK-REL COURSES-5	N	1	4.1	658	661
WRWHNUN5	F6-UNIT OF TIME IN WORK-REL COURSES-5	N	1	2	662	663
WRWKS5	F6OV-HOW MANY WEEKS-5	N	1	2	664	665
WRHRS5	F7-HRS ATTENDED WORK-REL COURSES-5	N	1	2	666	667
WRHRUNT5	F7-UNT/TIME ATTENDED WORK-REL COURSES-5	N	1	2	668	669
WRTUITO5	F8-EXPENSES FOR WORK-REL COURSES-5	N	1	4	670	673
WR5PRTYP	F10-TYPE OF INSTRUCTIONAL PROVIDER-5	N	1	2	674	675
WR5PREMP	F11-WORK-REL INSTRUC PROV WAS EMPLYR-5	N	1	2	676	677
WRAWARE5	F12-EMPLYR AWARE WORK-REL CRSE TAKEN-5	N	1	2	678	679
WR5EMREQ	F13A-EMPLYR REQUIRED WORK-REL COURSES-5	N	1	2	680	681
WR5EMPWP	F13B-EMPL GAVE TIME OFF W/WO PAY-5	N	1	2	682	683
WR5EMSPA	F13C-EMPL PROVIDED CLASSROOM SPACE-5	N	1	2	684	685
WR5EMPAY	F13D-EMPL PAID ALL/PART OF COSTS-5	N	1	2	686	687
WRUNION5	F15-EMPLOYER SUPPORT THRU UNION-5	N	1	2	688	689
WRAGAIN5	F16-WOULD TAKE WORK-REL CRSE AGAIN-5	N	1	2	690	691
WRREASO6	F4-MAIN REASON FOR WORK-REL COURSES-6	N	1	2	692	693
WRWHEN6	F6-TIME SPEND IN WORK-REL COURSES-6	N	1	4.1	694	697
WRWHNUN6	F6-UNIT OF TIME IN WORK-REL COURSES-6	N	1	2	698	699
WRWKS6	F6OV-HOW MANY WEEKS-6	N	1	2	700	701
WRHRS6	F7-HRS ATTENDED WORK-REL COURSES-6	N	1	2	702	703
WRHRUNT6	F7-UNT/TIME ATTENDED WORK-REL COURSES-6	N	1	2	704	705
WRTUITO6	F8-EXPENSES FOR WORK-REL COURSES-6	N	1	4	706	709
WR6PRTYP	F10-TYPE OF INSTRUCTIONAL PROVIDER-6	N	1	2	710	711
WR6PREMP	F11-WORK-REL INSTRUC PROV WAS EMPLYR-6	N	1	2	712	713
WRAWARE6	F12-EMPLYR AWARE WORK-REL CRSE TAKEN-6	N	1	2	714	715
WR6EMREQ	F13A-EMPLYR REQUIRED WORK-REL COURSES-6	N	1	2	716	717
WR6EMPWP	F13B-EMPL GAVE TIME OFF W/WO PAY-6	N	1	2	718	719
WR6EMSPA	F13C-EMPL PROVIDED CLASSROOM SPACE-6	N	1	2	720	721
WR6EMPAY	F13D-EMPL PAID ALL/PART OF COSTS-6	N	1	2	722	723
WRUNION6	F15-EMPLOYER SUPPORT THRU UNION-6	N	1	2	724	725
WRAGAIN6	F16-WOULD TAKE WORK-REL CRSE AGAIN-6	N	1	2	726	727
WRINTRST	F18-INTERESTED IN TAKING WORK-REL CRSE	N	1	2	728	729
WRHOWINT	F19-LEVEL OF INTEREST IN WORK-REL	N	1	2	730	731
WRKNOW	F20-KNEW OF WORK-REL CRSES TO TAKE	N	1	2	732	733
WRPRTIME	F21A-TIME WAS BARRIER TO WORK-REL	N	1	2	734	735
WRPRCOST	F21B-COST WAS A BARRIER TO WORK-REL	N	1	2	736	737
WRPRCHIL	F21C-CHILD CARE WAS BARRIER TO WORK-REL	N	1	2	738	739
WRPRTRAN	F21D-TRANSPRTATN BARRIER TO WORK-REL	N	1	2	740	741
WRPROTH	F21E-OTHER GENERAL BARRIER TO WORK-REL	N	1	2	742	743
WRPROTHC	F21-O/BARRIER CATEGORIES TO WORK-REL	N	1	2	744	745
WRPRGEN	F22-MAIN GENERAL BARRIER TO WORK-REL	N	1	2	746	747
WRTIFAM	F23AA-DESIRE TO SPEND TIME WITH FAMILY	N	1	2	748	749
WRTICHOR	F23AB-NEED TO DO HOUSEHOLD CHORES	N	1	2	750	751
WRTICLHR	F23AC-UNABL TO TAKE CLSSES DURNG WRK	N	1	2	752	753
WRTIWORK	F23AD-WORK RESPONSBLTS DO NOT PERMIT	N	1	2	754	755
WRTIACTI	F23AE-ACTIVITIES OUTSIDE WORK CONFLICT	N	1	2	756	757
WRTITRAV	F23AF-TIME-TRAVEL TIME TO/FROM CLASSES	N	1	2	758	759
WRTIOTH	F23AG-ANOTHER TIME RELATED PROBLEM	N	1	2	760	761
WRMOTUIT	F23BA-AMOUNT OF TUITION AND FEES	N	1	2	762	763
WRMOBOOK	F23BB-COST OF BOOKS AND SUPPLIES	N	1	2	764	765
WRMOCHIL	F23BC-COST-COST OF CHILD CARE	N	1	2	766	767
WRMOTRAN	F23BD-COST-COST OF TRANSPORTATION	N	1	2	768	769
WRMOOTH	F23BE-ANOTHER MONEY/COST PROBLEM	N	1	2	770	771
WRCHCOST	F23CA-CHILD-COST OF CHILD CARE	N	1	2	772	773

VARIABLE NAME	VARIABLE LABEL	FORMAT	RECORD NUMBER	LENGTH	START COLUMN	END COLUMN
WRCHAVAL	F23CB-AVAILABILITY OF CHILD CARE	N	1	2	774	775
WRCHOTH	F23CC-ANTHR CHILD CARE-RLTD PROBLEM	N	1	2	776	777
WRTRCOST	F23DA-TRANS-COST OF TRANSPORTATION	N	1	2	778	779
WRTRAVAL	F23DB-AVAILABILITY OF TRANSPORTATION	N	1	2	780	781
WRTRTIME	F23DC-TRANS-TRAVEL TIME TO/FROM CLASS	N	1	2	782	783
WRTROTH	F23DD-ANOTHER TRANSPORTATION PROBLEM	N	1	2	784	785
WRPRSPEC	F24-MAIN SPECIFIC BARRIER TO WORK-REL	N	1	2	786	787
WREMPOFF	F25-EMPLOYER OFFERED WORK-RELATED CRSES	N	1	2	788	789
SAACTY	G1-OTHER STRUCTURED COURSES	N	1	2	790	791
SAREASO1	G4-MAIN REASON FOR STRUCTURED CRSE-1	N	1	2	792	793
SA1PRTYP	G7-TYPE OF INSTRUCTIONAL PROVIDER-1	N	1	2	794	795
SA1PREMP	G8-STRUCT INSTRUC PROV WAS EMPLOYER-1	N	1	2	796	797
SATUITO1	G9-EXPENSES FOR STRUCT COURSES-1	N	1	4	798	801
SAWHEN1	G10-TIME SPEND IN STRUCT COURSES-1	N	1	5.1	802	806
SAWHNUN1	G10-UNIT OF TIME IN STRUCT COURSES-1	N	1	2	807	808
SAWKS1	G10OV-HOW MANY WEEKS-1	N	1	2	809	810
SAHRS1	G11-HRS ATTENDED STRUCT COURSES-1	N	1	2	811	812
SAHRUNT1	G11-UNIT OF TIME FOR STRUCT COURSES-1	N	1	2	813	814
SAREASO2	G4-MAIN REASON FOR STRUCTURED CRSE-2	N	1	2	815	816
SA2PRTYP	G7-TYPE OF INSTRUCTIONAL PROVIDER-2	N	1	2	817	818
SA2PREMP	G8-STRUCT INSTRUC PROV WAS EMPLOYER-2	N	1	2	819	820
SATUITO2	G9-EXPENSES FOR STRUCT COURSES-2	N	1	5	821	825
SAWHEN2	G10-TIME SPEND IN STRUCT COURSES-2	N	1	5.1	826	830
SAWHNUN2	G10-UNIT OF TIME IN STRUCT COURSES-2	N	1	2	831	832
SAWKS2	G10OV-HOW MANY WEEKS-2	N	1	2	833	834
SAHRS2	G11-HRS ATTENDED STRUCT COURSES-2	N	1	2	835	836
SAHRUNT2	G11-UNIT OF TIME FOR STRUCT COURSES-2	N	1	2	837	838
SAREASO3	G4-MAIN REASON FOR STRUCTURED CRSE-3	N	1	2	839	840
SA3PRTYP	G7-TYPE OF INSTRUCTIONAL PROVIDER-3	N	1	2	841	842
SA3PREMP	G8-STRUCT INSTRUC PROV WAS EMPLOYER-3	N	1	2	843	844
SATUITO3	G9-EXPENSES FOR STRUCT COURSES-3	N	1	4	845	848
SAWHEN3	G10-TIME SPEND IN STRUCT COURSES-3	N	1	4.1	849	852
SAWHNUN3	G10-UNIT OF TIME IN STRUCT COURSES-3	N	1	2	853	854
SAWKS3	G10OV-HOW MANY WEEKS-3	N	1	2	855	856
SAHRS3	G11-HRS ATTENDED STRUCT COURSES-3	N	1	2	857	858
SAHRUNT3	G11-UNIT OF TIME FOR STRUCT COURSES-3	N	1	2	859	860
SAEMPSUP	G13-EMPLOYER PROVIDED ANY SUPPORT	N	1	2	861	862
SAUNION	G14-EMPLYER SUPPORT THRU UNION AGREE	N	1	2	863	864
CVONLY	H1-COMPUTER/VIDEO-ONLY INSTRUCTION	N	1	2	865	866
CVNUM	H2-NUMBER OF COMPUTER CLASSES	N	1	2	867	868
CVHRS	H3-HRS SPENT ON EACH COMPUTER CLASS	N	1	5.1	869	873
ADOBMM	I1-MONTH OF BIRTH	N	1	2	874	875
ADOBYY	I1-YEAR OF BIRTH	N	1	2	876	877
ARACE	I2-RACE OF RESPONDENT	N	1	2	878	879
AHISPANI	I3-HISPANIC ORIGIN	N	1	2	880	881
AMARSTAT	I4-CURRENT MARITAL STATUS	N	1	2	882	883
BORNUS	I5-COUNTRY OF ORIGIN	N	1	2	884	885
MOVEAGE	I6-AGE AT WHICH MOVED TO U.S.	N	1	2	886	887
CITIZEN	I7-U.S. CITIZEN	N	1	2	888	889
MILITARY	I8-U.S. ARMED FORCES ACTIVE DUTY	N	1	2	890	891
MILIDISC	I9-YEAR DISCHARGED FROM ACTIVE DUTY	N	1	2	892	893
IBCERNOW	I10-CERTIFICATION/LICENSURE FOR JOB	N	1	2	894	895
IBCERT	I12-CERTIF/LICENSURE TO PRACTICE TRADE	N	1	2	896	897
REQUIRMN	I14-LEGAL/PROFESSIONAL REQRMNTS FOR CPE	N	1	2	898	899
IBWORK	I15-WORKED LAST WEEK	N	1	2	900	901
IBLEAVE	I16-ON LEAVE OR VACATION LAST WEEK	N	1	2	902	903
JOBLOOK	I17-LOOKING FOR WORK IN PAST 4 WEEKS	N	1	2	904	905
JOBPUBL	I18-CHECKED WITH PUBLIC EMPLMENT AGENCY	N	1	2	906	907
JOBPRIV	I18-CHECKED WITH PRIV EMPLOYMENT AGENCY	N	1	2	908	909
JOBEMPL	I18-CHECKED WITH EMPLOYER DIRECTLY	N	1	2	910	911
JOBREL	I18-CHECKED WITH FRIENDS OR RELATIVES	N	1	2	912	913
JOBANSAD	I18-PLACE OR ANSWERED ADS/SENT RESUME	N	1	2	914	915
JOBREAD	I18-READ WANT ADS	N	1	2	916	917
JOBOTHER	I18-SOMETHING ELSE TO FIND WORK	N	1	2	918	919
JOBACTY	I19-ACTIVITY DONE MOST LAST WEEK	N	1	2	920	921
JOBTAKE	I20-COULD HAVE TAKEN JOB LAST WEEK	N	1	2	922	923
JOBEVER	I21-EVER WORKED AT A JOB FOR PAY	N	1	2	924	925
LEAVEYY	I22-YEAR LEFT LAST JOB	N	1	2	926	927
WORKNUM	I23-HOW LONG WORKED FOR EMPLOYER	N	1	4.1	928	931
WORKUNT	I23-UNIT OF TIME WORKED FOR EMPLOYER	N	1	2	932	933
IBWORKMO	I24-MONTHS WORKED FOR PAY IN PAST YEAR	N	1	2	934	935
UNEMLOOK	I25-UNEMPLOYED & LOOKING FOR WORK	N	1	2	936	937

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JOBMORE	I26-MORE THAN ONE JOB LAST WEEK	N	1	2	938	939
PAYHRS	I27-HOURS WORKED PER WEEK	N	1	2	940	941
MEDICAL	I28A/I29A-MEDICAL/HOSPITAL INSURANCE	N	1	2	942	943
SICKPAY	I28B-LEAVE WITH FULL PAY	N	1	2	944	945
VACATPAY	I28C-VACATION WITH FULL PAY	N	1	2	946	947
RETIRMNT	I28D/I29B-PENSION PLAN OR RETRMNT PGM	N	1	2	948	949
EARNAMT	I30-EARNINGS	N	1	9.2	950	958
EARNUNT	I30-UNIT OF EARNINGS	N	1	2	959	960
FSIC1	INDUSTRY CODE-1	N	1	2	961	962
FSOC1	OCCUPATION CODE-1	N	1	2	963	964
FSIC2	INDUSTRY CODE-2	N	1	2	965	966
FSOC2	OCCUPATION CODE-2	N	1	2	967	968
FSIC3	INDUSTRY CODE-3	N	1	2	969	970
FSOC3	OCCUPATION CODE-3	N	1	2	971	972
FSIC4	INDUSTRY CODE-4	N	1	2	973	974
FSOC4	OCCUPATION CODE-4	N	1	2	975	976
FSIC5	INDUSTRY CODE-5	N	1	2	977	978
FSOC5	OCCUPATION CODE-5	N	1	2	979	980
LABUNION	I33-MEMBER OF A LABOR UNION	N	1	2	981	982
UNIONCON	I34-UNION CONTRACT	N	1	2	983	984
LAIDOFF	I35-LIKELIHOOD OF LAIDOFF	N	1	2	985	986
READENGL	I36-HOW WELL READS ENGLISH	N	1	2	987	988
WRITENGL	I37-HOW WELL WRITES ENGLISH	N	1	2	989	990
HOWNHOME	J1-OWN, RENT HOME, OR OTH ARRNGMENT	N	1	2	991	992
HOTHNUM	J2-OTHER TELEPHONE NUMBERS IN HH	N	1	2	993	994
HNUMUSE	J3-HOW MANY OTH PHN NUM FOR HM USE	N	1	2	995	996
HPHONSVC	J4-EVER BEEN W/O PHONE SERV >24 HR	N	1	2	997	998
HSVCNUM	J5-AMT OF TIME W/O PHONE SERVICE	N	1	3	999	1001
RECNUM	RECORD NUMBER	N	1	1	1024	1024
HSVCUNIT	J5-UNIT OF TIME W/O PHONE SERVICE	N	2	2	1	2
HWIC	J7A-FAMILY RECVD WIC PAST 12 MO	N	2	2	3	4
HFOODST	J7B-FAMILY RECVD FD STMPS PST 12MO	N	2	2	5	6
HAFDC	J7C-FAMILY RECVD AFDC PAST 12 MO	N	2	2	7	8
HINCMRNG	J8-TOTAL HOUSEHOLD INCOME-RANGE	N	2	2	9	10
HINCOME	J8-TOTAL HOUSEHOLD INCOME	N	2	2	11	12
HINCMEXT	J8OV-EXACT HH INC NEAREST $1000	N	2	5	13	17
AELABOR	D-LABOR FORCE STATUS	N	2	2	18	19
AELABOR2	D-LABOR FORCE STATUS - 2	N	2	2	20	21
AEPARTIC	D-PARTICIPATION-EXCLUDING FULL-TIME CRED	N	2	2	22	23
AEPARANY	D-PARTICIPATION-ALL TYPES OF ADULE EDUC	N	2	2	24	25
ANYSUPP	D-EMPLOYER SUPPORTED ANY ADULT EDUCATION	N	2	2	26	27
BSPARTIC	D-PARTICIPATION-ABE/GED OR ESL CLASSES	N	2	2	28	29
BSSUPP	D-EMP SUPPORT-ABE/GED CLASSES	N	2	2	30	31
BSTIMED	D-HOURS PER WEEK IN ABE/GED CLASSES	N	2	2	32	33
BSWEEK	D-HOW MANY WEEKS IN ABE/GED CLASSES	N	2	4.1	34	37
BSEMPSEG	D-EMPLOYER SUPPORTED/PROVIDED AE	N	2	2	38	39
CENREG	D-CENSUS REGION	N	2	2	40	41
CRDIPART	D-PARTICIPATION-CREDENTIAL PROGRAMS	N	2	2	42	43
CRDIPNEW	D-NUMBER OF PROGRAMS SPECIFIED IN D4	N	2	2	44	45
CRDIPSUP	D-EMP SUPPORT-CREDENTIAL PROGRAMS	N	2	2	46	47
CEMPSEG1	D-EMPLOYER SUPPORTED/PROVIDED AE	N	2	2	48	49
CEMPSEG2	D-EMPLOYER SUPPORTED/PROVIDED AE	N	2	2	50	51
CEMPSEG3	D-EMPLOYER SUPPORTED/PROVIDED AE	N	2	2	52	53
CRPTNEW1	D-NUMBER OF COURSES SPECIFIED IN D10-#1	N	2	2	54	55
CRPTNEW2	D-NUMBER OF COURSES SPECIFIED IN D10-#2	N	2	2	56	57
CRPTNEW3	D-NUMBER OF COURSES SPECIFIED IN D10-#3	N	2	2	58	59
ESEMPSEG	D-EMPLOYER SUPPORTED/PROVIDED AE	N	2	2	60	61
ESSUPP	D-EMPL SUPPORT-ESL CLASSES	N	2	2	62	63
ESTIMED	D-HOURS PER WEEK IN ESL CLASSES	N	2	2	64	65
ESWEEK	D-HOW MANY WEEKS IN ESL CLASSES	N	2	2	66	67
HHTOTAL	D-TOTAL NUMBER OF HOUSEHOLD MEMBERS	N	2	2	68	69
HHUNDR18	D-NUMBER OF HH MEMBERS YOUNGER THAN 18	N	2	2	70	71
HH18OVER	D-NUMBER OF HH MEMBERS 18 AND OLDER	N	2	2	72	73
HIGHEDUC	D-HIGHEST DEGREE OR CREDENTIAL OBTAINED	N	2	2	74	75
IBASSIST	D-ASSISTANTSHIP/FELLOWSHIP/WORK STUDY	N	2	2	76	77
IBCURAST	D-RES HAS ASSTSHIP/WORK-STUDY CURRENTLY	N	2	2	78	79
NUMKID10	D-NUMBER KIDS LESS THAN OR EQUAL TO 10	N	2	2	80	81
RACEETHN	D-RACE/ETHNICITY	N	2	2	82	83
RACEETH2	D-RACE/ETHINICITY - 2	N	2	2	84	85
SANEW	D-NUMBER OF COURSES SPECIFIED IN G3	N	2	2	86	87
SATIME1	D-HOURS PER WEEK IN STRUCT COURSE #1	N	2	4.1	88	91
SATIME2	D-HOURS PER WEEK IN STRUCT COURSE #2	N	2	4.1	92	95

VARIABLE NAME	VARIABLE LABEL	FORMAT	RECORD NUMBER	LENGTH	START COLUMN	END COLUMN
SATIME3	D-HOURS PER WEEK IN STRUCT COURSE #3	N	2	4.1	96	99
SATMONEY	D-TOT EXP-OTHER STRUCTURED COURSES	N	2	8.2	100	107
SATOTEMP	D-TOTAL NUM EMP SUPPORT OTH COURSE	N	2	2	108	109
SATOTIME	D-TOT HRS-OTHER STRUCTURED COURSES	N	2	7.2	110	116
SAWEEK1	D-HOW MANY WEEKS IN STRUCT COURSE #1	N	2	4.1	117	120
SAWEEK2	D-HOW MANY WEEKS IN STRUCT COURSE #2	N	2	4.1	121	124
SAWEEK3	D-HOW MANY WEEKS IN STRUCT COURSE #3	N	2	2	125	126
WEMPSEG1	D-EMPLOYER SUPPORTED/PROVIDED AE	N	2	2	127	128
WEMPSEG2	D-EMPLOYER SUPPORTED/PROVIDED AE	N	2	2	129	130
WEMPSEG3	D-EMPLOYER SUPPORTED/PROVIDED AE	N	2	2	131	132
WEMPSEG4	D-EMPLOYER SUPPORTED/PROVIDED AE	N	2	2	133	134
WEMPSEG5	D-EMPLOYER SUPPORTED/PROVIDED AE	N	2	2	135	136
WEMPSEG6	D-EMPLOYER SUPPORTED/PROVIDED AE	N	2	2	137	138
WRNEW	D-NUMBER OF COURSES SPECIFIED IN F3	N	2	2	139	140
WRSUPP	D-EMP SUPPORT-CAREER/JOB RELATED COURSES	N	2	2	141	142
WRTIME1	D-HOURS PER WEEK IN WORK-REL COURSE #1	N	2	4.1	143	146
WRTIME2	D-HOURS PER WEEK IN WORK-REL COURSE #2	N	2	4.1	147	150
WRTIME3	D-HOURS PER WEEK IN WORK-REL COURSE #3	N	2	4.1	151	154
WRTIME4	D-HOURS PER WEEK IN WORK-REL COURSE #4	N	2	4.1	155	158
WRTIME5	D-HOURS PER WEEK IN WORK-REL COURSE #5	N	2	2	159	160
WRTIME6	D-HOURS PER WEEK IN WORK-REL COURSE #6	N	2	2	161	162
WRTMONEY	D-TOT EXP-CAREER OR JOB RELATED COURSES	N	2	8.2	163	170
WRTOTEMP	D-TOTAL NUM EMP SUPPORT WORK COURSE	N	2	2	171	172
WRTOTIME	D-TOT HRS-CAREER OR JOB RELATED COURSES	N	2	7.2	173	179
WRWEEK1	D-HOW MANY WEEKS IN WORK-REL COURSE #1	N	2	4.1	180	183
WRWEEK2	D-HOW MANY WEEKS IN WORK-REL COURSE #2	N	2	4.1	184	187
WRWEEK3	D-HOW MANY WEEKS IN WORK-REL COURSE #3	N	2	4.1	188	191
WRWEEK4	D-HOW MANY WEEKS IN WORK-REL COURSE #4	N	2	4.1	192	195
WRWEEK5	D-HOW MANY WEEKS IN WORK-REL COURSE #5	N	2	4.1	196	199
WRWEEK6	D-HOW MANY WEEKS IN WORK-REL COURSE #6	N	2	4.1	200	203
ZIPBLHI2	D-PERCENT OF PERSONS WHO ARE BLACK	N	2	2	204	205
ZIPURBAN	D-LIVE IN INSIDE, OUTSIDE URBANIZED AREA	N	2	2	206	207
ZIP18PO2	D-PERCENT UNDER 18 BELOW POVERTY LINE	N	2	2	208	209
RECNUM	RECORD NUMBER	N	2	1	1024	1024
AEWEIGHT	FINAL RAKED WEIGHT	N	3	9.3	1	9
WRWGT	COURSE WEIGHT-WORK RELATED	N	3	9.3	10	18
SAWGT	COURSE WEIGHT-OTHER FORMAL	N	3	9.3	19	27
ARPL1	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	28	36
ARPL2	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	37	45
ARPL3	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	46	54
ARPL4	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	55	63
ARPL5	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	64	72
ARPL6	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	73	81
ARPL7	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	82	90
ARPL8	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	91	99
ARPL9	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	100	108
ARPL10	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	109	117
ARPL11	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	118	126
ARPL12	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	127	135
ARPL13	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	136	144
ARPL14	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	145	153
ARPL15	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	154	162
ARPL16	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	163	171
ARPL17	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	172	180
ARPL18	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	181	189
ARPL19	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	190	198
ARPL20	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	199	207
ARPL21	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	208	216
ARPL22	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	217	225
ARPL23	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	226	234
ARPL24	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	235	243
ARPL25	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	244	252
ARPL26	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	253	261
ARPL27	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	262	270
ARPL28	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	271	279
ARPL29	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	280	288
ARPL30	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	289	297
ARPL31	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	298	306
ARPL32	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	307	315
ARPL33	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	316	324
ARPL34	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	325	333
ARPL35	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	334	342

VARIABLE NAME	VARIABLE LABEL	FORMAT	RECORD NUMBER	LENGTH	START COLUMN	END COLUMN
ARPL36	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	343	351
ARPL37	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	352	360
ARPL38	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	361	369
ARPL39	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	370	378
ARPL40	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	379	387
ARPL41	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	388	396
ARPL42	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	397	405
ARPL43	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	406	414
ARPL44	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	415	423
ARPL45	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	424	432
ARPL46	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	433	441
ARPL47	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	442	450
ARPL48	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	451	459
ARPL49	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	460	468
ARPL50	REPLICATE WEIGHT FOR AEWEIGHT	N	3	9.3	469	477
PSU	FOR USE IN TAYLOR SERIES VARIANCE	N	3	5	478	482
STRATUM	FOR USE IN TAYLOR SERIES VARIANCE	N	3	2	483	484
AGF	IMPUTATION FLAG	N	3	2	485	486
SEF	IMPUTATION FLAG	N	3	2	487	488
AGF1	IMPUTATION FLAG	N	3	2	489	490
SEF1	IMPUTATION FLAG	N	3	2	491	492
AGF2	IMPUTATION FLAG	N	3	2	493	494
SEF2	IMPUTATION FLAG	N	3	2	495	496
AGF3	IMPUTATION FLAG	N	3	2	497	498
SEF3	IMPUTATION FLAG	N	3	2	499	500
AGF4	IMPUTATION FLAG	N	3	2	501	502
SEF4	IMPUTATION FLAG	N	3	2	503	504
AGF5	IMPUTATION FLAG	N	3	2	505	506
SEF5	IMPUTATION FLAG	N	3	2	507	508
AGF6	IMPUTATION FLAG	N	3	2	509	510
SEF6	IMPUTATION FLAG	N	3	2	511	512
AGF7	IMPUTATION FLAG	N	3	2	513	514
SEF7	IMPUTATION FLAG	N	3	2	515	516
AGF8	IMPUTATION FLAG	N	3	2	517	518
SEF8	IMPUTATION FLAG	N	3	2	519	520
AGF9	IMPUTATION FLAG	N	3	2	521	522
SEF9	IMPUTATION FLAG	N	3	2	523	524
AGF10	IMPUTATION FLAG	N	3	2	525	526
SEF10	IMPUTATION FLAG	N	3	2	527	528
AGF11	IMPUTATION FLAG	N	3	2	529	530
SEF11	IMPUTATION FLAG	N	3	2	531	532
AGF12	IMPUTATION FLAG	N	3	2	533	534
SEF12	IMPUTATION FLAG	N	3	2	535	536
AGF13	IMPUTATION FLAG	N	3	2	537	538
SEF13	IMPUTATION FLAG	N	3	2	539	540
AGF14	IMPUTATION FLAG	N	3	2	541	542
SEF14	IMPUTATION FLAG	N	3	2	543	544
IBGRADF	IMPUTATION FLAG	N	3	2	545	546
IBGRAF1	IMPUTATION FLAG	N	3	2	547	548
IBGRAF2	IMPUTATION FLAG	N	3	2	549	550
IBVOCDIF	IMPUTATION FLAG	N	3	2	551	552
IBDIPF	IMPUTATION FLAG	N	3	2	553	554
IBUSDIPF	IMPUTATION FLAG	N	3	2	555	556
IBDIPLYF	IMPUTATION FLAG	N	3	2	557	558
IBGEF	IMPUTATION FLAG	N	3	2	559	560
IBWORF12	IMPUTATION FLAG	N	3	2	561	562
IBSELFEF	IMPUTATION FLAG	N	3	2	563	564
IBOTHEMF	IMPUTATION FLAG	N	3	2	565	566
IBEMPF12	IMPUTATION FLAG	N	3	2	567	568
IBLANF	IMPUTATION FLAG	N	3	2	569	570
IBSPEAF	IMPUTATION FLAG	N	3	2	571	572
ESLANF	IMPUTATION FLAG	N	3	2	573	574
ESCOLF	IMPUTATION FLAG	N	3	2	575	576
ESDIFFF	IMPUTATION FLAG	N	3	2	577	578
ESREASOF	IMPUTATION FLAG	N	3	2	579	580
ESTIMF	IMPUTATION FLAG	N	3	2	581	582
ESLEARF	IMPUTATION FLAG	N	3	2	583	584
ESWHEF	IMPUTATION FLAG	N	3	2	585	586
ESWHENUF	IMPUTATION FLAG	N	3	2	587	588
ESWKF	IMPUTATION FLAG	N	3	2	589	590
ESHRF	IMPUTATION FLAG	N	3	2	591	592
ESHRSUNF	IMPUTATION FLAG	N	3	2	593	594

VARIABLE NAME	VARIABLE LABEL	FORMAT	RECORD NUMBER	LENGTH	START COLUMN	END COLUMN
ESTUITOF	IMPUTATION FLAG	N	3	2	595	596
ESPROVTF	IMPUTATION FLAG	N	3	2	597	598
ESPLACF	IMPUTATION FLAG	N	3	2	599	600
ESPROVEF	IMPUTATION FLAG	N	3	2	601	602
ESAWARF	IMPUTATION FLAG	N	3	2	603	604
ESEMPREF	IMPUTATION FLAG	N	3	2	605	606
ESEMPWF	IMPUTATION FLAG	N	3	2	607	608
ESEMPSPF	IMPUTATION FLAG	N	3	2	609	610
ESEMPPAF	IMPUTATION FLAG	N	3	2	611	612
ESUNIOF	IMPUTATION FLAG	N	3	2	613	614
ESAGAIF	IMPUTATION FLAG	N	3	2	615	616
ESINTRSF	IMPUTATION FLAG	N	3	2	617	618
ESHOWINF	IMPUTATION FLAG	N	3	2	619	620
ESKNOF	IMPUTATION FLAG	N	3	2	621	622
ESPRTIMF	IMPUTATION FLAG	N	3	2	623	624
ESPRCOSF	IMPUTATION FLAG	N	3	2	625	626
ESPRCHIF	IMPUTATION FLAG	N	3	2	627	628
ESPRTRAF	IMPUTATION FLAG	N	3	2	629	630
ESPROTF	IMPUTATION FLAG	N	3	2	631	632
ESPRGEF	IMPUTATION FLAG	N	3	2	633	634
ESTIFAF	IMPUTATION FLAG	N	3	2	635	636
ESTICHOF	IMPUTATION FLAG	N	3	2	637	638
ESTICLHF	IMPUTATION FLAG	N	3	2	639	640
ESTIWORF	IMPUTATION FLAG	N	3	2	641	642
ESTIACTF	IMPUTATION FLAG	N	3	2	643	644
ESTITRAF	IMPUTATION FLAG	N	3	2	645	646
ESTIOTF	IMPUTATION FLAG	N	3	2	647	648
ESMOTUIF	IMPUTATION FLAG	N	3	2	649	650
ESMOBOOF	IMPUTATION FLAG	N	3	2	651	652
ESMOCHIF	IMPUTATION FLAG	N	3	2	653	654
ESMOTRAF	IMPUTATION FLAG	N	3	2	655	656
ESMOOTF	IMPUTATION FLAG	N	3	2	657	658
ESCHCOSF	IMPUTATION FLAG	N	3	2	659	660
ESCHAVAF	IMPUTATION FLAG	N	3	2	661	662
ESCHOTF	IMPUTATION FLAG	N	3	2	663	664
ESTRCOSF	IMPUTATION FLAG	N	3	2	665	666
ESTRAVAF	IMPUTATION FLAG	N	3	2	667	668
ESTRTIMF	IMPUTATION FLAG	N	3	2	669	670
ESTROTF	IMPUTATION FLAG	N	3	2	671	672
ESPRSPEF	IMPUTATION FLAG	N	3	2	673	674
BSIMPROF	IMPUTATION FLAG	N	3	2	675	676
BSGEF	IMPUTATION FLAG	N	3	2	677	678
BSHSEQUF	IMPUTATION FLAG	N	3	2	679	680
BSREASOF	IMPUTATION FLAG	N	3	2	681	682
BSTIMF	IMPUTATION FLAG	N	3	2	683	684
BSLEARF	IMPUTATION FLAG	N	3	2	685	686
BSWHEF	IMPUTATION FLAG	N	3	2	687	688
BSWHENUF	IMPUTATION FLAG	N	3	2	689	690
BSWKF	IMPUTATION FLAG	N	3	2	691	692
BSHRF	IMPUTATION FLAG	N	3	2	693	694
BSHRSUNF	IMPUTATION FLAG	N	3	2	695	696
BSTUITOF	IMPUTATION FLAG	N	3	2	697	698
BSPROVTF	IMPUTATION FLAG	N	3	2	699	700
BSPLACF	IMPUTATION FLAG	N	3	2	701	702
BSPROVEF	IMPUTATION FLAG	N	3	2	703	704
BSAWARF	IMPUTATION FLAG	N	3	2	705	706
BSEMPREF	IMPUTATION FLAG	N	3	2	707	708
BSEMPWF	IMPUTATION FLAG	N	3	2	709	710
BSEMPSPF	IMPUTATION FLAG	N	3	2	711	712
BSEMPPAF	IMPUTATION FLAG	N	3	2	713	714
BSUNIOF	IMPUTATION FLAG	N	3	2	715	716
BSAGAIF	IMPUTATION FLAG	N	3	2	717	718
BSINTRSF	IMPUTATION FLAG	N	3	2	719	720
BSHOWINF	IMPUTATION FLAG	N	3	2	721	722
BSKNOF	IMPUTATION FLAG	N	3	2	723	724
BSPRTIMF	IMPUTATION FLAG	N	3	2	725	726
BSPRCOSF	IMPUTATION FLAG	N	3	2	727	728
BSPRCHIF	IMPUTATION FLAG	N	3	2	729	730
BSPRTRAF	IMPUTATION FLAG	N	3	2	731	732
BSPROTF	IMPUTATION FLAG	N	3	2	733	734
BSPRGEF	IMPUTATION FLAG	N	3	2	735	736
BSTIFAF	IMPUTATION FLAG	N	3	2	737	738

VARIABLE NAME	VARIABLE LABEL	FORMAT	RECORD NUMBER	LENGTH	START COLUMN	END COLUMN
BSTICHOF	IMPUTATION FLAG	N	3	2	739	740
BSTICLHF	IMPUTATION FLAG	N	3	2	741	742
BSTIWORF	IMPUTATION FLAG	N	3	2	743	744
BSTIACTF	IMPUTATION FLAG	N	3	2	745	746
BSTITRAF	IMPUTATION FLAG	N	3	2	747	748
BSTIOTF	IMPUTATION FLAG	N	3	2	749	750
BSMOTUIF	IMPUTATION FLAG	N	3	2	751	752
BSMOBOOF	IMPUTATION FLAG	N	3	2	753	754
BSMOCHIF	IMPUTATION FLAG	N	3	2	755	756
BSMOTRAF	IMPUTATION FLAG	N	3	2	757	758
BSMOOTF	IMPUTATION FLAG	N	3	2	759	760
BSCHCOSF	IMPUTATION FLAG	N	3	2	761	762
BSCHAVAF	IMPUTATION FLAG	N	3	2	763	764
BSCHOTF	IMPUTATION FLAG	N	3	2	765	766
BSTRCOSF	IMPUTATION FLAG	N	3	2	767	768
BSTRAVAF	IMPUTATION FLAG	N	3	2	769	770
BSTRTIMF	IMPUTATION FLAG	N	3	2	771	772
BSTROTF	IMPUTATION FLAG	N	3	2	773	774
BSPRSPEF	IMPUTATION FLAG	N	3	2	775	776
CRDEGREF	IMPUTATION FLAG	N	3	2	777	778
CRVOCDIF	IMPUTATION FLAG	N	3	2	779	780
CRDIPLF1	IMPUTATION FLAG	N	3	2	781	782
CIPFF1	IMPUTATION FLAG	N	3	2	783	784
CRREASF1	IMPUTATION FLAG	N	3	2	785	786
CRTRMFF1	IMPUTATION FLAG	N	3	2	787	788
CRTRMPF1	IMPUTATION FLAG	N	3	2	789	790
CRSCHLF1	IMPUTATION FLAG	N	3	2	791	792
CR12NUF1	IMPUTATION FLAG	N	3	2	793	794
CRPTNUF1	IMPUTATION FLAG	N	3	2	795	796
CR1LENUF	IMPUTATION FLAG	N	3	2	797	798
CRLENUF1	IMPUTATION FLAG	N	3	2	799	800
CRFTHRF1	IMPUTATION FLAG	N	3	2	801	802
CRPTHRF1	IMPUTATION FLAG	N	3	2	803	804
CRTUITF1	IMPUTATION FLAG	N	3	2	805	806
CR1PRTYF	IMPUTATION FLAG	N	3	2	807	808
CR1PREMF	IMPUTATION FLAG	N	3	2	809	810
CR1ASSIF	IMPUTATION FLAG	N	3	2	811	812
CRCURAF1	IMPUTATION FLAG	N	3	2	813	814
CRAWARF1	IMPUTATION FLAG	N	3	2	815	816
CR1EMREF	IMPUTATION FLAG	N	3	2	817	818
CR1EMPWF	IMPUTATION FLAG	N	3	2	819	820
CR1EMSPF	IMPUTATION FLAG	N	3	2	821	822
CR1EMPAF	IMPUTATION FLAG	N	3	2	823	824
CRUNIOF1	IMPUTATION FLAG	N	3	2	825	826
CRDIPLF2	IMPUTATION FLAG	N	3	2	827	828
CIPFF2	IMPUTATION FLAG	N	3	2	829	830
CRREASF2	IMPUTATION FLAG	N	3	2	831	832
CRTRMFF2	IMPUTATION FLAG	N	3	2	833	834
CRTRMPF2	IMPUTATION FLAG	N	3	2	835	836
CRSCHLF2	IMPUTATION FLAG	N	3	2	837	838
CR12NUF2	IMPUTATION FLAG	N	3	2	839	840
CRPTNUF2	IMPUTATION FLAG	N	3	2	841	842
CR2LENUF	IMPUTATION FLAG	N	3	2	843	844
CRLENUF2	IMPUTATION FLAG	N	3	2	845	846
CRFTHRF2	IMPUTATION FLAG	N	3	2	847	848
CRPTHRF2	IMPUTATION FLAG	N	3	2	849	850
CRTUITF2	IMPUTATION FLAG	N	3	2	851	852
CR2PRTYF	IMPUTATION FLAG	N	3	2	853	854
CR2PREMF	IMPUTATION FLAG	N	3	2	855	856
CR2ASSIF	IMPUTATION FLAG	N	3	2	857	858
CRCURAF2	IMPUTATION FLAG	N	3	2	859	860
CRAWARF2	IMPUTATION FLAG	N	3	2	861	862
CR2EMREF	IMPUTATION FLAG	N	3	2	863	864
CR2EMPWF	IMPUTATION FLAG	N	3	2	865	866
CR2EMSPF	IMPUTATION FLAG	N	3	2	867	868
CR2EMPAF	IMPUTATION FLAG	N	3	2	869	870
CRUNIOF2	IMPUTATION FLAG	N	3	2	871	872
CRDIPLF3	IMPUTATION FLAG	N	3	2	873	874
CIPFF3	IMPUTATION FLAG	N	3	2	875	876
CRREASF3	IMPUTATION FLAG	N	3	2	877	878
CRTRMFF3	IMPUTATION FLAG	N	3	2	879	880
CRTRMPF3	IMPUTATION FLAG	N	3	2	881	882

VARIABLE NAME	VARIABLE LABEL	FORMAT	RECORD NUMBER	LENGTH	START COLUMN	END COLUMN
CRSCHLF3	IMPUTATION FLAG	N	3	2	883	884
CR12NUF3	IMPUTATION FLAG	N	3	2	885	886
CRPTNUF3	IMPUTATION FLAG	N	3	2	887	888
CR3LENUF	IMPUTATION FLAG	N	3	2	889	890
CRLENUF3	IMPUTATION FLAG	N	3	2	891	892
CRFTHRF3	IMPUTATION FLAG	N	3	2	893	894
CRPTHRF3	IMPUTATION FLAG	N	3	2	895	896
CRTUITF3	IMPUTATION FLAG	N	3	2	897	898
CR3PRTYF	IMPUTATION FLAG	N	3	2	899	900
CR3PREMF	IMPUTATION FLAG	N	3	2	901	902
CR3ASSIF	IMPUTATION FLAG	N	3	2	903	904
CRCURAF3	IMPUTATION FLAG	N	3	2	905	906
CRAWARF3	IMPUTATION FLAG	N	3	2	907	908
CR3EMREF	IMPUTATION FLAG	N	3	2	909	910
CR3EMPWF	IMPUTATION FLAG	N	3	2	911	912
CR3EMSPF	IMPUTATION FLAG	N	3	2	913	914
CR3EMPAF	IMPUTATION FLAG	N	3	2	915	916
CRUNIOF3	IMPUTATION FLAG	N	3	2	917	918
APPRENTF	IMPUTATION FLAG	N	3	2	919	920
APSTILF	IMPUTATION FLAG	N	3	2	921	922
APTESF	IMPUTATION FLAG	N	3	2	923	924
APEMPLOF	IMPUTATION FLAG	N	3	2	925	926
APUNIOF	IMPUTATION FLAG	N	3	2	927	928
APSTAGOF	IMPUTATION FLAG	N	3	2	929	930
APFEDGOF	IMPUTATION FLAG	N	3	2	931	932
APOTHEF	IMPUTATION FLAG	N	3	2	933	934
APLENNUF	IMPUTATION FLAG	N	3	2	935	936
APLENUNF	IMPUTATION FLAG	N	3	2	937	938
APOJTHRF	IMPUTATION FLAG	N	3	2	939	940
APOTHHRF	IMPUTATION FLAG	N	3	2	941	942
WRACTF	IMPUTATION FLAG	N	3	2	943	944
WRREASF1	IMPUTATION FLAG	N	3	2	945	946
WRWHEF1	IMPUTATION FLAG	N	3	2	947	948
WRWHNUF1	IMPUTATION FLAG	N	3	2	949	950
WRWKF1	IMPUTATION FLAG	N	3	2	951	952
WRHRF1	IMPUTATION FLAG	N	3	2	953	954
WRHRUNF1	IMPUTATION FLAG	N	3	2	955	956
WRTUITF1	IMPUTATION FLAG	N	3	2	957	958
WR1PRTYF	IMPUTATION FLAG	N	3	2	959	960
WR1PREMF	IMPUTATION FLAG	N	3	2	961	962
WRAWARF1	IMPUTATION FLAG	N	3	2	963	964
WR1EMREF	IMPUTATION FLAG	N	3	2	965	966
WR1EMPWF	IMPUTATION FLAG	N	3	2	967	968
WR1EMSPF	IMPUTATION FLAG	N	3	2	969	970
WR1EMPAF	IMPUTATION FLAG	N	3	2	971	972
WRUNIOF1	IMPUTATION FLAG	N	3	2	973	974
WRAGAIF1	IMPUTATION FLAG	N	3	2	975	976
WRREASF2	IMPUTATION FLAG	N	3	2	977	978
WRWHEF2	IMPUTATION FLAG	N	3	2	979	980
WRWHNUF2	IMPUTATION FLAG	N	3	2	981	982
WRWKF2	IMPUTATION FLAG	N	3	2	983	984
WRHRF2	IMPUTATION FLAG	N	3	2	985	986
WRHRUNF2	IMPUTATION FLAG	N	3	2	987	988
WRTUITF2	IMPUTATION FLAG	N	3	2	989	990
WR2PRTYF	IMPUTATION FLAG	N	3	2	991	992
WR2PREMF	IMPUTATION FLAG	N	3	2	993	994
WRAWARF2	IMPUTATION FLAG	N	3	2	995	996
WR2EMREF	IMPUTATION FLAG	N	3	2	997	998
WR2EMPWF	IMPUTATION FLAG	N	3	2	999	1000
RECNUM	RECORD NUMBER	N	3	1	1024	1024
WR2EMSPF	IMPUTATION FLAG	N	4	2	1	2
WR2EMPAF	IMPUTATION FLAG	N	4	2	3	4
WRUNIOF2	IMPUTATION FLAG	N	4	2	5	6
WRAGAIF2	IMPUTATION FLAG	N	4	2	7	8
WRREASF3	IMPUTATION FLAG	N	4	2	9	10
WRWHEF3	IMPUTATION FLAG	N	4	2	11	12
WRWHNUF3	IMPUTATION FLAG	N	4	2	13	14
WRWKF3	IMPUTATION FLAG	N	4	2	15	16
WRHRF3	IMPUTATION FLAG	N	4	2	17	18
WRHRUNF3	IMPUTATION FLAG	N	4	2	19	20
WRTUITF3	IMPUTATION FLAG	N	4	2	21	22
WR3PRTYF	IMPUTATION FLAG	N	4	2	23	24

VARIABLE NAME	VARIABLE LABEL	FORMAT	RECORD NUMBER	LENGTH	START COLUMN	END COLUMN
WR3PREMF	IMPUTATION FLAG	N	4	2	25	26
WRAWARF3	IMPUTATION FLAG	N	4	2	27	28
WR3EMREF	IMPUTATION FLAG	N	4	2	29	30
WR3EMPWF	IMPUTATION FLAG	N	4	2	31	32
WR3EMSPF	IMPUTATION FLAG	N	4	2	33	34
WR3EMPAF	IMPUTATION FLAG	N	4	2	35	36
WRUNIOF3	IMPUTATION FLAG	N	4	2	37	38
WRAGAIF3	IMPUTATION FLAG	N	4	2	39	40
WRREASF4	IMPUTATION FLAG	N	4	2	41	42
WRWHEF4	IMPUTATION FLAG	N	4	2	43	44
WRWHNUF4	IMPUTATION FLAG	N	4	2	45	46
WRWKF4	IMPUTATION FLAG	N	4	2	47	48
WRHRF4	IMPUTATION FLAG	N	4	2	49	50
WRHRUNF4	IMPUTATION FLAG	N	4	2	51	52
WRTUITF4	IMPUTATION FLAG	N	4	2	53	54
WR4PRTYF	IMPUTATION FLAG	N	4	2	55	56
WR4PREMF	IMPUTATION FLAG	N	4	2	57	58
WRAWARF4	IMPUTATION FLAG	N	4	2	59	60
WR4EMREF	IMPUTATION FLAG	N	4	2	61	62
WR4EMPWF	IMPUTATION FLAG	N	4	2	63	64
WR4EMSPF	IMPUTATION FLAG	N	4	2	65	66
WR4EMPAF	IMPUTATION FLAG	N	4	2	67	68
WRUNIOF4	IMPUTATION FLAG	N	4	2	69	70
WRAGAIF4	IMPUTATION FLAG	N	4	2	71	72
WRREASF5	IMPUTATION FLAG	N	4	2	73	74
WRWHEF5	IMPUTATION FLAG	N	4	2	75	76
WRWHNUF5	IMPUTATION FLAG	N	4	2	77	78
WRWKF5	IMPUTATION FLAG	N	4	2	79	80
WRHRF5	IMPUTATION FLAG	N	4	2	81	82
WRHRUNF5	IMPUTATION FLAG	N	4	2	83	84
WRTUITF5	IMPUTATION FLAG	N	4	2	85	86
WR5PRTYF	IMPUTATION FLAG	N	4	2	87	88
WR5PREMF	IMPUTATION FLAG	N	4	2	89	90
WRAWARF5	IMPUTATION FLAG	N	4	2	91	92
WR5EMREF	IMPUTATION FLAG	N	4	2	93	94
WR5EMPWF	IMPUTATION FLAG	N	4	2	95	96
WR5EMSPF	IMPUTATION FLAG	N	4	2	97	98
WR5EMPAF	IMPUTATION FLAG	N	4	2	99	100
WRUNIOF5	IMPUTATION FLAG	N	4	2	101	102
WRAGAIF5	IMPUTATION FLAG	N	4	2	103	104
WRREASF6	IMPUTATION FLAG	N	4	2	105	106
WRWHEF6	IMPUTATION FLAG	N	4	2	107	108
WRWHNUF6	IMPUTATION FLAG	N	4	2	109	110
WRWKF6	IMPUTATION FLAG	N	4	2	111	112
WRHRF6	IMPUTATION FLAG	N	4	2	113	114
WRHRUNF6	IMPUTATION FLAG	N	4	2	115	116
WRTUITF6	IMPUTATION FLAG	N	4	2	117	118
WR6PRTYF	IMPUTATION FLAG	N	4	2	119	120
WR6PREMF	IMPUTATION FLAG	N	4	2	121	122
WRAWARF6	IMPUTATION FLAG	N	4	2	123	124
WR6EMREF	IMPUTATION FLAG	N	4	2	125	126
WR6EMPWF	IMPUTATION FLAG	N	4	2	127	128
WR6EMSPF	IMPUTATION FLAG	N	4	2	129	130
WR6EMPAF	IMPUTATION FLAG	N	4	2	131	132
WRUNIOF6	IMPUTATION FLAG	N	4	2	133	134
WRAGAIF6	IMPUTATION FLAG	N	4	2	135	136
WRINTRSF	IMPUTATION FLAG	N	4	2	137	138
WRHOWINF	IMPUTATION FLAG	N	4	2	139	140
WRKNOF	IMPUTATION FLAG	N	4	2	141	142
WRPRTIMF	IMPUTATION FLAG	N	4	2	143	144
WRPRCOSF	IMPUTATION FLAG	N	4	2	145	146
WRPRCHIF	IMPUTATION FLAG	N	4	2	147	148
WRPRTRAF	IMPUTATION FLAG	N	4	2	149	150
WRPROTF	IMPUTATION FLAG	N	4	2	151	152
WRPRGEF	IMPUTATION FLAG	N	4	2	153	154
WRTIFAF	IMPUTATION FLAG	N	4	2	155	156
WRTICHOF	IMPUTATION FLAG	N	4	2	157	158
WRTICLHF	IMPUTATION FLAG	N	4	2	159	160
WRTIWORF	IMPUTATION FLAG	N	4	2	161	162
WRTIACTF	IMPUTATION FLAG	N	4	2	163	164
WRTITRAF	IMPUTATION FLAG	N	4	2	165	166
WRTIOTF	IMPUTATION FLAG	N	4	2	167	168

VARIABLE NAME	VARIABLE LABEL	FORMAT	RECORD NUMBER	LENGTH	START COLUMN	END COLUMN
WRMOTUIF	IMPUTATION FLAG	N	4	2	169	170
WRMOBOOF	IMPUTATION FLAG	N	4	2	171	172
WRMOCHIF	IMPUTATION FLAG	N	4	2	173	174
WRMOTRAF	IMPUTATION FLAG	N	4	2	175	176
WRMOOTF	IMPUTATION FLAG	N	4	2	177	178
WRCHCOSF	IMPUTATION FLAG	N	4	2	179	180
WRCHAVAF	IMPUTATION FLAG	N	4	2	181	182
WRCHOTF	IMPUTATION FLAG	N	4	2	183	184
WRTRCOSF	IMPUTATION FLAG	N	4	2	185	186
WRTRAVAF	IMPUTATION FLAG	N	4	2	187	188
WRTRTIMF	IMPUTATION FLAG	N	4	2	189	190
WRTROTF	IMPUTATION FLAG	N	4	2	191	192
WRPRSPEF	IMPUTATION FLAG	N	4	2	193	194
WREMPO_F	IMPUTATION FLAG	N	4	2	195	196
SAACTF	IMPUTATION FLAG	N	4	2	197	198
SAREASF1	IMPUTATION FLAG	N	4	2	199	200
SA1PRTYF	IMPUTATION FLAG	N	4	2	201	202
SA1PREMF	IMPUTATION FLAG	N	4	2	203	204
SATUITF1	IMPUTATION FLAG	N	4	2	205	206
SAWHEF1	IMPUTATION FLAG	N	4	2	207	208
SAWHNUF1	IMPUTATION FLAG	N	4	2	209	210
SAWKF1	IMPUTATION FLAG	N	4	2	211	212
SAHRF1	IMPUTATION FLAG	N	4	2	213	214
SAHRUNF1	IMPUTATION FLAG	N	4	2	215	216
SAREASF2	IMPUTATION FLAG	N	4	2	217	218
SA2PRTYF	IMPUTATION FLAG	N	4	2	219	220
SA2PREMF	IMPUTATION FLAG	N	4	2	221	222
SATUITF2	IMPUTATION FLAG	N	4	2	223	224
SAWHEF2	IMPUTATION FLAG	N	4	2	225	226
SAWHNUF2	IMPUTATION FLAG	N	4	2	227	228
SAWKF2	IMPUTATION FLAG	N	4	2	229	230
SAHRF2	IMPUTATION FLAG	N	4	2	231	232
SAHRUNF2	IMPUTATION FLAG	N	4	2	233	234
SAREASF3	IMPUTATION FLAG	N	4	2	235	236
SA3PRTYF	IMPUTATION FLAG	N	4	2	237	238
SA3PREMF	IMPUTATION FLAG	N	4	2	239	240
SATUITF3	IMPUTATION FLAG	N	4	2	241	242
SAWHEF3	IMPUTATION FLAG	N	4	2	243	244
SAWHNUF3	IMPUTATION FLAG	N	4	2	245	246
SAWKF3	IMPUTATION FLAG	N	4	2	247	248
SAHRF3	IMPUTATION FLAG	N	4	2	249	250
SAHRUNF3	IMPUTATION FLAG	N	4	2	251	252
SAEMSUF	IMPUTATION FLAG	N	4	2	253	254
SAUNIOF	IMPUTATION FLAG	N	4	2	255	256
CVONLF	IMPUTATION FLAG	N	4	2	257	258
CVNUF	IMPUTATION FLAG	N	4	2	259	260
CVHRF	IMPUTATION FLAG	N	4	2	261	262
ADOBMF	IMPUTATION FLAG	N	4	2	263	264
ADOBYF	IMPUTATION FLAG	N	4	2	265	266
ARACF	IMPUTATION FLAG	N	4	2	267	268
AHISPANF	IMPUTATION FLAG	N	4	2	269	270
AMARSTAF	IMPUTATION FLAG	N	4	2	271	272
BORNUF	IMPUTATION FLAG	N	4	2	273	274
MOVEAGF	IMPUTATION FLAG	N	4	2	275	276
CITIZEF	IMPUTATION FLAG	N	4	2	277	278
MILITARF	IMPUTATION FLAG	N	4	2	279	280
MILIDISF	IMPUTATION FLAG	N	4	2	281	282
IBCERNOF	IMPUTATION FLAG	N	4	2	283	284
IBCERF	IMPUTATION FLAG	N	4	2	285	286
REQUIRMF	IMPUTATION FLAG	N	4	2	287	288
IBWORF	IMPUTATION FLAG	N	4	2	289	290
IBLEAVF	IMPUTATION FLAG	N	4	2	291	292
JOBLOOF	IMPUTATION FLAG	N	4	2	293	294
JOBPUBF	IMPUTATION FLAG	N	4	2	295	296
JOBPRIF	IMPUTATION FLAG	N	4	2	297	298
JOBEMPF	IMPUTATION FLAG	N	4	2	299	300
JOBREF	IMPUTATION FLAG	N	4	2	301	302
JOBANSAF	IMPUTATION FLAG	N	4	2	303	304
JOBREAF	IMPUTATION FLAG	N	4	2	305	306
JOBOTHEF	IMPUTATION FLAG	N	4	2	307	308
JOBACTF	IMPUTATION FLAG	N	4	2	309	310
JOBTAKF	IMPUTATION FLAG	N	4	2	311	312

VARIABLE NAME	VARIABLE LABEL	FORMAT	RECORD NUMBER	LENGTH	START COLUMN	END COLUMN
JOBEVEF	IMPUTATION FLAG	N	4	2	313	314
LEAVEYF	IMPUTATION FLAG	N	4	2	315	316
WORKNUF	IMPUTATION FLAG	N	4	2	317	318
WORKUNF	IMPUTATION FLAG	N	4	2	319	320
IBWORKMF	IMPUTATION FLAG	N	4	2	321	322
UNEMLOOF	IMPUTATION FLAG	N	4	2	323	324
JOBMORF	IMPUTATION FLAG	N	4	2	325	326
PAYHRF	IMPUTATION FLAG	N	4	2	327	328
MEDICAF	IMPUTATION FLAG	N	4	2	329	330
SICKPAF	IMPUTATION FLAG	N	4	2	331	332
VACATPAF	IMPUTATION FLAG	N	4	2	333	334
RETIRMNF	IMPUTATION FLAG	N	4	2	335	336
EARNAMF	IMPUTATION FLAG	N	4	2	337	338
EARNUNF	IMPUTATION FLAG	N	4	2	339	340
FSICF1	IMPUTATION FLAG	N	4	2	341	342
FSOCF1	IMPUTATION FLAG	N	4	2	343	344
FSICF2	IMPUTATION FLAG	N	4	2	345	346
FSOCF2	IMPUTATION FLAG	N	4	2	347	348
FSICF3	IMPUTATION FLAG	N	4	2	349	350
FSOCF3	IMPUTATION FLAG	N	4	2	351	352
FSICF4	IMPUTATION FLAG	N	4	2	353	354
FSOCF4	IMPUTATION FLAG	N	4	2	355	356
FSICF5	IMPUTATION FLAG	N	4	2	357	358
FSOCF5	IMPUTATION FLAG	N	4	2	359	360
LABUNIOF	IMPUTATION FLAG	N	4	2	361	362
UNIONCOF	IMPUTATION FLAG	N	4	2	363	364
LAIDO_F	IMPUTATION FLAG	N	4	2	365	366
READENGF	IMPUTATION FLAG	N	4	2	367	368
WRITENGF	IMPUTATION FLAG	N	4	2	369	370
HOWNHOMF	IMPUTATION FLAG	N	4	2	371	372
HOTHNUF	IMPUTATION FLAG	N	4	2	373	374
HNUMUSF	IMPUTATION FLAG	N	4	2	375	376
HPHONSVF	IMPUTATION FLAG	N	4	2	377	378
HSVCNUF	IMPUTATION FLAG	N	4	2	379	380
HSVCUNIF	IMPUTATION FLAG	N	4	2	381	382
HZIPCODF	IMPUTATION FLAG	N	4	2	383	384
HWIF	IMPUTATION FLAG	N	4	2	385	386
HFOODSF	IMPUTATION FLAG	N	4	2	387	388
HAFDF	IMPUTATION FLAG	N	4	2	389	390
HINCMRNF	IMPUTATION FLAG	N	4	2	391	392
HINCOMF	IMPUTATION FLAG	N	4	2	393	394
HINCMEXF	IMPUTATION FLAG	N	4	2	395	396
JOBFLAG	JOB FLAG	N	4	2	397	398
EARNFLAG	EARNINGS FLAG	N	4	2	399	400
WRTFLAG1	WORK CRSE HOURS/WEEK FLAG #1	N	4	2	401	402
WRTFLAG2	WORK CRSE HOURS/WEEK FLAG #2	N	4	2	403	404
WRTFLAG3	WORK CRSE HOURS/WEEK FLAG #3	N	4	2	405	406
WRTFLAG4	WORK CRSE HOURS/WEEK FLAG #4	N	4	2	407	408
WRTFLAG5	WORK CRSE HOURS/WEEK FLAG #5	N	4	2	409	410
WRTFLAG6	WORK CRSE HOURS/WEEK FLAG #6	N	4	2	411	412
SATFLAG1	OTH CRSE HOURS/WEEK FLAG #1	N	4	2	413	414
SATFLAG2	OTH CRSE HOURS/WEEK FLAG #2	N	4	2	415	416
SATFLAG3	OTH CRSE HOURS/WEEK FLAG #3	N	4	2	417	418
RECNUM	RECORD NUMBER	N	4	1	1024	1024

APPENDIX C

SAS CODE FOR DERIVED VARIABLES

```
/* The first set of code creates temporary variables that have recoded values of -1 (inapplicable) to 0.
This was done so that the value 0 instead of -1 is used when questionnaire variables are being summed to
create derived variables. */


DATA AE(DROP=T1 T2 T3 T4 T4A T5 T5A T6 T6A T7 T7A T8 T8A T9 T9A
             T10 T10A T11 T11A T12 T12A
             T13 T14 T15 T16 T17 T18 T19 T20 T21
             I CNT1 CNT2 CNT3 CNT4 CNT5);
     SET IN1.AEFNLUPD;

     IF CRDIPNEW < 0 THEN T1 = 0;  ELSE T1  = CRDIPNEW;
     IF WRNEW    < 0 THEN T2 = 0;  ELSE T2 = WRNEW;
     IF SANEW    < 0 THEN T3 = 0;  ELSE T3 = SANEW;
     IF WRWEEK1  < 0 THEN T4 = 0;  ELSE T4 = WRWEEK1;
     IF WRTIME1  < 0 THEN T4A = 0; ELSE T4A = WRTIME1;
     IF WRWEEK2  < 0 THEN T5 = 0;  ELSE T5  = WRWEEK2;
     IF WRTIME2  < 0 THEN T5A = 0; ELSE T5A = WRTIME2;
     IF WRWEEK3  < 0 THEN T6 = 0;  ELSE T6  = WRWEEK3;
     IF WRTIME3  < 0 THEN T6A = 0; ELSE T6A = WRTIME3;
     IF WRWEEK4  < 0 THEN T7  = 0; ELSE T7  = WRWEEK4;
     IF WRTIME4  < 0 THEN T7A = 0; ELSE T7A = WRTIME4;
     IF WRWEEK5  < 0 THEN T8  = 0; ELSE T8  = WRWEEK5;
     IF WRTIME5  < 0 THEN T8A = 0; ELSE T8A = WRTIME5;
     IF WRWEEK6  < 0 THEN T9  = 0; ELSE T9  = WRWEEK6;
     IF WRTIME6  < 0 THEN T9A = 0; ELSE T9A = WRTIME6;
     IF SAWEEK1  < 0 THEN T10 = 0; ELSE T10 = SAWEEK1;
     IF SATIME1  < 0 THEN T10A = 0; ELSE T10A = SATIME1;
     IF SAWEEK2  < 0 THEN T11 = 0;  ELSE T11  = SAWEEK2;
     IF SATIME2  < 0 THEN T11A = 0; ELSE T11A = SATIME2;
     IF SAWEEK3  < 0 THEN T12 = 0;  ELSE T12  = SAWEEK3;
     IF SATIME3  < 0 THEN T12A = 0; ELSE T12A = SATIME3;
     IF WRTUITO1 < 0 THEN T13 = 0;  ELSE T13 = WRTUITO1;
     IF WRTUITO2 < 0 THEN T14 = 0;  ELSE T14 = WRTUITO2;
     IF WRTUITO3 < 0 THEN T15 = 0;  ELSE T15 = WRTUITO3;
     IF WRTUITO4 < 0 THEN T16 = 0;  ELSE T16 = WRTUITO4;
     IF WRTUITO5 < 0 THEN T17 = 0;  ELSE T17 = WRTUITO5;
     IF WRTUITO6 < 0 THEN T18 = 0;  ELSE T18 = WRTUITO6;
     IF SATUITO1 < 0 THEN T19 = 0;  ELSE T19 = SATUITO1;
     IF SATUITO2 < 0 THEN T20 = 0;  ELSE T20 = SATUITO2;
     IF SATUITO3 < 0 THEN T21 = 0;  ELSE T21 = SATUITO3;


                       /*-- AELABOR --*/

     IF (IBWORK = 1 | (IBWORK = 2 & IBLEAVE = 1)) THEN AELABOR = 1;
        ELSE IF (IBWORK=2 & IBLEAVE=2) & JOBLOOK=1 &
                  (JOBPUBL=1 | JOBPRIV=1 | JOBEMPL=1 | JOBREL = 1 |
                   JOBANSAD = 1) THEN AELABOR = 2;
        ELSE AELABOR = 3;


                       /*-- AELABOR2 --*/

     IF (IBWORK = 1 | (IBWORK = 2 & IBLEAVE = 1)) THEN AELABOR2 = 1;
        ELSE IF (IBWORK=2 & IBLEAVE=2) & JOBLOOK=1 &
                 (JOBPUBL=1 | JOBPRIV=1 | JOBEMPL=1 | JOBREL=1 |
                JOBANSAD = 1) & JOBTAKE = 1) THEN AELABOR2 = 2;
        ELSE AELABOR2 = 3;


                       /*-- AEPARTIC --*/

     IF (ESLANG = 1 | BSIMPROV = 1 | BSGED = 1 | BSHSEQUV = 1 |
         CRTRMPT1 > 0 OR CRTRMPT2 > 0 OR CRTRMPT3 > 0 OR
         APPRENTI = 1 | WRACTY = 1 | SAACTY = 1) THEN AEPARTIC = 1;
        ELSE AEPARTIC = 0;


                       /*-- AEPARANY --*/

     IF (ESLANG = 1 | BSIMPROV = 1 | BSGED = 1 | BSHSEQUV = 1 |
         CRDEGREE = 1 | CRVOCDIP = 1 | APPRENTI = 1 | WRACTY = 1 |
         SAACTY = 1) THEN AEPARANY = 1;
        ELSE AEPARANY = 0;
```

```
                    /*-- ANYSUPP --*/

IF BSIMPROV NE 1 & BSGED NE 1 & BSHSEQUV NE 1 & ESLANG NE 1
    & CRVOCDIP = 2 & CRDEGREE = 2 & WRACTY = 2 THEN ANYSUPP = -1;
   ELSE IF (ESSUPP = 1 | BSSUPP = 1 | CRDIPSUP = 1 | WRSUPP = 1)
           THEN ANYSUPP = 1;
   ELSE ANYSUPP = 0;


                    /*-- BSPARTIC --*/

IF (BSIMPROV = 1 | BSGED = 1 | BSHSEQUV = 1 | ESLANG = 1)
           THEN BSPARTIC = 1;
   ELSE BSPARTIC = 0;


                    /*-- BSSUPP --*/

IF BSIMPROV NE 1 & BSGED NE 1 & BSHSEQUV NE 1
     THEN BSSUPP = -1;
   ELSE IF (BSPROVEM = 1 | BSEMPWP = 1 | BSEMPSPA = 1 |
      BSEMPPAY = 1) THEN BSSUPP = 1;
   ELSE BSSUPP = 0;


                    /*-- BSTIMED --*/
IF BSIMPROV NE 1 & BSGED NE 1 & BSHSEQUV NE 1
     THEN BSTIMED = -1;
   ELSE IF BSHRSUNT = 2 THEN BSTIMED = BSHRS;
   ELSE IF (BSHRSUNT = 1 & BSHRS =< 3) &
           (BSWHEN = 1 & BSWHENUN = 2) THEN
           BSTIMED = BSHRS * 5;
   ELSE IF (BSHRSUNT = 1 & BSWHENUN = 1 & BSWHEN >= 6)
         THEN BSTIMED = BSHRS * 5;
   ELSE IF (BSHRSUNT = 1 & BSWHENUN = 1 & BSWHEN <= 5)
         THEN BSTIMED = BSHRS * BSWHEN;
   ELSE BSTIMED = BSHRS;


                    /*-- BSWEEK --*/
IF BSIMPROV NE 1 & BSGED NE 1 & BSHSEQUV NE 1
     THEN BSWEEK = -1;
   ELSE IF BSWHENUN = 1 & BSWHEN < 8 THEN BSWEEK = 1;
   ELSE IF BSWHENUN = 1 & (7 < BSWHEN < 15) THEN BSWEEK = 2;
   ELSE IF BSWHENUN = 1 & (14 < BSWHEN < 22) THEN BSWEEK = 3;
   ELSE IF BSWHENUN = 1 & (21 < BSWHEN < 29) THEN BSWEEK = 4;
   ELSE IF BSWHENUN = 1 & (28 < BSWHEN < 36) THEN BSWEEK = 5;
   ELSE IF BSWHENUN = 1 & (35 < BSWHEN < 43) THEN BSWEEK = 6;
   ELSE IF BSWHENUN = 1 & (42 < BSWHEN < 50) THEN BSWEEK = 7;
   ELSE IF BSWHENUN = 1 & (49 < BSWHEN < 57) THEN BSWEEK = 8;
   ELSE IF BSWHENUN = 1 & (56 < BSWHEN < 64) THEN BSWEEK = 9;
   ELSE IF BSWHENUN = 1 & (63 < BSWHEN < 71) THEN BSWEEK = 10;
   ELSE IF BSWHENUN = 1 & (70 < BSWHEN < 78) THEN BSWEEK = 11;
   ELSE IF BSWHENUN = 1 & (77 < BSWHEN < 85) THEN BSWEEK = 12;
   ELSE IF BSWHENUN = 1 & (84 < BSWHEN < 92) THEN BSWEEK = 13;
   ELSE IF BSWHENUN = 1 & (91 < BSWHEN < 99) THEN BSWEEK = 14;
   ELSE IF BSWHENUN = 1 & (98 < BSWHEN < 106) THEN BSWEEK = 15;
   ELSE IF BSWHENUN = 1 & (105 < BSWHEN < 113) THEN BSWEEK = 16;
   ELSE IF BSWHENUN = 1 & (112 < BSWHEN < 120) THEN BSWEEK = 17;
   ELSE IF BSWHENUN = 1 & (119 < BSWHEN < 127) THEN BSWEEK = 18;
   ELSE IF BSWHENUN = 1 & (126 < BSWHEN < 134) THEN BSWEEK = 19;
   ELSE IF BSWHENUN = 1 & (133 < BSWHEN < 141) THEN BSWEEK = 20;
   ELSE IF BSWHENUN = 1 & (140 < BSWHEN < 148) THEN BSWEEK = 21;
   ELSE IF BSWHENUN = 1 & (147 < BSWHEN < 155) THEN BSWEEK = 22;
   ELSE IF BSWHENUN = 1 & (154 < BSWHEN < 162) THEN BSWEEK = 23;
   ELSE IF BSWHENUN = 2 THEN BSWEEK = BSWHEN;
   ELSE IF BSWHENUN = 3 THEN BSWEEK = (BSWHEN * 4);
   ELSE IF BSWHENUN = 4 THEN BSWEEK = (BSWHEN * 16);
   ELSE IF BSWHENUN = 5 THEN BSWEEK = (BSWHEN * 12);
   ELSE IF BSWHENUN = 91 THEN BSWEEK = BSWKS;


                    /*-- CRDIPART --*/

IF (CRDEGREE = 1 | CRVOCDIP = 1) THEN CRDIPART = 1;
   ELSE CRDIPART = 0;
```

```
                    /*-- CRDIPSUP --*/

IF CRVOCDIP = 2 & CRDEGREE = 2 THEN CRDIPSUP = -1;
   ELSE IF (CR1PREMP = 1 OR CR2PREMP = 1 OR CR3PREMP = 1 OR
    CR1EMPWP = 1 OR CR2EMPWP = 1 OR CR3EMPWP = 1 OR
    CR1EMSPA = 1 OR CR2EMSPA = 1 OR CR3EMSPA = 1 OR
    CR1EMPAY = 1 OR CR2EMPAY = 1 OR CR3EMPAY = 1)
                  THEN CRDIPSUP = 1;
   ELSE CRDIPSUP = 0;


                    /*-- ESSUPP --*/

IF ESLANG NE 1 THEN ESSUPP = -1;
   ELSE IF (ESPROVEM = 1 | ESEMPWP = 1 | ESEMPSPA = 1 |
    ESEMPPAY = 1) THEN ESSUPP = 1;
   ELSE ESSUPP = 0;


                    /*-- ESTIMED --*/
IF ESLANG NE 1 THEN ESTIMED = -1;
   ELSE IF ESHRSUNT = 2 THEN ESTIMED = ESHRS;
   ELSE IF (ESHRSUNT = 1 & ESHRS =< 3) &
         (ESWHEN = 1 & ESWHENUN = 2) THEN
         ESTIMED = ESHRS * 5;
   ELSE IF (ESHRSUNT = 1 & ESWHENUN = 1 & ESWHEN >= 6)
         THEN ESTIMED = ESHRS * 5;
   ELSE IF (ESHRSUNT = 1 & ESWHENUN = 1 & ESWHEN <= 5)
         THEN ESTIMED = ESHRS * ESWHEN;
   ELSE ESTIMED = ESHRS;


                    /*-- ESWEEK --*/

IF ESLANG NE 1 THEN ESWEEK = -1;
   ELSE IF ESWHENUN = 1 & ESWHEN < 8 THEN ESWEEK = 1;
   ELSE IF ESWHENUN = 1 & (7 < ESWHEN < 15) THEN ESWEEK = 2;
   ELSE IF ESWHENUN = 1 & (14 < ESWHEN < 22) THEN ESWEEK = 3;
   ELSE IF ESWHENUN = 1 & (21 < ESWHEN < 29) THEN ESWEEK = 4;
   ELSE IF ESWHENUN = 1 & (28 < ESWHEN < 36) THEN ESWEEK = 5;
   ELSE IF ESWHENUN = 1 & (35 < ESWHEN < 43) THEN ESWEEK = 6;
   ELSE IF ESWHENUN = 1 & (42 < ESWHEN < 50) THEN ESWEEK = 7;
   ELSE IF ESWHENUN = 1 & (49 < ESWHEN < 57) THEN ESWEEK = 8;
   ELSE IF ESWHENUN = 1 & (56 < ESWHEN < 64) THEN ESWEEK = 9;
   ELSE IF ESWHENUN = 1 & (63 < ESWHEN < 71) THEN ESWEEK = 10;
   ELSE IF ESWHENUN = 1 & (70 < ESWHEN < 78) THEN ESWEEK = 11;
   ELSE IF ESWHENUN = 1 & (77 < ESWHEN < 85) THEN ESWEEK = 12;
   ELSE IF ESWHENUN = 1 & (84 < ESWHEN < 92) THEN ESWEEK = 13;
   ELSE IF ESWHENUN = 1 & (91 < ESWHEN < 99) THEN ESWEEK = 14;
   ELSE IF ESWHENUN = 1 & (98 < ESWHEN < 106) THEN ESWEEK = 15;
   ELSE IF ESWHENUN = 1 & (105 < ESWHEN < 113) THEN ESWEEK = 16;
   ELSE IF ESWHENUN = 1 & (112 < ESWHEN < 120) THEN ESWEEK = 17;
   ELSE IF ESWHENUN = 1 & (119 < ESWHEN < 127) THEN ESWEEK = 18;
   ELSE IF ESWHENUN = 1 & (126 < ESWHEN < 134) THEN ESWEEK = 19;
   ELSE IF ESWHENUN = 1 & (133 < ESWHEN < 141) THEN ESWEEK = 20;
   ELSE IF ESWHENUN = 1 & (140 < ESWHEN < 148) THEN ESWEEK = 21;
   ELSE IF ESWHENUN = 1 & (147 < ESWHEN < 155) THEN ESWEEK = 22;
   ELSE IF ESWHENUN = 1 & (154 < ESWHEN < 162) THEN ESWEEK = 23;
   ELSE IF ESWHENUN = 2 THEN ESWEEK = ESWHEN;
   ELSE IF ESWHENUN = 3 THEN ESWEEK = (ESWHEN * 4);
   ELSE IF ESWHENUN = 4 THEN ESWEEK = (ESWHEN * 16);
   ELSE IF ESWHENUN = 5 THEN ESWEEK = (ESWHEN * 12);
   ELSE IF ESWHENUN = 91 THEN ESWEEK = ESWKS;


                    /*-- HIGHEDUC --*/

IF (IBGRADE < 8 & IBDIPL = 2) THEN HIGHEDUC = 1;
   ELSE IF (IBGRADE = 4 | (IBGRADE < 8 & IBDIPL = 1))
                       THEN HIGHEDUC = 2;
   ELSE IF IBGRADE = 8 THEN HIGHEDUC = 3;
   ELSE HIGHEDUC = 4;
```

```
                    /*-- IBASSIST --*/

IF (CR1ASSIS = 1 | CR2ASSIS = 2 | CR3ASSIS = 3) THEN IBASSIST = 1;
   ELSE IBASSIST = -1;


                    /*-- IBCURAST --*/

IF (CRCURAS1 = 1 | CRCURAS2 = 1 | CRCURAS3 = 1) THEN IBCURAST = 1;
   ELSE IBCURAST = -1;


                    /*-- RACEETHN --*/

IF AHISPANI = 1 THEN RACEETHN = 3;
   ELSE IF ARACE = 2 THEN RACEETHN = 2;
   ELSE IF ARACE = 1 THEN RACEETHN = 1;
   ELSE IF ARACE IN(3,4,91) THEN RACEETHN = 4;


                    /*-- RACEETH2 --*/

IF AHISPANI = 1 THEN RACEETH2 = 3;
   ELSE IF ARACE = 4 THEN RACEETH2 = 4;
   ELSE IF ARACE = 2 THEN RACEETH2 = 2;
   ELSE IF ARACE = 1 THEN RACEETH2 = 1;
   ELSE IF ARACE IN(3,91) THEN RACEETH2 = 5;


           /*-- SATIME1 through SATIME3 --*/

   IF SAREASO1 = -1 THEN SATIME1 = -1;
    ELSE IF SAHRUNT1 = 2 THEN SATIME1 = SAHRS1;
    ELSE IF (SAHRUNT1 = 1 & SAHRS1 =< 3) &
         (SAWHEN1 = 1 & SAWHNUN1 = 2) THEN
         SATIME1 = SAHRS1 * 5;
    ELSE IF (SAHRUNT1 = 1 & SAWHNUN1 = 1 & SAWHEN1 >= 6)
         THEN SATIME1 = SAHRS1 * 5;
    ELSE IF (SAHRUNT1 = 1 & SAWHNUN1 = 1 & SAWHEN1 <= 5)
         THEN SATIME1 = SAHRS1 * SAWHEN1;
    ELSE SATIME1 = SAHRS1;

   IF SAREASO2 = -1 THEN SATIME2 = -1;
    ELSE IF SAHRUNT2 = 2 THEN SATIME2 = SAHRS2;
    ELSE IF (SAHRUNT2 = 1 & SAHRS2 =< 3) &
         (SAWHEN2 = 1 & SAWHNUN2 = 2) THEN
         SATIME2 = SAHRS2 * 5;
    ELSE IF (SAHRUNT2 = 1 & SAWHNUN2 = 1 & SAWHEN2 >= 6)
         THEN SATIME2 = SAHRS2 * 5;
    ELSE IF (SAHRUNT2 = 1 & SAWHNUN2 = 1 & SAWHEN2 <= 5)
         THEN SATIME2 = SAHRS2 * SAWHEN2;
    ELSE SATIME2 = SAHRS2;

   IF SAREASO3 = -1 THEN SATIME3 = -1;
    ELSE IF SAHRUNT3 = 2 THEN SATIME3 = SAHRS3;
    ELSE IF (SAHRUNT3 = 1 & SAHRS3 =< 3) &
         (SAWHEN3 = 1 & SAWHNUN3 = 2) THEN
         SATIME3 = SAHRS3 * 5;
    ELSE IF (SAHRUNT3 = 1 & SAWHNUN3 = 1 & SAWHEN3 >= 6)
         THEN SATIME3 = SAHRS3 * 5;
    ELSE IF (SAHRUNT3 = 1 & SAWHNUN3 = 1 & SAWHEN3 <= 5)
         THEN SATIME3 = SAHRS3 * SAWHEN3;
    ELSE SATIME3 = SAHRS3;


                    /*-- SATMONEY --*/

IF SAACTY = 2 THEN SATMONEY = -1;
SATMONEY = (SUM(T19,T20,T21) * SAWGT);
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                    /*-- SATOTEMP --*/

ARRAY STOT SA1PREMP SA2PREMP SA3PREMP;
IF SAACTY = 2 THEN SATOTEMP = -1;
SATOTEMP = 0;

DO I = 1 TO 3;
   IF STOT{I} = 1 THEN SATOTEMP + 1;
END;


                    /*-- SATOTIME --*/

IF SAACTY = 2 THEN SATOTIME = -1;
SATOTIME = (SUM((T10 * T10A),(T11 * T11A),
                (T12 * T12A)) * SAWGT);


            /*-- SAWEEK1 through SAWEEK3 --*/

IF SAREASO1 = -1 THEN SAWEEK1 = -1;
   ELSE IF SAWHNUN1 = 1 & SAWHEN1 < 8 THEN SAWEEK1 = 1;
   ELSE IF SAWHNUN1 = 1 & (7 < SAWHEN1 < 15) THEN SAWEEK1 = 2;
   ELSE IF SAWHNUN1 = 1 & (14 < SAWHEN1 < 22) THEN SAWEEK1 = 3;
   ELSE IF SAWHNUN1 = 1 & (21 < SAWHEN1 < 29) THEN SAWEEK1 = 4;
   ELSE IF SAWHNUN1 = 1 & (28 < SAWHEN1 < 36) THEN SAWEEK1 = 5;
   ELSE IF SAWHNUN1 = 1 & (35 < SAWHEN1 < 43) THEN SAWEEK1 = 6;
   ELSE IF SAWHNUN1 = 1 & (42 < SAWHEN1 < 50) THEN SAWEEK1 = 7;
   ELSE IF SAWHNUN1 = 1 & (49 < SAWHEN1 < 57) THEN SAWEEK1 = 8;
   ELSE IF SAWHNUN1 = 1 & (56 < SAWHEN1 < 64) THEN SAWEEK1 = 9;
   ELSE IF SAWHNUN1 = 1 & (63 < SAWHEN1 < 71) THEN SAWEEK1 = 10;
   ELSE IF SAWHNUN1 = 1 & (70 < SAWHEN1 < 78) THEN SAWEEK1 = 11;
   ELSE IF SAWHNUN1 = 1 & (77 < SAWHEN1 < 85) THEN SAWEEK1 = 12;
   ELSE IF SAWHNUN1 = 1 & (84 < SAWHEN1 < 92) THEN SAWEEK1 = 13;
   ELSE IF SAWHNUN1 = 1 & (91 < SAWHEN1 < 99) THEN SAWEEK1 = 14;
   ELSE IF SAWHNUN1 = 1 & (98 < SAWHEN1 < 106) THEN SAWEEK1 = 15;
   ELSE IF SAWHNUN1 = 1 & (105 < SAWHEN1 < 113) THEN SAWEEK1 = 16;
   ELSE IF SAWHNUN1 = 1 & (112 < SAWHEN1 < 120) THEN SAWEEK1 = 17;
   ELSE IF SAWHNUN1 = 1 & (119 < SAWHEN1 < 127) THEN SAWEEK1 = 18;
   ELSE IF SAWHNUN1 = 1 & (126 < SAWHEN1 < 134) THEN SAWEEK1 = 19;
   ELSE IF SAWHNUN1 = 1 & (133 < SAWHEN1 < 141) THEN SAWEEK1 = 20;
   ELSE IF SAWHNUN1 = 1 & (140 < SAWHEN1 < 148) THEN SAWEEK1 = 21;
   ELSE IF SAWHNUN1 = 1 & (147 < SAWHEN1 < 155) THEN SAWEEK1 = 22;
   ELSE IF SAWHNUN1 = 1 & (154 < SAWHEN1 < 162) THEN SAWEEK1 = 23;
   ELSE IF SAWHNUN1 = 2 THEN SAWEEK1 = SAWHEN1;
   ELSE IF SAWHNUN1 = 3 THEN SAWEEK1 = (SAWHEN1 * 4);
   ELSE IF SAWHNUN1 = 4 THEN SAWEEK1 = (SAWHEN1 * 16);
   ELSE IF SAWHNUN1 = 5 THEN SAWEEK1 = (SAWHEN1 * 12);
   ELSE IF SAWHNUN1 = 91 THEN SAWEEK1 = SAWKS1;

IF SAREASO2 = -1 THEN SAWEEK2 = -1;
   ELSE IF SAWHNUN2 = 1 & SAWHEN2 < 8 THEN SAWEEK2 = 1;
   ELSE IF SAWHNUN2 = 1 & (7 < SAWHEN2 < 15) THEN SAWEEK2 = 2;
   ELSE IF SAWHNUN2 = 1 & (14 < SAWHEN2 < 22) THEN SAWEEK2 = 3;
   ELSE IF SAWHNUN2 = 1 & (21 < SAWHEN2 < 29) THEN SAWEEK2 = 4;
   ELSE IF SAWHNUN2 = 1 & (28 < SAWHEN2 < 36) THEN SAWEEK2 = 5;
   ELSE IF SAWHNUN2 = 1 & (35 < SAWHEN2 < 43) THEN SAWEEK2 = 6;
   ELSE IF SAWHNUN2 = 1 & (42 < SAWHEN2 < 50) THEN SAWEEK2 = 7;
   ELSE IF SAWHNUN2 = 1 & (49 < SAWHEN2 < 57) THEN SAWEEK2 = 8;
   ELSE IF SAWHNUN2 = 1 & (56 < SAWHEN2 < 64) THEN SAWEEK2 = 9;
   ELSE IF SAWHNUN2 = 1 & (63 < SAWHEN2 < 71) THEN SAWEEK2 = 10;
   ELSE IF SAWHNUN2 = 1 & (70 < SAWHEN2 < 78) THEN SAWEEK2 = 11;
   ELSE IF SAWHNUN2 = 1 & (77 < SAWHEN2 < 85) THEN SAWEEK2 = 12;
   ELSE IF SAWHNUN2 = 1 & (84 < SAWHEN2 < 92) THEN SAWEEK2 = 13;
   ELSE IF SAWHNUN2 = 1 & (91 < SAWHEN2 < 99) THEN SAWEEK2 = 14;
   ELSE IF SAWHNUN2 = 1 & (98 < SAWHEN2 < 106) THEN SAWEEK2 = 15;
   ELSE IF SAWHNUN2 = 1 & (105 < SAWHEN2 < 113) THEN SAWEEK2 = 16;
   ELSE IF SAWHNUN2 = 1 & (112 < SAWHEN2 < 120) THEN SAWEEK2 = 17;
   ELSE IF SAWHNUN2 = 1 & (119 < SAWHEN2 < 127) THEN SAWEEK2 = 18;
   ELSE IF SAWHNUN2 = 1 & (126 < SAWHEN2 < 134) THEN SAWEEK2 = 19;
   ELSE IF SAWHNUN2 = 1 & (133 < SAWHEN2 < 141) THEN SAWEEK2 = 20;
   ELSE IF SAWHNUN2 = 1 & (140 < SAWHEN2 < 148) THEN SAWEEK2 = 21;
   ELSE IF SAWHNUN2 = 1 & (147 < SAWHEN2 < 155) THEN SAWEEK2 = 22;
   ELSE IF SAWHNUN2 = 1 & (154 < SAWHEN2 < 162) THEN SAWEEK2 = 23;
   ELSE IF SAWHNUN2 = 2 THEN SAWEEK2 = SAWHEN2;
   ELSE IF SAWHNUN2 = 3 THEN SAWEEK2 = (SAWHEN2 * 4);
   ELSE IF SAWHNUN2 = 4 THEN SAWEEK2 = (SAWHEN2 * 16);
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   ELSE IF SAWHNUN2 = 5 THEN SAWEEK2 = (SAWHEN2 * 12);
   ELSE IF SAWHNUN2 = 91 THEN SAWEEK2 = SAWKS2;

IF SAREASO3 = -1 THEN SAWEEK3 = -1;
   ELSE IF SAWHNUN3 = 1 & SAWHEN3 < 8 THEN SAWEEK3 = 1;
    ELSE IF SAWHNUN3 = 1 & (7 < SAWHEN3 < 15) THEN SAWEEK3 = 2;
    ELSE IF SAWHNUN3 = 1 & (14 < SAWHEN3 < 22) THEN SAWEEK3 = 3;
   ELSE IF SAWHNUN3 = 1 & (21 < SAWHEN3 < 29) THEN SAWEEK3 = 4;
   ELSE IF SAWHNUN3 = 1 & (28 < SAWHEN3 < 36) THEN SAWEEK3 = 5;
   ELSE IF SAWHNUN3 = 1 & (35 < SAWHEN3 < 43) THEN SAWEEK3 = 6;
   ELSE IF SAWHNUN3 = 1 & (42 < SAWHEN3 < 50) THEN SAWEEK3 = 7;
   ELSE IF SAWHNUN3 = 1 & (49 < SAWHEN3 < 57) THEN SAWEEK3 = 8;
   ELSE IF SAWHNUN3 = 1 & (56 < SAWHEN3 < 64) THEN SAWEEK3 = 9;
   ELSE IF SAWHNUN3 = 1 & (63 < SAWHEN3 < 71) THEN SAWEEK3 = 10;
   ELSE IF SAWHNUN3 = 1 & (70 < SAWHEN3 < 78) THEN SAWEEK3 = 11;
   ELSE IF SAWHNUN3 = 1 & (77 < SAWHEN3 < 85) THEN SAWEEK3 = 12;
   ELSE IF SAWHNUN3 = 1 & (84 < SAWHEN3 < 92) THEN SAWEEK3 = 13;
   ELSE IF SAWHNUN3 = 1 & (91 < SAWHEN3 < 99) THEN SAWEEK3 = 14;
   ELSE IF SAWHNUN3 = 1 & (98 < SAWHEN3 < 106) THEN SAWEEK3 = 15;
   ELSE IF SAWHNUN3 = 1 & (105 < SAWHEN3 < 113) THEN SAWEEK3 = 16;
   ELSE IF SAWHNUN3 = 1 & (112 < SAWHEN3 < 120) THEN SAWEEK3 = 17;
   ELSE IF SAWHNUN3 = 1 & (119 < SAWHEN3 < 127) THEN SAWEEK3 = 18;
   ELSE IF SAWHNUN3 = 1 & (126 < SAWHEN3 < 134) THEN SAWEEK3 = 19;
   ELSE IF SAWHNUN3 = 1 & (133 < SAWHEN3 < 141) THEN SAWEEK3 = 20;
   ELSE IF SAWHNUN3 = 1 & (140 < SAWHEN3 < 148) THEN SAWEEK3 = 21;
   ELSE IF SAWHNUN3 = 1 & (147 < SAWHEN3 < 155) THEN SAWEEK3 = 22;
   ELSE IF SAWHNUN3 = 1 & (154 < SAWHEN3 < 162) THEN SAWEEK3 = 23;
   ELSE IF SAWHNUN3 = 2 THEN SAWEEK3 = SAWHEN3;
   ELSE IF SAWHNUN3 = 3 THEN SAWEEK3 = (SAWHEN3 * 4);
   ELSE IF SAWHNUN3 = 4 THEN SAWEEK3 = (SAWHEN3 * 16);
   ELSE IF SAWHNUN3 = 5 THEN SAWEEK3 = (SAWHEN3 * 12);
   ELSE IF SAWHNUN3 = 91 THEN SAWEEK3 = SAWKS3;


                  /*-- WRSUPP --*/

  IF WRACTY = 2 THEN WRSUPP = -1;
   ELSE IF (WR1PREMP = 1 OR WR2PREMP = 1 OR WR3PREMP = 1 OR
    WR4PREMP = 1 OR WR5PREMP = 1 OR WR6PREMP = 1 OR
    WR1EMPWP = 1 OR WR2EMPWP = 1 OR WR3EMPWP = 1 OR
    WR4EMPWP = 1 OR WR5EMPWP = 1 OR WR6EMPWP = 1 OR
    WR1EMSPA = 1 OR WR2EMSPA = 1 OR WR3EMSPA = 1 OR
    WR4EMSPA = 1 OR WR5EMSPA = 1 OR WR6EMSPA = 1 OR
    WR1EMPAY = 1 OR WR2EMPAY = 1 OR WR3EMPAY = 1 OR
    WR4EMPAY = 1 OR WR5EMPAY = 1 OR WR6EMPAY = 1)
                  THEN WRSUPP = 1;
   ELSE WRSUPP = 0;


           /*-- WRTIME1 through WRTIME6 --*/

IF WRREASO1 = -1 THEN WRTIME1 = -1;
    ELSE IF WRHRUNT1 = 2 THEN WRTIME1 = WRHRS1;
    ELSE IF (WRHRUNT1 = 1 & WRHRS1 =< 3) &
         (WRWHEN1 = 1 & WRWHNUN1 = 2) THEN
         WRTIME1 = WRHRS1 * 5;
    ELSE IF (WRHRUNT1 = 1 & WRWHNUN1 = 1 & WRWHEN1 >= 6)
         THEN WRTIME1 = WRHRS1 * 5;
    ELSE IF (WRHRUNT1 = 1 & WRWHNUN1 = 1 & WRWHEN1 <= 5)
         THEN WRTIME1 = WRHRS1 * WRWHEN1;
    ELSE WRTIME1 = WRHRS1;

IF WRREASO2 = -1 THEN WRTIME2 = -1;
    ELSE IF WRHRUNT2 = 2 THEN WRTIME2 = WRHRS2;
    ELSE IF (WRHRUNT2 = 1 & WRHRS2 =< 3) &
         (WRWHEN2 = 1 & WRWHNUN2 = 2) THEN
         WRTIME2 = WRHRS2 * 5;
    ELSE IF (WRHRUNT2 = 1 & WRWHNUN2 = 1 & WRWHEN2 >= 6)
         THEN WRTIME2 = WRHRS2 * 5;
    ELSE IF (WRHRUNT2 = 1 & WRWHNUN2 = 1 & WRWHEN2 <= 5)
         THEN WRTIME2 = WRHRS2 * WRWHEN2;
    ELSE WRTIME2 = WRHRS2;
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IF WRREASO3 = -1 THEN WRTIME3 = -1;
    ELSE IF WRHRUNT3 = 2 THEN WRTIME3 = WRHRS3;
    ELSE IF (WRHRUNT3 = 1 & WRHRS3 =< 3) &
         (WRWHEN3 = 1 & WRWHNUN3 = 2) THEN
         WRTIME3 = WRHRS3 * 5;
    ELSE IF (WRHRUNT3 = 1 & WRWHNUN3 = 1 & WRWHEN3 >= 6)
         THEN WRTIME3 = WRHRS3 * 5;
    ELSE IF (WRHRUNT3 = 1 & WRWHNUN3 = 1 & WRWHEN3 <= 5)
           THEN WRTIME3 = WRHRS3 * WRWHEN3;
    ELSE WRTIME3 = WRHRS3;

IF WRREASO4 = -1 THEN WRTIME4 = -1;
    ELSE IF WRHRUNT4 = 2 THEN WRTIME4 = WRHRS4;
    ELSE IF (WRHRUNT4 = 1 & WRHRS4 =< 3) &
         (WRWHEN4 = 1 & WRWHNUN4 = 2) THEN
         WRTIME4 = WRHRS4 * 5;
    ELSE IF (WRHRUNT4 = 1 & WRWHNUN4 = 1 & WRWHEN4 >= 6)
         THEN WRTIME4 = WRHRS4 * 5;
    ELSE IF (WRHRUNT4 = 1 & WRWHNUN4 = 1 & WRWHEN4 <= 5)
         THEN WRTIME4 = WRHRS4 * WRWHEN4;
    ELSE WRTIME4 = WRHRS4;

IF WRREASO5 = -1 THEN WRTIME5 = -1;
    ELSE IF WRHRUNT5 = 2 THEN WRTIME5 = WRHRS5;
    ELSE IF (WRHRUNT5 = 1 & WRHRS5 =< 3) &
         (WRWHEN5 = 1 & WRWHNUN5 = 2) THEN
         WRTIME5 = WRHRS5 * 5;
    ELSE IF (WRHRUNT5 = 1 & WRWHNUN5 = 1 & WRWHEN5 >= 6)
         THEN WRTIME5 = WRHRS5 * 5;
    ELSE IF (WRHRUNT5 = 1 & WRWHNUN5 = 1 & WRWHEN5 <= 5)
         THEN WRTIME5 = WRHRS5 * WRWHEN5;
    ELSE WRTIME5 = WRHRS5;

IF WRREASO6 = -1 THEN WRTIME6 = -1;
    ELSE IF WRHRUNT6 = 2 THEN WRTIME6 = WRHRS6;
    ELSE IF (WRHRUNT6 = 1 & WRHRS6 =< 3) &
         (WRWHEN6 = 1 & WRWHNUN6 = 2) THEN
         WRTIME6 = WRHRS6 * 5;
    ELSE IF (WRHRUNT6 = 1 & WRWHNUN6 = 1 & WRWHEN6 >= 6)
         THEN WRTIME6 = WRHRS6 * 5;
    ELSE IF (WRHRUNT6 = 1 & WRWHNUN6 = 1 & WRWHEN6 <= 5)
         THEN WRTIME6 = WRHRS6 * WRWHEN6;
    ELSE WRTIME6 = WRHRS6;


                    /*-- WRTMONEY --*/

IF WRACTY = 2 THEN WRTMONEY = -1;
WRTMONEY = (SUM(T13,T14,T15,T16,T17,
                T18) * WRWGT);


                    /*-- WRTOTEMP --*/

ARRAY WTOT WR1PREMP WR2PREMP WR3PREMP WR4PREMP WR5PREMP WR6PREMP;
IF WRACTY = 2 THEN WRTOTEMP = -1;
WRTOTEMP = 0;
DO I = 1 TO 6;
   IF WTOT{I} = 1 THEN WRTOTEMP + 1;
END;

                    /*-- WRTOTIME --*/

IF WRACTY = 2 THEN WRTOTIME = -1;
WRTOTIME = (SUM((T4 * T4A),(T5 * T5A),
                (T6 * T6A),(T7 * T7A),
                (T8 * T8A),(T9 * T9A)) * WRWGT);
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            /*-- WRWEEK1 through WRWEEK6 --*/

IF WRREASO1 = -1 THEN WRWEEK1 = -1;
   ELSE IF WRWHNUN1 = 1 & WRWHEN1 < 8 THEN WRWEEK1 = 1;
    ELSE IF WRWHNUN1 = 1 & (7 < WRWHEN1 < 15) THEN WRWEEK1 = 2;
    ELSE IF WRWHNUN1 = 1 & (14 < WRWHEN1 < 22) THEN WRWEEK1 = 3;
    ELSE IF WRWHNUN1 = 1 & (21 < WRWHEN1 < 29) THEN WRWEEK1 = 4;
    ELSE IF WRWHNUN1 = 1 & (28 < WRWHEN1 < 36) THEN WRWEEK1 = 5;
    ELSE IF WRWHNUN1 = 1 & (35 < WRWHEN1 < 43) THEN WRWEEK1 = 6;
    ELSE IF WRWHNUN1 = 1 & (42 < WRWHEN1 < 50) THEN WRWEEK1 = 7;
    ELSE IF WRWHNUN1 = 1 & (49 < WRWHEN1 < 57) THEN WRWEEK1 = 8;
    ELSE IF WRWHNUN1 = 1 & (56 < WRWHEN1 < 64) THEN WRWEEK1 = 9;
    ELSE IF WRWHNUN1 = 1 & (63 < WRWHEN1 < 71) THEN WRWEEK1 = 10;
    ELSE IF WRWHNUN1 = 1 & (70 < WRWHEN1 < 78) THEN WRWEEK1 = 11;
    ELSE IF WRWHNUN1 = 1 & (77 < WRWHEN1 < 85) THEN WRWEEK1 = 12;
    ELSE IF WRWHNUN1 = 1 & (84 < WRWHEN1 < 92) THEN WRWEEK1 = 13;
    ELSE IF WRWHNUN1 = 1 & (91 < WRWHEN1 < 99) THEN WRWEEK1 = 14;
    ELSE IF WRWHNUN1 = 1 & (98 < WRWHEN1 < 106) THEN WRWEEK1 = 15;
    ELSE IF WRWHNUN1 = 1 & (105 < WRWHEN1 < 113) THEN WRWEEK1 = 16;
    ELSE IF WRWHNUN1 = 1 & (112 < WRWHEN1 < 120) THEN WRWEEK1 = 17;
    ELSE IF WRWHNUN1 = 1 & (119 < WRWHEN1 < 127) THEN WRWEEK1 = 18;
    ELSE IF WRWHNUN1 = 1 & (126 < WRWHEN1 < 134) THEN WRWEEK1 = 19;
    ELSE IF WRWHNUN1 = 1 & (133 < WRWHEN1 < 141) THEN WRWEEK1 = 20;
    ELSE IF WRWHNUN1 = 1 & (140 < WRWHEN1 < 148) THEN WRWEEK1 = 21;
    ELSE IF WRWHNUN1 = 1 & (147 < WRWHEN1 < 155) THEN WRWEEK1 = 22;
    ELSE IF WRWHNUN1 = 1 & (154 < WRWHEN1 < 162) THEN WRWEEK1 = 23;
    ELSE IF WRWHNUN1 = 2 THEN WRWEEK1 = WRWHEN1;
    ELSE IF WRWHNUN1 = 3 THEN WRWEEK1 = (WRWHEN1 * 4);
    ELSE IF WRWHNUN1 = 4 THEN WRWEEK1 = (WRWHEN1 * 16);
    ELSE IF WRWHNUN1 = 5 THEN WRWEEK1 = (WRWHEN1 * 12);
    ELSE IF WRWHNUN1 = 91 THEN WRWEEK1 = WRWKS1;

IF WRREASO2 = -1 THEN WRWEEK2 = -1;
   ELSE IF WRWHNUN2 = 1 & WRWHEN2 < 8 THEN WRWEEK2 = 1;
    ELSE IF WRWHNUN2 = 1 & (7 < WRWHEN2 < 15) THEN WRWEEK2 = 2;
    ELSE IF WRWHNUN2 = 1 & (14 < WRWHEN2 < 22) THEN WRWEEK2 = 3;
    ELSE IF WRWHNUN2 = 1 & (21 < WRWHEN2 < 29) THEN WRWEEK2 = 4;
    ELSE IF WRWHNUN2 = 1 & (28 < WRWHEN2 < 36) THEN WRWEEK2 = 5;
    ELSE IF WRWHNUN2 = 1 & (35 < WRWHEN2 < 43) THEN WRWEEK2 = 6;
    ELSE IF WRWHNUN2 = 1 & (42 < WRWHEN2 < 50) THEN WRWEEK2 = 7;
    ELSE IF WRWHNUN2 = 1 & (49 < WRWHEN2 < 57) THEN WRWEEK2 = 8;
    ELSE IF WRWHNUN2 = 1 & (56 < WRWHEN2 < 64) THEN WRWEEK2 = 9;
    ELSE IF WRWHNUN2 = 1 & (63 < WRWHEN2 < 71) THEN WRWEEK2 = 10;
    ELSE IF WRWHNUN2 = 1 & (70 < WRWHEN2 < 78) THEN WRWEEK2 = 11;
    ELSE IF WRWHNUN2 = 1 & (77 < WRWHEN2 < 85) THEN WRWEEK2 = 12;
    ELSE IF WRWHNUN2 = 1 & (84 < WRWHEN2 < 92) THEN WRWEEK2 = 13;
    ELSE IF WRWHNUN2 = 1 & (91 < WRWHEN2 < 99) THEN WRWEEK2 = 14;
    ELSE IF WRWHNUN2 = 1 & (98 < WRWHEN2 < 106) THEN WRWEEK2 = 15;
    ELSE IF WRWHNUN2 = 1 & (105 < WRWHEN2 < 113) THEN WRWEEK2 = 16;
    ELSE IF WRWHNUN2 = 1 & (112 < WRWHEN2 < 120) THEN WRWEEK2 = 17;
    ELSE IF WRWHNUN2 = 1 & (119 < WRWHEN2 < 127) THEN WRWEEK2 = 18;
    ELSE IF WRWHNUN2 = 1 & (126 < WRWHEN2 < 134) THEN WRWEEK2 = 19;
    ELSE IF WRWHNUN2 = 1 & (133 < WRWHEN2 < 141) THEN WRWEEK2 = 20;
    ELSE IF WRWHNUN2 = 1 & (140 < WRWHEN2 < 148) THEN WRWEEK2 = 21;
    ELSE IF WRWHNUN2 = 1 & (147 < WRWHEN2 < 155) THEN WRWEEK2 = 22;
    ELSE IF WRWHNUN2 = 1 & (154 < WRWHEN2 < 162) THEN WRWEEK2 = 23;
    ELSE IF WRWHNUN2 = 2 THEN WRWEEK2 = WRWHEN2;
    ELSE IF WRWHNUN2 = 3 THEN WRWEEK2 = (WRWHEN2 * 4);
    ELSE IF WRWHNUN2 = 4 THEN WRWEEK2 = (WRWHEN2 * 16);
    ELSE IF WRWHNUN2 = 5 THEN WRWEEK2 = (WRWHEN2 * 12);
    ELSE IF WRWHNUN2 = 91 THEN WRWEEK2 = WRWKS2;

IF WRREASO3 = -1 THEN WRWEEK3 = -1;
   ELSE IF WRWHNUN3 = 1 & WRWHEN3 < 8 THEN WRWEEK3 = 1;
    ELSE IF WRWHNUN3 = 1 & (7 < WRWHEN3 < 15) THEN WRWEEK3 = 2;
    ELSE IF WRWHNUN3 = 1 & (14 < WRWHEN3 < 22) THEN WRWEEK3 = 3;
    ELSE IF WRWHNUN3 = 1 & (21 < WRWHEN3 < 29) THEN WRWEEK3 = 4;
    ELSE IF WRWHNUN3 = 1 & (28 < WRWHEN3 < 36) THEN WRWEEK3 = 5;
    ELSE IF WRWHNUN3 = 1 & (35 < WRWHEN3 < 43) THEN WRWEEK3 = 6;
    ELSE IF WRWHNUN3 = 1 & (42 < WRWHEN3 < 50) THEN WRWEEK3 = 7;
    ELSE IF WRWHNUN3 = 1 & (49 < WRWHEN3 < 57) THEN WRWEEK3 = 8;
    ELSE IF WRWHNUN3 = 1 & (56 < WRWHEN3 < 64) THEN WRWEEK3 = 9;
    ELSE IF WRWHNUN3 = 1 & (63 < WRWHEN3 < 71) THEN WRWEEK3 = 10;
    ELSE IF WRWHNUN3 = 1 & (70 < WRWHEN3 < 78) THEN WRWEEK3 = 11;
    ELSE IF WRWHNUN3 = 1 & (77 < WRWHEN3 < 85) THEN WRWEEK3 = 12;
    ELSE IF WRWHNUN3 = 1 & (84 < WRWHEN3 < 92) THEN WRWEEK3 = 13;
    ELSE IF WRWHNUN3 = 1 & (91 < WRWHEN3 < 99) THEN WRWEEK3 = 14;
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   ELSE IF WRWHNUN3 = 1 & (98 < WRWHEN3 < 106) THEN WRWEEK3 = 15;
   ELSE IF WRWHNUN3 = 1 & (105 < WRWHEN3 < 113) THEN WRWEEK3 = 16;
   ELSE IF WRWHNUN3 = 1 & (112 < WRWHEN3 < 120) THEN WRWEEK3 = 17;
   ELSE IF WRWHNUN3 = 1 & (119 < WRWHEN3 < 127) THEN WRWEEK3 = 18;
   ELSE IF WRWHNUN3 = 1 & (126 < WRWHEN3 < 134) THEN WRWEEK3 = 19;
   ELSE IF WRWHNUN3 = 1 & (133 < WRWHEN3 < 141) THEN WRWEEK3 = 20;
   ELSE IF WRWHNUN3 = 1 & (140 < WRWHEN3 < 148) THEN WRWEEK3 = 21;
   ELSE IF WRWHNUN3 = 1 & (147 < WRWHEN3 < 155) THEN WRWEEK3 = 22;
   ELSE IF WRWHNUN3 = 1 & (154 < WRWHEN3 < 162) THEN WRWEEK3 = 23;
   ELSE IF WRWHNUN3 = 2 THEN WRWEEK3 = WRWHEN3;
   ELSE IF WRWHNUN3 = 3 THEN WRWEEK3 = (WRWHEN3 * 4);
   ELSE IF WRWHNUN3 = 4 THEN WRWEEK3 = (WRWHEN3 * 16);
   ELSE IF WRWHNUN3 = 5 THEN WRWEEK3 = (WRWHEN3 * 12);
   ELSE IF WRWHNUN3 = 91 THEN WRWEEK3 = WRWKS3;

IF WRREASO4 = -1 THEN WRWEEK4 = -1;
   ELSE IF WRWHNUN4 = 1 & WRWHEN4 < 8 THEN WRWEEK4 = 1;
   ELSE IF WRWHNUN4 = 1 & (7 < WRWHEN4 < 15) THEN WRWEEK4 = 2;
   ELSE IF WRWHNUN4 = 1 & (14 < WRWHEN4 < 22) THEN WRWEEK4 = 3;
   ELSE IF WRWHNUN4 = 1 & (21 < WRWHEN4 < 29) THEN WRWEEK4 = 4;
   ELSE IF WRWHNUN4 = 1 & (28 < WRWHEN4 < 36) THEN WRWEEK4 = 5;
   ELSE IF WRWHNUN4 = 1 & (35 < WRWHEN4 < 43) THEN WRWEEK4 = 6;
   ELSE IF WRWHNUN4 = 1 & (42 < WRWHEN4 < 50) THEN WRWEEK4 = 7;
   ELSE IF WRWHNUN4 = 1 & (49 < WRWHEN4 < 57) THEN WRWEEK4 = 8;
   ELSE IF WRWHNUN4 = 1 & (56 < WRWHEN4 < 64) THEN WRWEEK4 = 9;
   ELSE IF WRWHNUN4 = 1 & (63 < WRWHEN4 < 71) THEN WRWEEK4 = 10;
   ELSE IF WRWHNUN4 = 1 & (70 < WRWHEN4 < 78) THEN WRWEEK4 = 11;
   ELSE IF WRWHNUN4 = 1 & (77 < WRWHEN4 < 85) THEN WRWEEK4 = 12;
   ELSE IF WRWHNUN4 = 1 & (84 < WRWHEN4 < 92) THEN WRWEEK4 = 13;
   ELSE IF WRWHNUN4 = 1 & (91 < WRWHEN4 < 99) THEN WRWEEK4 = 14;
   ELSE IF WRWHNUN4 = 1 & (98 < WRWHEN4 < 106) THEN WRWEEK4 = 15;
   ELSE IF WRWHNUN4 = 1 & (105 < WRWHEN4 < 113) THEN WRWEEK4 = 16;
   ELSE IF WRWHNUN4 = 1 & (112 < WRWHEN4 < 120) THEN WRWEEK4 = 17;
   ELSE IF WRWHNUN4 = 1 & (119 < WRWHEN4 < 127) THEN WRWEEK4 = 18;
   ELSE IF WRWHNUN4 = 1 & (126 < WRWHEN4 < 134) THEN WRWEEK4 = 19;
   ELSE IF WRWHNUN4 = 1 & (133 < WRWHEN4 < 141) THEN WRWEEK4 = 20;
   ELSE IF WRWHNUN4 = 1 & (140 < WRWHEN4 < 148) THEN WRWEEK4 = 21;
   ELSE IF WRWHNUN4 = 1 & (147 < WRWHEN4 < 155) THEN WRWEEK4 = 22;
   ELSE IF WRWHNUN4 = 1 & (154 < WRWHEN4 < 162) THEN WRWEEK4 = 23;
   ELSE IF WRWHNUN4 = 2 THEN WRWEEK4 = WRWHEN4;
   ELSE IF WRWHNUN4 = 3 THEN WRWEEK4 = (WRWHEN4 * 4);
   ELSE IF WRWHNUN4 = 4 THEN WRWEEK4 = (WRWHEN4 * 16);
   ELSE IF WRWHNUN4 = 5 THEN WRWEEK4 = (WRWHEN4 * 12);
   ELSE IF WRWHNUN4 = 91 THEN WRWEEK4 = WRWKS4;

IF WRREASO5 = -1 THEN WRWEEK5 = -1;
   ELSE IF WRWHNUN5 = 1 & WRWHEN5 < 8 THEN WRWEEK5 = 1;
   ELSE IF WRWHNUN5 = 1 & (7 < WRWHEN5 < 15) THEN WRWEEK5 = 2;
   ELSE IF WRWHNUN5 = 1 & (14 < WRWHEN5 < 22) THEN WRWEEK5 = 3;
   ELSE IF WRWHNUN5 = 1 & (21 < WRWHEN5 < 29) THEN WRWEEK5 = 4;
   ELSE IF WRWHNUN5 = 1 & (28 < WRWHEN5 < 36) THEN WRWEEK5 = 5;
   ELSE IF WRWHNUN5 = 1 & (35 < WRWHEN5 < 43) THEN WRWEEK5 = 6;
   ELSE IF WRWHNUN5 = 1 & (42 < WRWHEN5 < 50) THEN WRWEEK5 = 7;
   ELSE IF WRWHNUN5 = 1 & (49 < WRWHEN5 < 57) THEN WRWEEK5 = 8;
   ELSE IF WRWHNUN5 = 1 & (56 < WRWHEN5 < 64) THEN WRWEEK5 = 9;
   ELSE IF WRWHNUN5 = 1 & (63 < WRWHEN5 < 71) THEN WRWEEK5 = 10;
   ELSE IF WRWHNUN5 = 1 & (70 < WRWHEN5 < 78) THEN WRWEEK5 = 11;
   ELSE IF WRWHNUN5 = 1 & (77 < WRWHEN5 < 85) THEN WRWEEK5 = 12;
   ELSE IF WRWHNUN5 = 1 & (84 < WRWHEN5 < 92) THEN WRWEEK5 = 13;
   ELSE IF WRWHNUN5 = 1 & (91 < WRWHEN5 < 99) THEN WRWEEK5 = 14;
   ELSE IF WRWHNUN5 = 1 & (98 < WRWHEN5 < 106) THEN WRWEEK5 = 15;
   ELSE IF WRWHNUN5 = 1 & (105 < WRWHEN5 < 113) THEN WRWEEK5 = 16;
   ELSE IF WRWHNUN5 = 1 & (112 < WRWHEN5 < 120) THEN WRWEEK5 = 17;
   ELSE IF WRWHNUN5 = 1 & (119 < WRWHEN5 < 127) THEN WRWEEK5 = 18;
   ELSE IF WRWHNUN5 = 1 & (126 < WRWHEN5 < 134) THEN WRWEEK5 = 19;
   ELSE IF WRWHNUN5 = 1 & (133 < WRWHEN5 < 141) THEN WRWEEK5 = 20;
   ELSE IF WRWHNUN5 = 1 & (140 < WRWHEN5 < 148) THEN WRWEEK5 = 21;
   ELSE IF WRWHNUN5 = 1 & (147 < WRWHEN5 < 155) THEN WRWEEK5 = 22;
   ELSE IF WRWHNUN5 = 1 & (154 < WRWHEN5 < 162) THEN WRWEEK5 = 23;
   ELSE IF WRWHNUN5 = 2 THEN WRWEEK5 = WRWHEN5;
   ELSE IF WRWHNUN5 = 3 THEN WRWEEK5 = (WRWHEN5 * 4);
   ELSE IF WRWHNUN5 = 4 THEN WRWEEK5 = (WRWHEN5 * 16);
   ELSE IF WRWHNUN5 = 5 THEN WRWEEK5 = (WRWHEN5 * 12);
   ELSE IF WRWHNUN5 = 91 THEN WRWEEK5 = WRWKS5;
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IF WRREASO6 = -1 THEN WRWEEK6 = -1;
   ELSE IF WRWHNUN6 = 1 & WRWHEN6 < 8 THEN WRWEEK6 = 1;
   ELSE IF WRWHNUN6 = 1 & (7 < WRWHEN6 < 15) THEN WRWEEK6 = 2;
   ELSE IF WRWHNUN6 = 1 & (14 < WRWHEN6 < 22) THEN WRWEEK6 = 3;
   ELSE IF WRWHNUN6 = 1 & (21 < WRWHEN6 < 29) THEN WRWEEK6 = 4;
   ELSE IF WRWHNUN6 = 1 & (28 < WRWHEN6 < 36) THEN WRWEEK6 = 5;
   ELSE IF WRWHNUN6 = 1 & (35 < WRWHEN6 < 43) THEN WRWEEK6 = 6;
   ELSE IF WRWHNUN6 = 1 & (42 < WRWHEN6 < 50) THEN WRWEEK6 = 7;
   ELSE IF WRWHNUN6 = 1 & (49 < WRWHEN6 < 57) THEN WRWEEK6 = 8;
   ELSE IF WRWHNUN6 = 1 & (56 < WRWHEN6 < 64) THEN WRWEEK6 = 9;
   ELSE IF WRWHNUN6 = 1 & (63 < WRWHEN6 < 71) THEN WRWEEK6 = 10;
   ELSE IF WRWHNUN6 = 1 & (70 < WRWHEN6 < 78) THEN WRWEEK6 = 11;
   ELSE IF WRWHNUN6 = 1 & (77 < WRWHEN6 < 85) THEN WRWEEK6 = 12;
   ELSE IF WRWHNUN6 = 1 & (84 < WRWHEN6 < 92) THEN WRWEEK6 = 13;
   ELSE IF WRWHNUN6 = 1 & (91 < WRWHEN6 < 99) THEN WRWEEK6 = 14;
   ELSE IF WRWHNUN6 = 1 & (98 < WRWHEN6 < 106) THEN WRWEEK6 = 15;
   ELSE IF WRWHNUN6 = 1 & (105 < WRWHEN6 < 113) THEN WRWEEK6 = 16;
   ELSE IF WRWHNUN6 = 1 & (112 < WRWHEN6 < 120) THEN WRWEEK6 = 17;
   ELSE IF WRWHNUN6 = 1 & (119 < WRWHEN6 < 127) THEN WRWEEK6 = 18;
   ELSE IF WRWHNUN6 = 1 & (126 < WRWHEN6 < 134) THEN WRWEEK6 = 19;
   ELSE IF WRWHNUN6 = 1 & (133 < WRWHEN6 < 141) THEN WRWEEK6 = 20;
   ELSE IF WRWHNUN6 = 1 & (140 < WRWHEN6 < 148) THEN WRWEEK6 = 21;
   ELSE IF WRWHNUN6 = 1 & (147 < WRWHEN6 < 155) THEN WRWEEK6 = 22;
   ELSE IF WRWHNUN6 = 1 & (154 < WRWHEN6 < 162) THEN WRWEEK6 = 23;
   ELSE IF WRWHNUN6 = 2 THEN WRWEEK6 = WRWHEN6;
   ELSE IF WRWHNUN6 = 3 THEN WRWEEK6 = (WRWHEN6 * 4);
   ELSE IF WRWHNUN6 = 4 THEN WRWEEK6 = (WRWHEN6 * 16);
   ELSE IF WRWHNUN6 = 5 THEN WRWEEK6 = (WRWHEN6 * 12);
   ELSE IF WRWHNUN6 = 91 THEN WRWEEK6 = WRWKS6;
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APPENDIX E

INDUSTRY AND OCCUPATION CODING MANUAL

NHES:95 Industry and Occupation Coding in the Adult Education Component

1. General Approach

Industries and occupations reported in the 1995 National Household Education Survey (NHES:95) Adult Education component were coded according to the rules of the *Standard Industrial Classification Manual* (1987) and *Standard Occupational Classification Manual* (1980). Rather than using highly detailed categories for industry (SIC) and occupation (SOC), the NHES:95 used aggregated categories. This Appendix provides information on how the coding was accomplished. The general approaches to coding both industry and occupation are described in this section. The 2-digit SIC and SOC codes associated with each of the NHES categories are provided in Sections 2 and 3, respectively. Finally, Section 4 provides a crosswalk of industry and occupation categories between the NHES:95 and the NHES:91.

In general, the NHES:95 **industry** categories are at the highest level of aggregation used in the *Standard Industrial Classification Manual* (1987), called *Divisions*. In a few cases, categories below the Division level that are of interest are broken out separately. These are at the level of *Major Groups*. For example, within Division I, health services and educational services categories are broken out.

The NHES:95 categories for **industry** are:

01. Agriculture, Forestry and Fishing	Division A
02. Mining	Division B
03. Construction	Division C
04. Manufacturing	Division D
05. Transportation, Communication, Electric, Gas and Sanitary Services	Division E
06. Wholesale Trade	Division F
07. Retail Trade	Division G
08. Finance, Insurance, and Real Estate	Division H
09. Services	Division I, except Major Groups 80 and 82
10. Health Services	Division I, Major Group 80
11. Educational Services	Division I, Major Group 82
12. Public Administration	Division J
13. Nonclassifiable Establishments	Division K

The **occupation** codes do not have Division levels like the industry codes (SIC); rather, there are various numerical groups, the most general of which have 2 digits. Some NHES:95 occupation categories represent several 2-digit SOC classifications of occupations.

The NHES:95 categories for **occupation** are:

01. Executive, Administrative, and Managerial Occupations	SOC codes 11, 12, 13, and 14
02. Engineers, Surveyors, and Architects	SOC code 16
03. Natural Scientists and Mathematicians	SOC codes 17 and 18
04. Social Scientists, Social Workers, Religious Workers, and Lawyers	SOC codes 19, 20, and 21
05. Teachers: College, University, and other Postsecondary Institution; Counselors, Librarians, Archivists	SOC codes 22, 24, and 25
06. Teachers, Except Postsecondary Institution	SOC code 23
07. Health Diagnosing and Treating Practitioners	SOC codes 26, 27, and 28
08. Registered Nurses, Pharmacists, Dieticians, Therapists, and Physician's Assistants	SOC codes 29 and 30
09. Writers, Artists, Entertainers, and Athletes	SOC codes 32, 33, and 34
10. Health Technologists and Technicians	SOC code 36
11. Technologists and Technicians, except Health	SOC codes 37, 38, and 39
12. Marketing and Sales Occupations	SOC codes 40, 41, 42, 43, and 44
13. Administrative Support Occupations, including Clerical	SOC codes 45, 46, and 47
14. Service Occupations	SOC codes 50, 51, and 52
15. Agricultural, Forestry, and Fishing Occupations	SOC codes 55, 56, 57, and 58
16. Mechanics and Repairers	SOC codes 60 and 61
17. Construction and Extractive Occupations	SOC codes 63, 64, and 65
18. Precision Production Occupations	SOC codes 67, 68, and 69
19. Production Working Occupations	SOC codes 71, 73, 74, 75, 76, 77, and 78
20. Transportation and Material Moving Occupations	SOC codes 81, 82, and 83
21. Handlers, Equipment Cleaners, Helpers, and Laborers	SOC codes 85, 86, and 87
22. Miscellaneous Occupations	SOC code 99

When coding **industry** and **occupation** codes in the NHES:95, five variables were used. These variables include:

- Industry;
- Names of employer;
- Occupation;
- Main duties; and
- Educational attainment.

For the most part, two variables were used in coding the respondent's industry: the name of the employer and the respondent's description of the industry. In many cases, the industry string alone was sufficient to code the type of industry (e.g., retail store). The NHES:95 Adult Education proprietary data file[1] contains verbatim strings of the variables used for coding industry. The variables containing the verbatim strings are INDUSTR1, INDUSTR2, INDUSTR3, INDUSTR4, and INDUSTR5 (I31a/c) for the respondent's industry and EMPLNAM1, EMPLNAM2, EMPLNAM3, EMPLNAM4, and EMPLNAM5 (I31a/b) for names of the respondent's employer. The AE public use data file contains the industry codes under the variable names FSIC1 through FSIC5.

For coding occupation, coders relied primarily on the respondent's occupation and duties. The specific duties given by the respondent often helped to classify the occupation. The respondent's highest education was available to use when the occupation could not be coded with the job title and duties alone. The NHES:95 Adult Education proprietary data file[1] contains verbatim strings of the variables used for coding occupation. The variables containing the verbatim strings are PROFESS1, PROFESS2, PROFESS3, PROFESS4, and PROFESS5 (I32) for the respondent's occupation and DUTIES1, DUTIES2, DUTIES3, DUTIES4, and DUTIES5 (I32) for the respondent's main duties. The AE public use data file contains the occupation codes under the variable names FSOC1 through FSOC5.

The SIC and SOC coding categories used in the NHES:95 were slightly different from those used in the NHES:91. A crosswalk is provided in section 4.

[1]The proprietary data file can be obtained under a special licensing agreement with NCES.

2. Industry (SIC) Coding

This section discusses the aggregated categories that were used for coding *industry* in the NHES:95. Under each NHES category, there is a listing of the 2-digit SIC code categories that are included. For example, NHES industry code 01, Agriculture, Forestry, & Fishing, includes all SIC industry codes beginning with 01, 02, 07, 08, and 09. The NHES:95 Adult Education public data file contains the NHES industry codes; variable names are FSIC1, FSIC2, FSIC3, FSIC4, and FSIC5.

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01 Agriculture, Forestry, and Fishing

This category includes all SIC codes associated with agriculture, forestry, and those associated with fishing, hunting, and trapping.

01 Agriculture production-crops
02 Agriculture production livestock and animal specialties
07 Agriculture services
08 Forestry
09 Fishing, hunting, and trapping

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02 Mining

This category includes SIC industry classifications for metal mining, coal mining, oil and gas extraction, and mining of nonmetallic minerals.

10 Metal mining
12 Coal mining
13 Oil and gas extraction
14 Mining and quarrying of nonmetallic minerals, except fuels

---

03 Construction

This NHES category includes all SIC categories associated with residential and nonresidential building construction; heavy construction such as highways, bridges, and tunnels; and special construction trade contractors such as in plumbing and heating, or electrical wiring.

15 Building construction-general contractors and operative builders
16 Heavy construction other than building construction-contractors
17 Construction-special trade contractors

04 Manufacturing

This is a very broad category that includes the manufacture (making) of most kinds of products. The list below shows the 2-digit SIC codes that are included here. It is a comprehensive list including food, clothing, furniture, wood products, paper products, printing and publishing, chemical and petroleum industries (not including oil and gas extraction), rubber, glass, concrete, stone, and metal products, electronics and other equipment, transportation equipment, and measuring instruments like cameras, optical products, or medical products.

20 Food and kindred products
21 Tobacco products
22 Textile mill products
23 Apparel and other finished products made from fabrics and similar materials
24 Lumber and wood products, except furniture
25 Furniture and fixtures
26 Paper and allied products
27 Printing, publishing, and allied industries
28 Chemicals and allied products
29 Petroleum refining and related industries
30 Rubber and miscellaneous plastics products
31 Leather and leather products
32 Stone, clay, glass, and concrete products
33 Primary metal industries
34 Fabricated metal products, except machinery and transportation equipment
35 Industrial and commercial machinery and computer equipment
36 Electronic and other electrical equipment and components, except computer equipment
37 Transportation equipment
38 Measuring, analyzing, and controlling instruments; photographic, medical and optical goods; watches and clocks
39 Miscellaneous manufacturing industries

05 Transportation and Public Utilities

This categories includes a variety of transportation fields including railroads; local transportation such as busses, commuter coaches, streetcars, and taxis; and air transportation. In addition, it includes public utilities such as postal service, pipelines, electric, and gas; and communications, including telephones, cable, radio and television.

40 Railroad transportation
41 Local and suburban transit and interurban highway passenger transportation
42 Motor freight transportation and warehousing
43 United States Postal Service
44 Water transportation
45 Transportation by air
46 Pipelines, except natural gas
47 Transportation services
48 Communications
49 Electric, gas, and sanitary services

06 Wholesale Trade

Wholesale trade refers to the sale of goods to retailers, contractors, business users, those acting as their agents, or to other wholesalers. It includes durable goods such as machinery and appliances, furniture and home furnishings, construction materials, and so on. It also includes wholesale trade of nondurable goods like clothing, paper products, groceries, chemicals, books and newspapers, and so on.

50 Wholesale trade-durable goods
51 Wholesale trade-nondurable goods

07 Retail Trade

Retail trade refers to establishments engaged in selling merchandise for personal or household consumption, and providing services incidental to the sale of goods. The categories below show the wide range of retail trade establishments included in this NHES category.

52 Building materials, hardware, garden supply, and mobile home dealers
53 General merchandise stores
54 Food stores
55 Automotive dealers and gasoline service stations
56 Apparel and accessory stores
57 Home furniture, furnishings, and equipment stores
58 Eating and drinking places
59 Miscellaneous retail

08 Finance, Insurance, and Real Estate

This category includes financial institutions such as banks, savings institutions, credit unions, and mortgage bankers and brokers. It also includes securities and commodities brokers and dealers, the insurance industry, real estate, and other investment business.

60 Depository institutions
61 Nondepository credit institutions
62 Security and commodity brokers, dealers, exchanges, and services
63 Insurance carriers
64 Insurance agents, brokers, and service
65 Real estate
67 Holding and other investment offices

09 Services

Services are businesses engaged in providing a wide variety of services for individuals, business and government, and other organizations. These businesses include hotels and lodging places; establishments providing personal, business, repair, and amusement services; legal, engineering and other professional services; and membership organizations.

70 Hotels, rooming houses, camps, and other lodging places
72 Personal services

73 Business services
75 Automotive repair, services, and parking
76 Miscellaneous repair services
78 Motion pictures
79 Amusement and recreation services
81 Legal services
83 Social services
84 Museums, art galleries, and botanical and zoological gardens
86 Membership organizations
87 Engineering, accounting, research, management, and related services
88 Private households
89 Miscellaneous services

****

***NOTE**: Two kinds of services industries (**Health Services** and **Educational Services**) are **NOT** included in here. There are two separate NHES categories for them, shown below.*

****

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10 Health Services

Health services include doctors' and dentists' offices and clinics, other health practitioners' offices, nursing and personal care facilities, hospitals, medical and dental laboratories, home health care services, and miscellaneous health and allied health services.

80 Health services

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11 Educational Services

Educational services include elementary and secondary schools, colleges and junior colleges, universities, professional schools (e.g., medical or law school), vocational schools, libraries, and other schools and educational services.

82 Educational services

12 Public Administration

This category includes executive, legislative, judicial, administrative and regulatory activities of Federal, State, local, and international governments. It does not include private business establishments, which are included in other categories based on the activity in which they are engaged. For example, a private accounting firm that conducts independent audits for a local government agency would be included in 09, Services, not in 12, Public Administration.

91 Executive, legislative, and general government, except finance
92 Justice, public order, and safety
93 Public finance, taxation, and monetary policy
94 Administration of human resource programs
95 Administration of environmental quality and housing programs
96 Administration of economic programs

13 Nonclassifiable Establishments

This group includes establishments that cannot be placed in any other industry.

99 Nonclassifiable establishments

3. Occupation (SOC) Coding

This section describes the aggregated categories that were used for coding *occupation* in the NHES:95. Under each NHES occupation category, there is a listing of the 2-digit SOC categories that are included. For example, NHES occupation code 01, Executive, Administrative, and Managerial Occupations includes SOC industry codes beginning with 11, 12/13, and 14. The NHES:95 Adult Education public data file contains the NHES occupation codes and variable names are FSOC1, FSOC2, FSOC3, FSOC4, and FSOC5.

01 Executive, Administrative, and Managerial Occupations

This category includes top and middle management occupations and occupations that directly support management. Top level managers are persons concerned with policy making, planning, staffing, directing and/or controlling activities. Middle managers include persons who plan, or organize, direct and/or control activities at the operational level. Legislators are also included in this category. Workers in this category are not directly concerned with the fabrication of products or with the provision of services. Other officials and administrators include consultants, library directors, customer-house brokers, and location managers.

11 Officials and administrators, public administration
12/13 Officials and administrators, other
14 Management related occupations

****

***NOTE**: Supervisors generally supervise and coordinate activities of workers engaged in one or more occupations and they categorized with the occupation they supervise. For example, supervisors of agricultural workers are included in Category 15 (Agricultural, Forestry, and Fishing Occupations). On the other hand, managers plan, organize, direct, and control the major functions of an industrial, commercial, governmental, or other establishment.*

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02 Engineers, Surveyors, and Architects

The category includes occupations concerned with applying principles of architecture and engineering in the design and construction of buildings, equipment and processing systems, highways and roads, and land utilization.

16 Engineers, surveyors, and architects

03 Natural Scientists and Mathematicians

This category includes those engaged primarily in the application of scientific principles to research and development. Natural scientists are those in the physical sciences (e.g., chemistry, physics) and the life sciences (e.g., biology, agriculture, medicine). In addition, this category includes those in computer science, mathematics (including statistics), and operations research.

17 Computer, mathematical, and operations research occupations
18 Natural scientists

****

NOTE: *Those who* ***teach*** *in these fields are classified under teaching (see 05 and 06).*

****

04 Social Scientists, Social Workers, Religious Workers, and Lawyers

This division includes occupations concerned with the social needs of people and in basic and applied research in the social sciences.

19 Social scientists and urban planners
20 Social, recreation, and religious workers
21 Lawyers and judges

05 Teachers: College, University, and other Postsecondary Institution; Counselors, Librarians, Archivists

This NHES category includes those who teach at higher education institutions and at other postsecondary (after high school) institutions, such as vocational institutes. In addition, vocational and educational counselors, librarians, and archivists are included here.

22 Teachers; college, university, and other postsecondary institution
24 Vocational & educational counselor
25 Librarians, archivists, and curators

06 Teachers, except Postsecondary Institution

This category includes prekindergarten and kindergarten teachers, elementary and secondary teachers, special education teachers, instructional coordinators, and adult education teachers (outside postsecondary).

23 Teachers, except postsecondary institution

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NOTE: *While early childhood <u>teachers</u> are included in this category, child care workers at day care centers are classified under Category 14 (Service Occupations).*

****

07 Health Diagnosing and Treating Practitioners

This category includes health care professionals who diagnose and treat patients. In addition to physicians, dentists, and veterinarians, this category includes optometrists, podiatrists, and other diagnosing and treating professionals, such as optometrists, podiatrists, chiropractors, hypnotherapists, and acupuncturists.

26 Physicians and dentists
27 Veterinarians
28 Other health diagnosing and treating practitioners

****

NOTE: *This category does not include registered nurses, LPN's, or assisting health occupations. Registered nurses are included in Category 08 (Registered Nurses, Pharmacists, Dieticians, Therapists, and Physician's Assistants). LPN's are included in Category 10 (Health Technologists and Technicians). Assisting health occupations (e.g., nurses aide or dental assistants) are included under Category 14 (Service Occupations).*

****

08 Registered Nurses, Pharmacists, Dieticians, Therapists, and Physician's Assistants

This category includes occupations concerned with the maintenance of health, the prevention of illness, and the care of the ill through the provision and supervision of nursing care; compounding drugs, planning food service or nutritional programs; providing assistance to physicians; and the provision of therapy and treatment as directed by physicians.

29 Registered nurses
30 Pharmacists, dietitians, therapists, & physician's assistants

****

NOTE: *This category does not include assisting occupations, such as nurses aide or dental assistants, etc., which are included under Category 14 (Service Occupations). LPN's are included under Category 10 (Health Technologists and Technicians).*

****

09 Writers, Artists, Entertainers, and Athletes

This occupational category includes occupations concerned with creating and executing artistic works in a personally interpreted manner, by painting, sculpturing, drawing, engraving, etching, and other methods; creating designs for products and interior decorations; designing and illustrating books, magazines, and other publications; writing; still, motion picture and television photography/filming; producing, directing, staging, acting, dancing, singing in entertainment; and participating in sports and athletics as competitor or player and administering and directing athletic programs.

32 Writers, artists, performers, and related workers
33 Editors, reporters, public relations specialists, and announcers
34 Athletes and related workers

10 Health Technologists and Technicians

This category includes occupations concerned with providing technical assistance in the provision of health care. For example, clinical laboratory technologists and technicians, dental hygienists, radiologic technicians, licensed practical nurses (LPN's), and other health technologists are included here.

36 Health technologists and technicians

****

NOTE: *Nurses aides or dental assistants are included under Category 14 (Service Occupations).*

****

11 Technologists and Technicians, except Health

This group includes those providing technical assistance in engineering and scientific research, development, testing, and related activities, as well as operating and programming technical equipment and systems.

37 Engineering and related technologists and technicians
38 Science technologists and technicians
39 Technicians; except health, engineering, and science

12 Marketing and Sales Occupations

This category includes occupations involving selling goods or services, purchasing commodities and property for resale, and conducting wholesale or retail business.

40 Supervisors; marketing and sales occupations
41 Insurance, securities, real estate, and business service sales occupations
42 Sales occupations, commodities except retail
43 Sales occupations, retail
44 Sales related occupations

13 Administrative Support Occupations, including Clerical

Occupations involving preparing, transcribing, transferring, systematizing, and preserving written communications and records; collecting accounts; gathering and distributing information; operating office machines and data processing equipment; operating switchboards; distributing mail and messages; and other support and clerical duties such as bank teller, data entry keyer, etc.

45 Supervisors; administrative support occupations, including clerical
46-47 Administrative support occupations, including clerical

14 Service Occupations

The category includes occupations providing personal and protective services to individuals, and current maintenance and cleaning for building and residences. Some examples include food service, health service (e.g, aides or assistants), cleaning services other than household, and personal services.

50 Private household occupations
51 Protective service occupations
52 Service occupations, except private household and protective

****
NOTE: *Cooks and clerks at fast-food restaurants are included in this category.*
****

15 Agricultural, Forestry, and Fishing Occupations

This category is concerned with the production, propagation (breeding/growing), gathering, and catching of animals, animal products, and plant products (timber, crop, and ornamental); the provision of services associated with agricultural production; and game farms, fisheries, and wildlife conservation. "Other agricultural and related occupations" include occupations concerned with the production and propagation of animals, animals products, plants and products (crops and ornamental).

55 Farm operators and managers
56 Other agricultural and related occupations
57 Forestry and logging occupations
58 Fishers, hunters, and trappers

****
NOTE: *Landscape gardeners are included in this category.*
****

16 Mechanics and Repairers

Mechanics and repairers are persons who do adjustment, maintenance, part replacement, and repair of tools, equipment, and machines. Installation may be included if installation is usually done in conjunction with other duties of the repairers.

60 Supervisors; mechanics and repairers
61 Mechanics and repairers

17 Construction and Extractive Occupations

This category includes occupations that normally are performed at a specific site, which will change over time, in contrast to production workers, where the work is usually at a fixed location. Construction workers include those in overall construction, brickmasons, stonemasons, carpenters, electricians, drywall installers, paperhangers and painters, etc. Extractive occupations include oil well drillers, mining machine operators, and so on.

63 Supervisors; construction and extractive occupations
64 Construction trades
65 Extractive occupations

18 Precision Production Occupations

Precision production includes occupations concerned with performing production tasks that require a high degree of precision or attainment of rigid specification and operating plants or large systems. Examples are tool and die makers, pattern and model makers, machinists, jewelers, engravers, and so on. Also included are some food-related occupations including butchers and bakers. Plant and system operators include water and sewage, gas, power, chemical, petroleum, and other plant or system operators.

67 Supervisors; precision production occupations
68 Precision production occupations
69 Plant and system operators

19 Production Working Occupations

This category includes occupations concerned with setting up, operating, and tending of machines and hand production work usually in a factory or other fixed place of business.

71 Supervisors; production occupations
73-74 Machine Setup operators
75-76 Machine operators and tenders
77 Fabricators, assemblers, and hand working occupations
78 Production inspectors, testers, samplers, and weighers

20 Transportation and Material Moving Occupations

This category includes occupations concerned with operating and controlling equipment used to facilitate the movement of people or materials and the supervising of those workers.

81 Supervisors; transportation and material moving occupations
82 Transportation occupations
83 Material moving occupations, except transportation

21 Handlers, Equipment Cleaners, Helpers, and Laborers

This category includes occupations that involve helping other workers and performing routine nonmachine tasks. A wide variety of helpers, handlers, etc., are included in this category. Examples include construction laborers, freight, stock, and material movers, garage and service station related occupations, parking lot attendants, and vehicles washers and equipment cleaners.

85 Supervisors; handlers, equipment cleaners, helpers, and laborers
86 Helpers
87 Handlers, equipment cleaners and laborers

22 Miscellaneous Occupations

Occupations that are not included in any of the categories above are included here.

99 Miscellaneous occupations

4. Crosswalk of Industry and Occupation Categories between NHES:95 and NHES:91

This section provides information on a crosswalk of industry and occupation categories between the NHES:95 and the NHES:91. Tables 1 and 2 are keyed to the NHES:95 industry and occupation categories. The NHES:91 industry and occupation categories are grouped according to the NHES:95 categories to which they correspond.

Table 1. -- Crosswalk of Industry Categories between NHES:95 and NHES:91

NHES:95 Industry Codes	NHES:91 Industry Codes
01 Agriculture, Forestry and Fishing	A Agriculture, Forestry and Fishing
02 Mining	B Mining
03 Construction	C Construction
04 Manufacturing	D Manufacturing D35 Industrial Machinery and Equipment D36 Electronic and Other Electric Equipment D37 Transportation Equipment
05 Transportation, Communication, Gas and Sanitary, Electric Services	E Transportation and Public Utilities E41 Local and Interurban Passenger Transit E42 Trucking and Warehousing E43 U.S. Postal Service E48 Communication E49 Electric, Gas, and Sanitary Services
06 Wholesale Trade	F Wholesale Trade
07 Retail Trade	G Retail Trade
08 Finance, Insurance, and Real Estate	H Finance, Insurance, and Real Estate
09 Services	I Services I737 Computer and Data Processing I81 Legal Services I87 Engineering and Management
10 Health Services	I80 Health Services

Table 1. -- Crosswalk of Industry Categories between NHES:95 and NHES:91 (continued)

NHES:95 Industry Codes	NHES:91 Industry Codes
11 Educational Services	I821 Elementary and Secondary Education I822 Colleges and University I824 Vocational School
12 Public Administration	J Public Administration J914 Federal Government J915 State and Local Government J971 National Security
13 Nonclassifiable Establishments	K Nonclassifiable Establishments

Table 2. -- Crosswalk of Occupation Categories between NHES:95 and NHES:91

NHES:95 Occupation Codes	NHES:91 Occupation Codes
01 Executive, Administrative, and Managerial Occupations	A Executive, Administrative, and Managerial Occupations
02 Engineers, Surveyors, and Architects	B Engineers, Surveyors, and Architects
03 Natural Scientists and Mathematicians	C Natural Scientists and Mathematicians C171 Computer Scientists
04 Social Scientists, Social Workers, Religious Workers, and Lawyers	D19 Social Scientists, and Urban Planners D20 Social, Recreational, and Religious Workers D21 Lawyers and Judges
05 Teachers: College, University, and other Postsecondary Institution; Counselors, Librarians, Archivists	E22 Teachers: College, University, and Postsecondary Institution E24 Vocational and Educational Counselors E25 Librarians, Archivists, and Curators
06 Teachers, Except Postsecondary Institution	E23 Teachers, except Postsecondary Institution
07 Health Diagnosing and Treating Practitioners	F26 Physicians and Dentists F27 Veterinarians F28 Other Health Diagnosing and Treating Practitioners
08 Registered Nurses, Pharmacists, Dieticians, Therapists, and Physician's Assistants	F29 Registered Nurses F30 Pharmacists, Dietitians, Therapists, and Physician's Assistants
09 Writers, Artists, Entertainers, and Athletes	H Writers, Artists, Entertainers, and Athletes
10 Health Technologists and Technicians	I Health Technologists and Technicians
11 Technologists and Technicians, except Health	J37 Engineering/Technologists and Technicians J38 Science Technologists and Technicians J39 Technicians; except Health, Engineering and Science
12 Marketing and Sales Occupations	K Marketing and Sales Occupations

Table 2. -- Crosswalk of Occupation Categories between NHES:95 and NHES:91 (Continued)

NHES:95 Occupation Codes	NHES:91 Occupation Codes
13 Administrative Support Occupations, including Clerical	L Administrative Support Occupations, including Clerical
14 Service Occupations	M Service Occupations
15 Agricultural, Forestry, and Fishing Occupations	N Agricultural, Forestry, and Fishing Occupations
16 Mechanics and Repairers	O Mechanics and Repairers O611 Vehicle, Mobile Equipment, Mechanics and Repairers O615 Electric, Electronic Equipment Repairers
17 Construction and Extractive Occupations	P Construction and Extractive Occupations
18 Precision Production Occupations	Q Precision Production Occupations
19 Production Working Occupations	R Production Working Occupations
20 Transportation and Material Moving Occupations	S Transportation and Material Moving Occupations S821 Motor Vehicle Operators
21 Handlers, Equipment Cleaners, Helpers, and Laborers	T Handlers, Equipment Cleaners, Helpers, and Laborers
22 Miscellaneous Occupations	Z Unemployed, Retired, Disabled, Unclassifiable Occupation
NOT AVAILABLE	U Military Occupations

References

Standard Industrial Classification Manual. (1987). Washington, D.C.: Executive Office of the President, Office of management and Budget.

Standard Occupation Classification Manual. (1980). Washington, D.C.: U.S. Department of Commerce, Office of Federal Statistical Policy and Standards.

APPENDIX F

MAJOR FIELD OF STUDY
CODING MANUAL

CODING MAJOR FIELDS OF STUDY

I. BACKGROUND

The Adult Education (AE) component of the 1995 National Household Education Survey (NHES:95) collected major fields of study (MFOS) of credential programs. Credential programs include vocational or technical diplomas, associate's degrees, bachelor's degrees, master's degrees, doctorates, and professional degrees beyond a bachelor's degree. Each string of MFOS reported by the respondents is coded using two-digit categories of the *Classification of Instructional Programs* (*CIP*)[1].

This manual provides individuals who wish to code MFOS verbatim strings (called "coders") and who are responsible for supervising coding staff (called "supervisors") with step-by-step procedures to determine appropriate codes and with specific decision rules that can be implemented for assigning codes for ambiguous verbatim strings of MFOS. Therefore, when assigning MFOS codes, the coders and supervisors are strongly encouraged not only to use verbatim strings of MFOS, but also to review and implement the decision rules discussed in this manual (see the Resolution of Ambiguous Verbatim Strings section). This manual includes the following four major sections:

- Coding Procedures;
- Resolution of Ambiguous Verbatim Strings;
- List of 2-digit CIP Categories;
- Alphabetic Index of All CIP Codes.

II. CODING PROCEDURES

Verbatim strings of MFOS reported by the respondents are the primary information used to determine appropriate MFOS codes. There are many cases in which verbatim strings match exactly the MFOS listed in the Alphabetic Index of All CIP Codes (e.g., Agriculture, Chemistry, Computer Sciences, Educational Psychology, Structural Engineering, etc.). In other cases, however, verbatim strings do not match the MFOS listed in the Alphabetic Index of All CIP Codes. Before assigning MFOS codes, it is necessary to refer to the *CIP* manual to obtain further information and to ensure that the placement of these cases is appropriate. At the same time, additional information, such as degree types, providers, or course names, may be used, if available, to assist the coders in assigning appropriate codes.

Specific Coding Steps

Assigning MFOS codes involves up to seven steps. It is not necessary to take all seven steps for all cases. Steps 1 through Step 3 are used to determine the most appropriate MFOS code for the majority of cases; however, all seven steps are sometimes necessary before assigning appropriate MFOS codes. The seven steps are described below.

[1] Morgan, R.L., Hunt, E.S., & Carpenter, J.M. (1990 Edition). *Classification of instructional programs*. U.S. Department of Education, Office of Educational Research and Improvement, NCES 91-396.

Step 1 Read verbatim string of MFOS.

Step 2 Search for matching strings from the Alphabetic Index of All CIP Codes found in section V of this manual.

Step 3 If the verbatim string matches one of the strings in the Alphabetic Index of All CIP Codes, identify the category and enter the 2-digit code for the case. Then, go to the next case. Otherwise, go to Step 4.

Step 4 Because respondents use their own words when reporting major fields of study, the verbatim strings do not always exactly match strings in the Alphabetic Index of All CIP Codes. If its substantive area of study clearly fits into the strings found in the Alphabetic Index of All CIP Codes, the coder should identify the category and enter the 2-digit code for the case.

To determine the substantive areas of the field of study, the noun of the verbatim string generally provides more of the substance than the adjective. For example, the substantive area for interior design is "design," which is a part of the visual and performing arts. Since the Alphabetic Index of All CIP Codes contains the exact string (see page F-29 of this manual), the appropriate MFOS code for interior design is Category 50 (Visual and Performing Arts).

However, there are other cases in which the adjective of the verbatim string provides more of the substance than the noun. For example, if the verbatim response of the MFOS is architectural design, the Alphabetic Index of All CIP Codes contains several strings (i.e., architecture, architectural environmental design, and architectural urban design and planning) that relate to the reported verbatim string. In this case, category 04 (Architecture & Related Programs) would be the appropriate code, because the substantive area appears to be "architecture" rather than "design" in this case. **It is important to note that although Category 04 is the right placement for architectural design, the coders should always look at the noun string (i.e., design) to ensure that assigned codes are most appropriate.**

Step 5 If the verbatim string does not match the strings in the Alphabetic Index of All CIP Codes at all, coders should refer to the *CIP* manual for further information. In order to look for information in the *CIP* manual, they should refer to the list of CIP categories found in this manual (see page F-16) and identify possible placement using substantive areas of MFOS (i.e., business, education, sciences, engineering, etc.) that the verbatim string best represents. Then, they should read the information in the *CIP* manual and enter the code if the information describes the substantive area of the verbatim string.

For example, if the verbatim string of the MFOS is counseling, this case could be coded in either 13, Education or 42, Psychology. In this case, the coders need to refer to both the education and the psychology sections in the *CIP* manual to examine which section contains information that describes the reported verbatim string. Since the reported verbatim string does not contain the word "education," and the *CIP* manual includes the vast majority of counseling programs in the psychology section (see page 137 of the *CIP* manual), this case should be assigned to 42, Psychology.

Remember that this manual also includes a number of specific decision rules for assigning MFOS codes for ambiguous verbatim strings. You should review any relevant information in section III.

Step 6 If coders have difficulty determining appropriate 2-digit codes from the *CIP* manual, they should write problems along with case ID numbers on a problem log sheet. A problem log of these cases should be maintained and supervisors should review these cases as a flow basis.

When recording the problems, the coders are asked to indicate alternative codes that they consider and the final codes that they assign to the problem cases. All alternative codes should be reviewed by supervisors before determining the most appropriate codes for the problem cases.

Example: If the reported verbatim string of MFOS is air conditioning and refrigeration and the coder has difficulty in assigning a code, the coder records this case in the problem log. The coder indicates that he/she considered three possible codes for this case (i.e., 14, Engineering; 15, Engineering-Related Technologies; or 47, Mechanics & Repairs) and assigned 91, Indeterminable. Then, the supervisor first reviews the three codes that the coder indicated and will look for any other alternative codes before assigning the final code.

When the reported verbatim strings does not appear to be representative of a true MFOS string, the coders should also record these verbatim strings on the problem log sheet.

Example: If the verbatim strings of MFOS are a bachelor of art & science or an associate of art, these are simply undifferentiated bachelor's or associate's degree titles. These cases should be assigned to 91, Indeterminable, if the content is not distinct enough to assign the case to a specific discipline.

Step 7 If the information reported by the respondents is not sufficient to determine an appropriate code, then code 91, Indeterminable, should be assigned. Before assigning the Indeterminable code, coders should refer to the *CIP* manual as well as the decision rules included in this manual.

The coders should be instructed not to make any decisions that exceed the rules in this manual or the *CIP* manual. All cases assigned to 91, Indeterminable, should be reviewed by supervisors for alternative coding assignment.

III. RESOLUTION OF AMBIGUOUS VERBATIM STRINGS

There are some cases in which assigning appropriate MFOS codes is difficult for coders using the Alphabetic Index of All CIP Codes, mainly because respondents used their own words to describe MFOS. As stated in Step 6, these ambiguous verbatim strings should be recorded on the problem log sheet and reviewed by supervisors for possible placement.

When reviewing these ambiguous cases, supervisors will usually find that the *CIP* manual provides information for them to determine the most appropriate MFOS codes for them. Although the *CIP* manual does not specify programs based on the type of degree or provider, additional information, if available (i.e., type of degree, provider, and name of course) can also be used to assign appropriate MFOS codes. For example, "electrical" should be coded 14, Engineering if the degree type is a bachelor's degree or higher, but "electrical" should be coded 15, Engineering-Related Technologies if the degree type is an associate's degree or vocational/technical diploma. The first section below includes examples of ambiguous cases for which degree and provider are useful in assigning codes.

The use of course information in determining appropriate codes was not particularly fruitful in the NHES:95. In some studies, full transcript information is used to code courses and major fields of study, and course catalogues from the institutions may also be available. This was not the case in the NHES:95, which was a telephone survey of persons in their homes. Course names were not collected for all credential programs, only for part-time enrollment. Also, because respondents use their own words to describe both courses and programs, course names are also sometimes ambiguous. Finally, some respondents were taking courses for general requirements or electives, so that their courses did not provide information to clarify the major field of study.

The following is a discussion of ambiguous verbatim strings of MFOS recorded by the coders in the NHES:95 AE component. In the problem log sheet, the coders indicated that they were unsure about assigning codes for these ambiguous cases. To determine MFOS codes for them, specific decision rules were formulated for the cases, as needed.

In some cases, particularly in the very early stages of coding, cases were identified as problematic when they did, in fact, appear in the *CIP* manual. In these cases, the coders may have been unsure of the general area in which to look for the appropriate code. In some cases, the respondent may have used a technical term with which coders were unfamiliar, and they did not have sufficient information to begin their search (i.e., see Horology, below). In many of these cases, coders did not identify possible coding categories in the problem log. As a result of this initial difficulty, assignment of MFOS codes for the vast majority of the ambiguous cases is based on the information found in the *CIP* manual; page numbers of the *CIP* manual are indicated. The use of some of these examples in future training, and their inclusion in training exercises, may help to avoid the need to review some of these types of cases in future coding efforts.

In other cases, the response reported in the interview was truly ambiguous, and additional decision rules were needed for the classification of these cases. Both coders and supervisors are strongly advised to be familiar with decision rules included in this manual and to implement them, whenever necessary. The following is divided into three sections: (1) ambiguous engineering and health programs, (2) real estate programs, and (3) other ambiguous programs.

Ambiguous Engineering and Health Programs

This section covers those ambiguous engineering and health programs for which degree and provider are helpful in assigning the MFOS codes. Remember that the *CIP* manual does not specify by level so the degree/provider rule is not always helpful in determining the appropriate MFOS code. It should be noted that when more than one plausible code remains after considering degree/provider, the detailed description of content areas in the *CIP* manual should be used to select the appropriate MFOS code. The general rule is that if the degree is less than a bachelor's degree, or the provider is a vocational school or technical institute, the program should be coded at the vocational level, e.g., 15, Engineering-Related Technologies. On the other hand, if the provider is a 4-year college or university, or the degree is a bachelor's degree or above, the program should be coded at the more technical level, e.g., 14, Engineering or 51, Health Professions and Related Sciences.

Below is a discussion of verbatim strings illustrating the process of reviewing possible codes and implementing decision rules related to degrees or providers. These appear in alphabetical order with the engineering-related group and the health-related group.

Aeronautic science: The term "aeronautic" appears in both category 14, Engineering (e.g., aerospace and aeronautical engineering, *CIP* manual, page 85), and in category 49, Transportation & Materials Moving Workers (the *CIP* manual includes aviation and airway science, aircraft pilot and navigator, and air traffic controller programs in CIP category 49 (*CIP* manual, page 159). The reported MFOS does not include the term "engineering," which would suggest its placement in category 14. As a result, this case should be coded 49, Transportation & Materials Moving Workers since it more closely matches the response as given.

Air conditioning and refrigeration: This case could be assigned to one of three categories: 14, Engineering; 15, Engineering-Related Technologies; or 47, Mechanics & Repairs. The choice between these three codes should be made on the basis of the verbatim strings, the type of provider, and the degree sought. Engineering includes such "scientific" engineering fields as aerospace engineering, chemical engineering, electrical engineering, engineering physics, etc., and so is eliminated as a possible category. Mechanics and repairers includes installing and repairing electrical equipment and machines, and appears to be a possible placement. However, this case should be coded 15, Engineering-Related Technologies, because the *CIP* manual explicitly includes heating, air conditioning and refrigeration mechanics and repairers in CIP category 15 (*CIP* manual, page 95).

See also, *Heating, ventilation, and refrigeration*, below.

Architectural: This case could be coded in one of four MFOS categories: 04, Architecture & Related Programs; 14, Engineering; 15, Engineering-Related Technologies; or 48, Precision Production Trades. This is because the term "architectural" appears in each of these categories in the *CIP* manual. According to the *CIP* manual, architecture and architectural urban design and planning programs are included in CIP category 04. Architectural engineering technology is included in engineering-related technologies (*CIP* manual, page 93), and architectural engineering programs are included in CIP category 14 (*CIP* manual, page 58). Architectural drafting is included under precision production trades (*CIP* manual, page 155). The reported name of the program is architectural and the reported verbatim string does not include the words "engineering" or "drafting." The verbatim reporting of "architectural" indicates that the key content is architecture. This case is assigned to 04, Architecture & Related Programs.

Electrical: Electrical technology fields are included in 15, Engineering-Related Technologies while electrical and electronics equipment installers and repairers are included in 47, Mechanics and Repairers. There is no mention of engineering or repairing in the information reported for this program. However, electrical engineering is included in category 14, Engineering. Based on the decision rules associated with the provider and degree type, this case is coded 15, Engineering-Related Technologies since the degree is an associate's degree. If, however, the degree is a bachelor's degree or higher, then the case would be coded 14, Engineering.

Also see *Electrical theory*, *Electronics*, and *Electronics engineering*, below.

Electrical theory: The decision rule is the same as for the response "electrical," that is, the decision rules based on the provider and degree type. This case is coded 14, Engineering.

Electronics: This response could be assigned to either 15, Engineering-Related Technology or 47, Mechanics & Repairs, both of which include subfields related to electronics technology. If this is a vocational/technical program and there is no mention of repairs in the name of the program reported by the respondent, this case is coded 15, Engineering-Related Technology. If the respondent was pursuing a bachelor's degree or higher, this would have been coded as 14, Engineering, a category that also includes electronics programs.

See also *Electrical*, and *Electrical theory*, above, and *Electronics engineering*, below.

Electronics engineering: This case could be assigned to either 14, Engineering or 15, Engineering-Related Technology. Since the degree type is a bachelor's degree or higher, this case should be coded 14, Engineering. The *CIP* manual includes electronic engineering programs in CIP category 14 (*CIP* manual, page 87). However, if the degree is an associate degree or higher, then the case would be coded 15, Engineering-Related Technology.

Heating, ventilation, refrigeration: This case could be assigned to one of three categories: 14, Engineering; 15, Engineering-Related Technologies; or 47, Mechanics & Repairs. Engineering, however, includes such "scientific" engineering fields as aerospace engineering, chemical engineering, electrical engineering, engineering physics, etc., and so is eliminated as a possible category. Engineering-related technologies, 15, includes programs that prepare individuals to apply basic engineering principles and technical skills in support of engineering and related projects. This category appears to be more engineering-related and thus can be eliminated. Mechanics and repairers includes installing and repairing electrical equipment and machines, and appears to be a possible placement. The respondent reported participating in an associate's degree with a provider of a federal, state, county, or local government agency. This case is coded 47, Heating, Air Conditioning and Refrigeration Mechanic and Repairer, because the *CIP* manual explicitly includes heating, air conditioning and refrigeration mechanics and repairers in CIP category 47 (*CIP* manual, page 95) and because the respondent's degree program is consistent with the CIP category.

Also see *Air conditioning and refrigeration*, above.

Industrial wire & technology: This case could be assigned to either 15, Engineering-Related Technology or 47, Mechanics & Repairers. Engineering-related technology includes industrial production technologies (*CIP* manual, page 96). Mechanics and repairers includes electrical and electronics equipment installation and repair (*CIP* manual, page 151). The substantive area of this program appears to be engineering-related and the response does not include installation or repair. The respondent was enrolled in a vocational/technical program at a public 2-year vocational/technical school. As a result, this case is coded 15, Engineering-Related Technology.

Alcohol drug studies: The name of the program suggests that this MFOS is a health-related area, that is, this case can be assigned to either 34, Health-Related Knowledge & Skills or 51, Health Professions & Related Sciences. However, category 34 includes personal and family health fields such as birthing and parenting, personal health improvement, and additional prevention and treatment (which focuses on the individual or family). The *CIP* manual indicates that alcohol or drug preventive strategies and treatment programs are in CIP category 51 (*CIP* manual, page 179). The degree type the respondent pursued was an associate's degree at a 2-year community or junior college. Because the reported name (alcohol/drug studies) does not suggest that the field of study is for personal/family health and because the respondent reports taking this course as part of an associate's degree program at a 2-year community or junior college, this case is assigned to 51, Health Professions and Related Sciences.

See also, *Drug and alcohol abuse*, below.

Drug and alcohol abuse: See *Alcohol and Drug studies*, above. This case is assigned to 51, Health Professions and Related Sciences because the name of the program reported by the respondent, the degree type (bachelor's), and provider (4-year college or university) indicate that this MFOS is a health-related field. Additionally, the *CIP* manual includes drug and alcohol prevention strategies and treatment programs in CIP category 51 (page 179). The response does not indicate that this program is for personal/family health. Category 34 of the *CIP* manual, Health-Related Knowledge & Skills, and category 37, Personal Awareness & Self-Improvement, are considered personal improvement fields.

Real Estate Programs

The following four entries all are related to real estate programs under various names. In general, these were listed by coders as problematic because real estate is generally thought of as a sales/marketing activity (under category 08), but all real estate entries in the *CIP* manual appear under category 52, Business Management and Administrative Support. In the NHES:95, a total of 29 real estate-related programs were reported and assigned to 52, Business Management & Administrative Services (3 percent of all programs coded 52).

Real estate: This case could be coded in either 08, Business or 52, Business Management & Administrative Services. This case is assigned to 52, Business Management & Administrative Services. This respondent was pursuing a professional degree at an adult learning center.

Real estate appraisal: This case could be coded in either 08, Business Marketing or 52, Business Management & Administrative Services. This case is assigned to 52, Business Management & Administrative Services. The reported degree is an associate's degree at a public 2-year vocational/technical school.

Real estate appraiser: This case could be coded in either 08, Business or 52, Business Management & Administrative Services. This case is assigned to 52, Business Management & Administrative Services. The vocational/technical program was provided by a professional association.

Real estate law: The coder was unsure as to whether this case should be coded with other real estate fields or with law. Since the *CIP* manual contains real estate law program in the business section instead of in the law section (*CIP* manual, page 198), this case is coded 52, Business Management & Administrative Services. The respondent was pursuing an associate's degree at a 4-year college or university.

Other Ambiguous Programs

The following are programs for which coders had difficulty assigning MFOS codes, discussions of possible codes, and justifications for the final codes assigned to these cases. These are discussed in alphabetical order.

Administration of justice: This case could be coded as 22, Law and Legal Studies, 43, Protective Services, or 44, Public Administration. Law and Legal Studies covers programs at the bachelor's degree or higher level. Protective services includes law-enforcement-related fields, such as criminal justice and corrections, law enforcement-police science, and criminal justice studies (*CIP* manual, page 40). Because of the term "administration" in the title given, 44, Public Administration is also examined to determine whether an appropriate string appears in that category (*CIP* manual, pages 141-142), however, the public administration listing does not include justice-related fields. This case is assigned to 43, Protective Services, because administration of justice is listed under criminal justice studies in the *CIP* manual (page 140).

Administrative office: Although this case was listed by a coder on the problem log, it does not appear to be ambiguous. At first glance, code 08, Marketing Operations/ Marketing and Distribution and 44, Public Administration and Services appear to be possibilities for this case. Careful inspection of Marketing Operations/Marketing and Distributions reveals that this code is for programs that prepare individuals to plan and execute, at the operational or direct sales level, the promotion and distribution of ideas, goods and services in order to create exchanges that satisfy individual and organizational objectives. Nothing in the verbatim string indicates that this description fits this program. Public Administration and Services describes a group of programs that prepare individuals to analyze, manage, and deliver public programs and services. Again, nothing in the verbatim string indicates that this describes this program. The substantive area of the program appears to be business office administration. Since the *CIP* manual classifies this kind of program into CIP category 52 (*CIP* manual, page 191), this case is assigned to 52, Business Management and Administrative Services.

American sign language: This string was identified by a coder as one which he/she did not know how to code; however, it is not ambiguous. According to the *CIP* manual, sign language interpreter programs are included in CIP category 51 (*CIP* manual, page 170). This case is coded 51, Health Professions & Related Sciences.

Art: This case could be assigned to either 36, Leisure & Recreational Activities or 50, Visual & Performing Arts. Leisure and Recreational Activities includes areas such as art, music, dancing, reading, theater, writing, and personal-interest courses such as pet ownership and care, handicrafts and model-making, and so on. Visual and Performing Arts includes crafts, folk art, dance, design and applied arts, dramatic/theater arts, film/video and photographic arts, fine arts, and music. Category 50 also includes "art, general." The case is assigned a code of 36, Leisure & Recreation on the basis of the exact string match to the category "art" (*CIP* manual, page 207). The placement is somewhat arbitrary, given that a general art category is also found in category 50.

Associate of Art: This is simply an undifferentiated AA degree title. The content is not distinct enough to assign the case to a specific discipline. This case is assigned to 91, Indeterminable.

Associate of Science: This is simply an undifferentiated AS degree title. The content is not distinct enough to assign the case to a specific discipline. This case is assigned to 91, Indeterminable. The reader will note that the field *Science* alone (below) is assigned to a category. However, an associate or bachelor of science degree may be in many fields other than the sciences, such as engineering, health-related fields, psychology, and so on.

Bachelor of Art & Science: This is simply an undifferentiated bachelor's degree title. Since the content is not distinct enough to assign the case to a specific discipline, this case is assigned to 91, Indeterminable.

Bilingual certification: The name of the program reported by the respondent indicates that this certificate program might be designed for people who want to be bilingual teachers. However, the *CIP* manual must also be examined for programs for interpreters. No codes are found for bilingual interpreter programs, only for foreign language translation and interpreters in CIP category 16, Foreign Languages and Literature (*CIP* manual, page 99). However, since Bilingual/bicultural education is found to be classified in CIP category 13, Education (*CIP* manual, page 75), this case is assigned to 13, Education.

Caring for people: The coder was uncertain whether this response contained enough information to assign a code. The name of the program reported by the respondent suggests that this MFOS is a health-related area. Category 12, Personal and Miscellaneous Services, includes programs that prepare individuals to provide a variety of services to individual consumers as well as to organizations such as businesses and industries. Category 34, Health-Related Knowledge and Skills, includes programs that describe the promotion of personal and family health. Category 51, Health Professions and Related Sciences, includes health professions and paraprofessional fields involving a wide range of types of patient/client care (*CIP* manual, page 181). Since the respondent reported participating in a Home Health Aide certificate program at a private vocational or trade school, this case is coded as 51, Health Professions and Related Sciences, although the placement is somewhat arbitrary.

Certified production inventory: Although the coder questioned how this case should be coded, a review of the CIP categories indicates that this response is not ambiguous. Possible categories include 01, Agricultural Business and Production, 14, Engineering, 27, Mathematics, and 52, Business Management and Administrative Services. Agricultural Business and Production includes programs that apply specifically to agricultural business and production. There is no information from the respondent to indicate that this program was agriculturally oriented. Engineering (and more specifically, Engineering/Industrial Management) applies to engineering principles of planning and operational management of enterprises and organizations. The Operations Research subcategory under Mathematics describes programs in the development and application of complex mathematical or simulation models to solve problems involving operational systems. The respondent reported participating in a professional degree program at a 2-year community or junior college. The *CIP* manual includes inventory control programs in CIP category 52 (*CIP* manual, page 188), and the case is assigned to 52, Business Management and Administrative Services.

Communication and media art: This case could be coded in 09, Communications, 10, Communications Technologies, or 50, Visual & Performing Arts. Communications includes communications technology, photographic technology, and radio and television broadcasting and technology. Communications Technologies includes programs that prepare individuals to support and assist communications professionals and skilled communications workers. Nothing in the verbatim string indicates that this describes this course. Visual and performing arts includes fine arts, theater and dramatic arts, film and photographic arts. The field of study as reported by the respondent did not indicate performance-related activities, which characterize visual and performing arts fields. In the *CIP* manual, journalism and mass communication programs, including media such as newspapers journalism and radio and television broadcasting, are included in CIP category 9 (*CIP* manual, page 68). This case is assigned to 09, Communications.

Also see *Multimedia*, below.

Communications/accounting: This case appears to be a double major and thus is coded 91, Indeterminable.

Computer and accounting: The ambiguity in this response is a question as to whether it is possible to code this case since two fields are reported together. However, the substantive area of the program appears to be computer-related accounting. The *CIP* manual includes computer-related accounting programs (e.g., accounting software applications) in CIP category 52 (*CIP* manual, page 189). This case is coded 52, Business Management & Administrative Services.

Computer drafting auto CAD: This case could be assigned to either 11, Computer & Information Sciences or 48, Precision Production Trades. The computer and information sciences field is examined because the term "computer" was reported in the response. However, computer drafting is not found in the computer and information sciences field. The *CIP* manual includes computer drafting programs in precision production trades (*CIP* manual, page 155). The respondent was enrolled in a vocational/technical program at a public 2-year vocational/technical school. This case is assigned to 48, Precision Production Trades.

See also, *Computerized drafting*, below.

Computer graphics: This case could be coded in 11, Computer and Information Sciences or 50, Visual & Performing Arts. Computer and information sciences is examined because the response included "computer" in the name. Graphics programs, also part of the string, are included in the creative arts. The CIP category of computer and information science, however, does not include graphics. The *CIP* manual indicates that computer graphics programs are included in category 50 (*CIP* manual, page 162). This case is coded 50, Visual & Performing Arts.

Computerized drafting: This case could be assigned to either 11, Computer & Information Sciences or 48, Precision Production Trades. As noted above (see "Computer Drafting Auto CAD," above), the computer and information sciences field is examined because the term "computerized" was reported in the response. However, computer drafting is not found in the computer and information sciences field. The *CIP* manual places drafting programs including computer-assisted design programs in CIP category 48 (*CIP* manual, page 155). This case is assigned to 48, Precision Production Trades.

Conflict resolution: The only reference to "conflict" found in the *CIP* manual is in category 30, Multi/Interdisciplinary, which includes peace and conflict studies (*CIP* manual, page 122). However, it is not clear whether this MFOS refer to peace and conflict study, methods of dealing with conflict among persons or groups within a business, school, or other institution, or across institutions. Even under the latter possibility, the field is considered highly likely to be interdisciplinary in its content. As a result, this case is coded 30, Multi/Interdisciplinary.

Corporate fitness: The information provided by the respondent is not sufficient to determine an appropriate MFOS code. For example, this could be a program for someone earning a certificate in a management field that involves assessing the soundness of a company, or could be for someone earning a certificate in fitness (health) programs administered in a corporate environment. This case is coded 91, Indeterminable.

Counseling: This case could be coded in either 13, Education or 42, Psychology. The field of education includes student counseling and personnel services (*CIP* manual, page 79), and the field of psychology includes clinical psychology and counseling psychology (*CIP* manual, pages 136-137). Since the reported name of the program does not contain the string "education," this case is assigned to 42, Psychology (*CIP* manual, page 137).

See also, *Group counseling*, below.

Data processing: The *CIP* manual indicates that data processing technology programs are classified in CIP category 11 (*CIP* manual, page 71). Business Management and Administrative support are also reviewed; however, that category includes data entry, generally a clerical activity, but not data processing, generally a programming activity. This case is coded 11, Computer & Information Sciences.

Developing training programs: The type of training program is not specified in this response, resulting in the coder questioning its placement. Education is eliminated as a possible code because the string does not include education or specify a school environment. A very common venue for training programs is in the work-place, where people may be trained in policy, procedures, technical skills, and so on. As a result, the business categories are reviewed. Training programs are not a separate category under Human Resources in the *CIP* manual, but they are included in CIP category 52 (*CIP* manual, page 195). Thus, this case is coded 52, Business Management & Administrative Services.

Disciplinary studies: This case is an undifferentiated program and it is coded 91, Indeterminable. Multi/interdisciplinary studies is considered as a possible code, but the response as given does not specify multiple fields or an interdisciplinary approach.

Early childhood development: This case appears as if it could fit into 13, Education or 20, Vocational Home Economics. Because the name of the program appears to be very similar to an instruction in child growth and development, which is a home economics major title (*CIP* manual, page 106), and because education is not mentioned in the program name by the respondent, this case is coded 20, Vocational Home Economics.

Early childhood education: The response is not ambiguous. Categories 19, Home Economics, and 42, Psychology, may at first glance be considered but a closer look shows that Home Economics describes individual and family development studies while Psychology describes psychology programs, not education programs. This case is assigned to 13, Education because the substantive area of the program is education and the *CIP* manual includes early childhood education in CIP category 13 (*CIP* manual, page 80).

Electives: This case is coded 91, Indeterminable because there is insufficient information to determine an appropriate MFOS code.

English as a Second Language: Although the *CIP* manual explicitly includes "teaching English as a Second Language," the name of the program reported by the respondent suggests that this is an education program covering how to teach ESL because the degree type is a bachelor's degree or higher. Since the *CIP* manual includes ESL teacher education programs in CIP category 13 (*CIP* manual, page 84), this case is assigned to 13, Education.

Food engineering: This case could be assigned to either 02, Agricultural Sciences (which includes food sciences and technology) or 19, Home Economics (which includes food and nutrition services). However, since the name of the program reported by the respondent does not provide sufficient information to assign a code, this case is coded 91, Indeterminable.

Genealogy: Coders and supervisors considered codes 24, Liberal Arts & Sciences or 45, Social Sciences & History. However, since the name of the program reported by the respondent does not provide sufficient information to assign a code and the *CIP* manual does not include the reported verbatim string, this case is coded 91, Indeterminable.

Gifted children: The name of the program reported by the respondent suggests that this program might be designed for people who want to be or are teachers of gifted children. Since the *CIP* manual includes education of the gifted and talented in CIP category 13 (*CIP* manual, page 78), this case is assigned to 13, Education.

Group counseling: This case could be assigned to either 13, Education or 42, Psychology. The field of education includes student counseling, and psychology includes clinical psychology and counseling psychology. Since the reported name of the program does not contain the string "education" and the *CIP* manual includes large group counseling in CIP category 42 (*CIP* manual, page 137), this case is assigned to 42, Psychology.

Hazardous chemical: The *CIP* manual includes environmental and pollution control technology/technician programs in CIP category 15 (*CIP* manual, page 95). This case is coded 15, Engineering-Related Technologies.

Hazardous material response: In the *CIP* manual, environmental and pollution control technology/technician programs including hazardous materials are included in CIP category 15 (*CIP* manual, page 95). This case is coded 15, Engineering-Related Technologies.

Hazardous materials: This is a case questioned by coders, but it is not ambiguous. In the *CIP* manual, environmental and pollution control technology/technician programs including hazardous materials are included in CIP category 15 (*CIP* manual, page 95). This case is coded 15, Engineering-Related Technologies.

See also, *Hazardous material response* and *Hazardous chemical*, following.

Horology: The term horology was unfamiliar to the coders. The *CIP* manual indicates that programs that deal with making, repairing, and maintaining timepieces are included in CIP category 47 (*CIP* manual, page 153). This case is coded 47, Mechanics & Repairs.

Human & organizational behavior: Organizational behavior studies is found in CIP category 52, Business Management and Administrative Services (*CIP* manual, page 195). Organizational psychology is included in 42, Psychology (*CIP* manual, page 138). Although the field of psychology generally deals with human behavior, psychology is not specifically mentioned in the string, suggesting that this is not a psychology major. As a result, this case is coded 52, Business Management & Administrative Services.

Also see *Human relations* and *Industrial relations*, following.

Human relations: This field could be in 45, Social Sciences and History, 43, Psychology, or 52, Business Management and Administrative Services, depending on the context of the human relations program. Contrary to the previous response, which refer to organizational behavior, this response does not explicitly suggest an organizational setting or application. Since the information reported by the respondent is not sufficient to determine an appropriate MFOS code, the case is coded 91, Indeterminable.

Industrial relations: Since the substantive area of the program appears to be relations, but within an industry context, and the *CIP* manual includes programs associated with various relations in CIP category 52 (*CIP* manual, page 195), this case should be assigned to 52, Business Management & Administrative Services. Comparing this response to the two previous responses, a specific context is given, as in human and organizational behavior, and contrary to the less clear field of human relations, immediately above.

Information systems management: This case could be assigned to either 11, Computer & Information Sciences or 52, Business Management & Administrative Services. However, since the reported name of the program does not contain the string "computer" and the *CIP* manual contains management information systems and business systems networking in CIP category 52 (*CIP* manual, page 196-197), this case is assigned to 52, Business Management & Administrative Services.

Interdisciplinary: Although the reported verbatim string is not found in the Alphabetic Index of the All CIP Codes, the *CIP* manual includes this kind of program in the multi/interdisciplinary section (*CIP* manual, page 122). This case is coded 30, Multi/Interdisciplinary.

Lab management: The reported verbatim string suggests that it could be a science program or business management program. This case is assigned to 91, Indeterminable because the information is not sufficient to determine an appropriate MFOS code.

Math certificate in actuarial science: This response includes references to two fields -- mathematics and business management. The substantive area of the program appears to be mathematics, or more narrowly, actuarial science since the response indicates that the person is/was working on a "math certificate." Applied mathematics is listed under actuarial science in category 52, Business Management, and refers to category 27, Mathematics for correct code assignment (see *CIP* manual, page 193). This case is coded 27, Mathematics.

Merchandizing & management: It appears that this case could be assigned to either 08, Business (which includes marketing, which is related to merchandizing) or 52, Business Management & Administrative Services. Programs covering purchasing, procurement and contracts management are included in CIP category 52 (*CIP* manual, page 188), and the response specifically refers to management. This case is assigned to 52, Business Management & Administrative Services.

Multimedia: This case could be assigned to 09, Communication or 50, Visual and Performing Arts. In this case, the name of the program reported by the respondent suggests that the substantive area of the program is media-communication. Also, communications technology, photographic technology, and radio and television broadcasting and technology are included in 09, Communication. The case was coded 09, Communication (*CIP* manual, page 68).

National security: For this case, coders may consider 43, Protective Services, or 45, Social Sciences and History. Protective Services includes programs that describe the principles and procedures for providing police, fire, and other safety services, and for managing penal institutions. A closer inspection of these categories eliminates 43, Protective Services. Since national security is a sub-specialty of international relations (*CIP* manual, page 147), the case is assigned to 45, Social Sciences and History.

Policy analysis: The verbatim string suggests that this case is 45, Social Sciences and History. The *CIP* manual includes various policy-related programs in CIP category 45 (*CIP* manual, page 147). While public policy is also included in category 42, Public Administration, the response does not suggest that this is a public administration program or that the policy analysis focuses on governmental actions or management. As a result, category 45 is selected for this case.

Psychology in early education: This case could potentially be assigned to either 13, Education or 42, Psychology, since both fields are mentioned in the response. Since the reported verbatim string contains the word "education," and educational psychology is included under education (*CIP* manual, page 77) this case is coded 13, Education.

Psychology/social work: This case appears to be a double major and thus is coded 91, Indeterminable. While Multi/Interdisciplinary Studies was considered for placement, that field is comprised of areas of study that explicitly cut across fields but are within a single curriculum. Therefore, treating this case as a double major and coding it as Indeterminable is preferred.

Quality management: The substantive area of the program appears to be quality control and the management of quality control activities. Two substantive areas are reviewed -- business management, and engineering-related technology. No quality control programs are found in business management. Statistical process control is an engineering-related technologies program, similar in nature to quality management. Also, the *CIP* manual includes quality control and safety technology programs in CIP category 15 (*CIP* manual, page 96). Thus, this case is assigned to 15, Engineering-Related Technologies.

Radiologic technology: The coder apparently was uncertain as to whether this was a technology program or an allied health program. However, radiologic technology is a Health Professions and Related Sciences field. This case is coded 51, Health Professions & Related Sciences.

See also, *Radiology*, following.

Radiology: This string is not ambiguous. The response indicates that the program is health-related. This case is coded 51, Health Professions & Related Sciences.

Reading and math: The reported name of the program suggests that this might be a reading and math education program. However, the reading and math program may also be a basic skills program leading to a certificate or credential of some kind. Additional information from the case indicates that the degree type is a bachelor's degree or higher. As a result, it appears reasonable to assume that this is an education program, and this case is assigned to 13, Education.

Science: This case could be coded in one of three categories: 26, Biological Sciences/Life Sciences; 40, Physical Sciences; or 41, Science Technology. Since the reported name of the program is science and the vast majority of science-related MFOS codes, except biological sciences, is listed in the physical sciences section in the *CIP* manual (page 129), this case is assigned to 40, Physical Sciences.

Also see *Associate of Science*, above.

Scientific illustration: The substantive area of the program appears to be illustration because the word "illustration" is part of the program name. However, both science fields and visual and performing arts are examined. Science fields (biological, physical, and scientific technology) do not specify any programs in illustration. Since the *CIP* manual includes graphic design, commercial art and illustration programs in CIP category 50 (*CIP* manual, page 162), this case is assigned to 50, Visual and Performing Arts.

Services: Since the information is not sufficient to determine an appropriate MFOS code, the case is coded 91, Indeterminable.

Spanish/cross culture: The reported verbatim string appears to be a combined program covering both language and culture. Considering the foreign language listed first to be the substantive area, and given that the *CIP* manual includes foreign languages, area and cultural studies in CIP category 16 (*CIP* manual, page 99), this case is coded 16, Foreign Languages and Literatures.

Speech communication: This case could be assigned to either 09, Communication or 23, English Language & Literature/Letters, which includes speech and rhetorical studies. Because the substantive area of the program appears to be communication and the *CIP* manual includes communication programs in CIP category 9 (*CIP* manual, page 68), this case is assigned to 09, Communication.

Taxes: This response is actually not ambiguous. Because all tax programs are included in the business management section in the *CIP* manual (page 198), this case is assigned to 52, Business Management & Administrative Services.

Urban planning: This case could be assigned to 04, Architecture & Related Programs; 44, or 45, Social Sciences & History, or possibly to 44 Public Administration and Services, if urban planning is interpreted in terms of city management. Architecture and related programs includes city/urban, community, and regional planning. Social science appears to focus more on urban studies and affairs, but not planning. Public administration includes fields related to the administration and management of entities including cities. This case is assigned to 04, Architecture & Related Programs, since it specifically refers to urban planning (and not study/analysis or management), which the *CIP* manual includes in category 04.

Veterinarian animal science: There is a question as to whether this response should be included in agriculture or in health sciences. The *CIP* manual indicates that veterinary sciences is included in the health-related category rather than in agriculture (*CIP* manual, page 186). This case is assigned to 51, Health Professions and Related Sciences.

Waste management: This string is not ambiguous. Since the *CIP* manual includes waste disposal procedures in CIP category 15 (*CIP* manual,page 95), this case is coded 15, Engineering-Related Technologies).

IV. LIST OF 2-DIGIT CIP CATEGORIES

Code	Titles
01	Agricultural Business & Production
02	Agricultural Sciences
03	Conservation & Renewable Natural Resources
04	Architecture & Related Programs
05	Area, Ethnic & Cultural Studies
08	Business
09	Communications
10	Communications Technologies
11	Computer & Information Sciences
12	Personal & Miscellaneous Services
13	Education
14	Engineering
15	Engineering-Related Technologies
16	Foreign Languages & Literatures
19	Home Economics
20	Vocational Home Economics
21	Technology Education/Industrial Arts
22	Law & Legal Studies
23	English Language & Literature/Letters
24	Liberal Arts & Sciences, General Studies & Humanities
25	Library Sciences
26	Biological Sciences/Life Sciences
27	Mathematics
28	Reserve Officers' Training Corps Programs
29	Military Technologies
30	Multi/Interdisciplinary Studies
31	Parks, Recreation, Leisure & Fitness Studies
32	Basic Skills
33	Citizenship Activities
34	Health-Related Knowledge & Skills
35	Interpersonal & Social Skills
36	Leisure & Recreational Activities
37	Personal Awareness & Self-Improvement
38	Philosophy & Religion
39	Theological Studies & Religious Vocations
40	Physical Sciences
41	Science Technologies
42	Psychology
43	Protective Services
44	Public Administration & Services
45	Social Sciences & History
46	Construction Trades
47	Mechanics & Repairers
48	Precision Production Trades
49	Transportation & Materials Moving Workers
50	Visual & Performing Arts
51	Health Professions & Related Sciences
52	Business Management & Administrative Services
91	Indeterminable/Other/Unknown

V. ALPHABETIC INDEX OF ALL CIP CODES

Code	Titles
52	Accounting
52	Accounting, Other
52	Accounting Technician
40	Acoustics
50	Acting and Directing
52	Actuarial Science
51	Acupuncture and Oriental Medicine
31	Adapted Physical Education/Therapeutic Recreation
34	Addiction Prevention and Treatment
13	Administration of Special Education
52	Administrative and Secretarial Services, Other
52	Administrative Assistant/Secretarial Science, General
13	Adult and Continuing Education Administration
13	Adult and Continuing Teacher Education
09	Advertising
15	Aeronautical and Aerospace Engineering Tech./Technician
14	Aerospace, Aeronautical and Astronautical Engineering
51	Aerospace Medicine Residency
05	African Studies
05	Afro-American (Black) Studies
01	Agricultural and Food Products Processing Operations and Mgmt.
02	Agricultural Animal Breeding and Genetics
02	Agricultural Animal Health
01	Agricultural Animal Husbandry and Production Management
02	Agricultural Animal Nutrition
02	Agricultural Animal Physiology
01	Agricultural Business/Agribusiness Operations
01	Agricultural Business and Management, General
01	Agricultural Business and Management, Other
01	Agricultural Business and Production, Other
01	Agricultural Economics
14	Agricultural Engineering
02	Agricultural Extension
01	Agricultural Mechanization, General
01	Agricultural Mechanization, Other
02	Agricultural Plant Pathology
02	Agricultural Plant Physiology
01	Agricultural Power Machinery Operator
01	Agricultural Production Workers and Managers, Other
01	Agricultural Production Workers and Managers, General
01	Agricultural Supplies and Related Services, Other
01	Agricultural Supplies Retailing and Wholesaling
13	Agricultural Teacher Education (Vocational)
02	Agriculture/Agricultural Sciences, General
02	Agriculture/Agricultural Sciences, Other

Code	Titles
02	Agronomy and Crop Science
28	Air Force R.O.T.C./Air Science
49	Air Traffic Controller
49	Air Transportation Workers, Other
47	Aircraft Mechanic/Technician, Airframe
47	Aircraft Mechanic/Technician, Powerplants
49	Aircraft Pilot (Private)
49	Aircraft Pilot and Navigator (Professional)
51	Alcohol/Drug Abuse Counseling
51	Allergies and Immunology Residency
45	American (United States) History
33	American Citizenship Education
45	American Government and Politics
05	American Indian/Native American Studies
23	American Literature (United States)
05	American Studies/Civilization
40	Analytical Chemistry
26	Anatomy
51	Anesthesiology Residency
02	Animal Sciences, General
02	Animal Sciences, Other
01	Animal Trainer
45	Anthropology
08	Apparel and Accessories Marketing Operations, Other
08	Apparel and Accessories Marketing Operations, General
45	Applied and Resource Economics
27	Applied Mathematics, General
27	Applied Mathematics, Other
01	Aquaculture Operations and Production Management
16	Arabic Language and Literature
45	Archeology
48	Architectural Drafting
14	Architectural Engineering
15	Architectural Engineering Tech./Technician
04	Architectural Environmental Design
04	Architectural Urban Design and Planning
04	Architecture
04	Architecture and Related Programs, Other
05	Area, Ethnic and Cultural Studies, Other
05	Area Studies, Other
28	Army R.O.T.C./Military Science
36	Art
50	Art, General
50	Art History, Criticism and Conservation
13	Art Teacher Education
51	Art Therapy
50	Arts Management

Code	Titles
05	Asian-American Studies
05	Asian Studies
40	Astronomy
40	Astrophysics
31	Athletic Training and Sports Medicine
40	Atmospheric Sciences and Meteorology
08	Auctioneering
51	Audiology/Hearing Sciences
47	Auto/Automotive Body Repairer
47	Auto/Automotive Mechanic/Technician
15	Automotive Engineering Tech./Technician
49	Aviation and Airway Science
49	Aviation Management
47	Aviation Systems and Avionics Main. Technologist/Technician
12	Baker/Pastry Chef
52	Banking and Financial Support Services
12	Barber/Hairstylist
12	Bartender/Mixologist
51	Basic Medical Sciences, Other
32	Basic Skills, General
32	Basic Skills, Other
39	Bible/Biblical Studies
39	Biblical and Other Theological Languages and Literatures
47	Bicycle Mechanic and Repairer
13	Bilingual/Bicultural Education
26	Biochemistry
14	Bioengineering and Biomedical Engineering
30	Biological and Physical Sciences
26	Biological Immunology
26	Biological Sciences/Life Sciences, Other
41	Biological Tech./Technician
26	Biology, General
13	Biology Teacher Education
15	Biomedical Engineering-Related Tech./Technician
26	Biometrics
26	Biophysics
30	Biopsychology
26	Biostatistics
26	Biotechnology Research
34	Birthing and Parenting Knowledge and Skills
51	Blood Bank Tech./Technician
51	Blood Banking Residency
36	Board, Card and Role-Playing Games
26	Botany, General
26	Botany, Other
09	Broadcast Journalism
46	Building/Property Main. and Manager
52	Business Administration and Management, General

Code	Titles
52	Business Administration and Management, Other
08	Business and Personal Services Marketing Operations, Other
35	Business and Social Skills
52	Business Communications
52	Business Computer Facilities Operator
52	Business Computer Programming/Programmer
52	Business, General
19	Business Home Economics
52	Business Information and Data Processing Services, Other
47	Business Machine Repairer
52	Business Management and Administrative Services, Other
52	Business/Managerial Economics
52	Business Marketing and Marketing Management
52	Business Quantitative Methods and Management Science, Other
08	Business Services Marketing Operations
52	Business Statistics
52	Business Systems Analysis and Design
52	Business Systems Networking and Telecommunications
13	Business Teacher Education (Vocational)
48	Cabinet Maker and Millworker
05	Canadian Studies
12	Card Dealer
51	Cardiology Residency
51	Cardiovascular Tech./Technician
32	Career Exploration/Awareness Skills
46	Carpenter
45	Cartography
26	Cell and Molecular Biology, Other
26	Cell Biology
14	Ceramic Sciences and Engineering
50	Ceramics Arts and Ceramics
53	Certificate of IEP Completion
40	Chemical and Atomic/Molecular Physics
14	Chemical Engineering
51	Chemical Pathology Residency
41	Chemical Tech./Technician
40	Chemistry, General
40	Chemistry, Other
13	Chemistry Teacher Education
20	Child Care and Guidance Workers and Managers, General
20	Child Care and Guidance Workers and Managers, Other
20	Child Care Provider/Assistant
20	Child Care Services Manager
20	Child Development, Care and Guidance
19	Child Growth, Care and Development Studies
51	Child/Pediatric Neurology Residency
51	Child Psychiatry Residency
16	Chinese Language and Literature

Code	Titles
51	Chiropractic (D.C., D.C.M.)
33	Citizenship Activities, General
33	Citizenship Activities, Other
04	City/Urban, Community and Regional Planning
15	Civil Engineering/Civil Tech./Technician
14	Civil Engineering, General
14	Civil Engineering, Other
48	Civil/Structural Drafting
16	Classical and Ancient Near Eastern Languages and Literatures, Other
16	Classics and Classical Languages and Literatures
51	Clinical and Medical Social Work
42	Clinical Psychology
20	Clothing and Textiles
19	Clothing/Apparel and Textile Studies
20	Clothing, Apparel and Textile Workers and Managers, Other
20	Clothing, Apparel and Textile Workers and Managers, General
42	Cognitive Psychology and Psycholinguistics
36	Collecting
13	College/Postsecondary Student Counseling and Personnel Services
53	College Preparatory High School Diploma
51	Colon and Rectal Surgery Residency
20	Commercial Garment and Apparel Worker
50	Commercial Photography
51	Communication Disorders, General
51	Communication Disorders Sciences and Services, Other
47	Communication Systems Installer and Repairer
09	Communications, General
09	Communications, Other
10	Communications Technol./Technicians, Other
13	Community and Junior College Administration
33	Community Awareness
51	Community Health Liaison
33	Community Involvement
44	Community Organization, Resources and Services
42	Community Psychology
23	Comparative Literature
20	Comprehensive Consumer and Homemaking Education
32	Computational Skills
11	Computer and Information Sciences, General
11	Computer and Information Sciences, Other
14	Computer Engineering
15	Computer Engineering Tech./Technician
36	Computer Games and Programming Skills
47	Computer Installer and Repairer
15	Computer Main. Tech./Technician
11	Computer Programming
11	Computer Science
11	Computer Systems Analysis

Code	Titles
13	Computer Teacher Education
48	Computer Typography and Composition Equipment Operator
03	Conservation and Renewable Natural Resources, Other
46	Construction and Building Finishers and Managers, Other
46	Construction/Building Inspector
15	Construction/Building Tech./Technician
49	Construction Equipment Operator
46	Construction Trades, Other
20	Consumer and Homemaking Education, Other
19	Consumer Economics and Science
20	Consumer Education
36	Cooking and Other Domestic Skills
43	Corrections/Correctional Administration
12	Cosmetic Services, General
12	Cosmetic Services, Other
12	Cosmetologist
42	Counseling Psychology
13	Counselor Education Counseling and Guidance Services
52	Court Reporter
50	Crafts, Folk Art and Artisanry
43	Criminal Justice and Corrections, Other
43	Criminal Justice/Law Enforcement Administration
43	Criminal Justice Studies
45	Criminology
51	Critical Care Anesthesiology Residency
51	Critical Care Medicine Residency
51	Critical Care Surgery Residency
01	Crop Production Operations and Management
12	Culinary Arts and Related Services, Other
12	Culinary Arts/Chef Training
13	Curriculum and Instruction
20	Custodial, Housekeeping and Home Services Workers and Managers, Gen.
20	Custodial, Housekeeping and Home Services Workers and Managers, Other
20	Custodian/Caretaker
20	Custom Tailor
51	Cytotechnologist
02	Dairy Science
50	Dance
51	Dance Therapy
36	Dancing
11	Data Processing Tech./Technician
45	Demography/Population Studies
51	Dental Assistant
51	Dental Clinical Sciences/Graduate Dentistry (M.S., Ph.D.)
51	Dental Hygienist
51	Dental Laboratory Technician
51	Dental/Oral Surgery Specialty
51	Dental Public Health Specialty

Code	Titles
51	Dental Residency Programs, Other
51	Dental Services, Other
51	Dentistry (D.D.S., D.M.D.)
51	Dermatology Residency
51	Dermatopathology Residency
50	Design and Applied Arts, Other
50	Design and Visual Communications
48	Desktop Publishing Equipment Operator
45	Development Economics and International Development
42	Developmental and Child Psychology
51	Diagnostic Medical Sonography
51	Diagnostic Radiology Residency
47	Diesel Engine Mechanic and Repairer
19	Dietetics/Human Nutritional Services
20	Dietician Assistant
49	Diver (Professional)
39	Divinity/Ministry (B.D., M.Div.)
48	Drafting, General
48	Drafting, Other
13	Drama and Dance Teacher Education
50	Drama/Theater Arts, General
50	Drama/Theater Literature, History and Criticism
50	Dramatic/Theater Arts and Stagecraft, Other
50	Drawing
13	Driver and Safety Teacher Education
20	Drycleaner and Launderer (Commercial)
40	Earth and Planetary Sciences
16	East and Southeast Asian Languages and Literatures, Other
05	East Asian Studies
16	East European Languages and Literatures, Other
05	Eastern European Area Studies
26	Ecology
45	Econometrics and Quantitative Economics
45	Economics, General
45	Economics, Other
13	Education Administration and Supervision, General
13	Education Administration and Supervision, Other
13	Education, General
13	Education of the Autistic
13	Education of the Blind and Visually Handicapped
13	Education of the Deaf and Hearing Impaired
13	Education of the Emotionally Handicapped
13	Education of the Gifted and Talented
13	Education of the Mentally Handicapped
13	Education of the Multiple Handicapped
13	Education of the Physically Handicapped
13	Education of the Specific Learning Disabled
13	Education of the Speech Impaired

Code	Titles
13	Education, Other
13	Educational Assessment, Testing and Measurement
13	Educational Evaluation and Research
13	Educational Evaluation, Research and Statistics, Other
13	Educational/Instructional Media Design
10	Educational/Instructional Media Tech./Technician
13	Educational Psychology
13	Educational Statistics and Research Methods
13	Educational Supervision
20	Elder Care Provider/Companion
15	Electrical and Electronic Engin.-Related Technol./Technicians, Other
47	Electrical and Electronics Equipment Installer and Repairer, General
47	Electrical and Electronics Equipment Installer and Repairer, Other
46	Electrical and Power Transmission Installer, Other
46	Electrical and Power Transmission Installer, General
15	Electrical, Electronic and Communications Engin. Tech./Technician
14	Electrical, Electronics and Communication Engineering
48	Electrical/Electronics Drafting
46	Electrician
51	Electrocardiograph Tech./Technician
51	Electroencephalograph Tech./Technician
12	Electrolysis Technician
15	Electromechanical Instrumentation and Main. Technol./Technicians, Other
15	Electromechanical Tech./Technician
13	Elementary, Middle and Secondary Education Administration
40	Elementary Particle Physics
13	Elementary Teacher Education
51	Emergency Medical Tech./Technician
51	Emergency Medicine Residency
51	Endocrinology and Metabolism Residency
51	Endodontics Specialty
15	Energy Management and Systems Tech./Technician
14	Engineering Design
14	Engineering, General
14	Engineering/Industrial Management
14	Engineering Mechanics
14	Engineering, Other
14	Engineering Physics
15	Engineering-Related Tech./Technician, General
15	Engineering-Related Technol./Technicians, Other
14	Engineering Science
23	English Composition
23	English Creative Writing
23	English Language and Literature, General
23	English Language and Literature/Letters, Other
23	English Literature (British and Commonwealth)
13	English Teacher Education
23	English Technical and Business Writing

Code	Titles
52	Enterprise Management and Operation, General
52	Enterprise Management and Operation, Other
26	Entomology
08	Entrepreneurship
15	Environmental and Pollution Control Tech./Technician
15	Environmental Control Technol./Technicians, Other
14	Environmental/Environmental Health Engineering
51	Environmental Health
03	Environmental Science/Studies
51	Epidemiology
01	Equestrian/Equine Studies, Horse Management and Training
05	Ethnic and Cultural Studies, Other
45	European History
05	European Studies
26	Evolutionary Biology
52	Executive Assistant/Secretary
20	Executive Housekeeper
31	Exercise Sciences/Physiology and Movement Studies
42	Experimental Psychology
20	Exploratory Homemaking
19	Family and Community Studies
19	Family and Marriage Counseling
19	Family/Consumer Resource Management, Other
20	Family/Individual Health
19	Family Life and Relations Studies
20	Family Living and Parenthood
51	Family Medicine Residency
19	Family Resource Management Studies
01	Farm and Ranch Management
20	Fashion and Fabric Consultant
50	Fashion Design and Illustration
08	Fashion Merchandising
08	Fashion Modeling
50	Fiber, Textile and Weaving Arts
50	Film/Cinema Studies
50	Film/Video and Photographic Arts, Other
50	Film-Video Making/Cinematography and Production
52	Finance, General
52	Financial Management and Services, Other
52	Financial Planning
08	Financial Services Marketing Operations
50	Fine Arts and Art Studies, Other
50	Fine/Studio Arts
43	Fire Protection and Safety Tech./Technician
43	Fire Protection, Other
43	Fire Science/Firefighting
43	Fire Services Administration
03	Fishing and Fisheries Sciences and Management

Code	Titles
49	Fishing Tech./Commercial Fishing
49	Flight Attendant
08	Floristry Marketing Operations
12	Food and Beverage/Restaurant Operations Manager
20	Food and Nutrition
20	Food Caterer
08	Food Products Retailing and Wholesaling Operations
08	Food Sales Operations
02	Food Sciences and Tech.
19	Food Systems Administration
19	Foods and Nutrition Science
19	Foods and Nutrition Studies, General
19	Foods and Nutrition Studies, Other
16	Foreign Language Interpretation and Translation
16	Foreign Languages and Literatures, General
16	Foreign Languages and Literatures, Other
13	Foreign Languages Teacher Education
51	Forensic Pathology Residency
43	Forensic Tech./Technician
03	Forest Harvesting and Production Tech./Technician
03	Forest Management
03	Forest Production and Processing, Other
03	Forest Products Tech./Technician
03	Forestry and Related Sciences, Other
03	Forestry, General
03	Forestry Sciences
52	Franchise Operation
16	French Language and Literature
13	French Language Teacher Education
12	Funeral Services and Mortuary Science
48	Furniture Designer and Maker
12	Gaming and Sports Officiating Services, Other
51	Gastroenterology Residency
08	General Buying Operations
08	General Distribution Operations
08	General Marketing Operations
52	General Office/Clerical and Typing Services
08	General Retailing and Wholesaling Operations and Skills, Other
08	General Retailing Operations
08	General Selling Skills and Sales Operations
24	General Studies
51	General Surgery Residency
13	General Teacher Education, Other
26	Genetics, Plant and Animal
40	Geochemistry
45	Geography
40	Geological and Related Sciences, Other
14	Geological Engineering

Code	Titles
40	Geology
14	Geophysical Engineering
40	Geophysics and Seismology
14	Geotechnical Engineering
51	Geriatric Medicine Residency
16	German Language and Literature
13	German Language Teacher Education
16	Germanic Languages and Literatures, Other
19	Gerontological Services
30	Gerontology
48	Graphic and Printing Equipment Operator, General
48	Graphic and Printing Equipment Operators, Other
50	Graphic Design, Commercial Art and Illustration
16	Greek Language and Literature (Ancient and Medieval)
16	Greek Language and Literature (Modern)
01	Greenhouse Operations and Management
47	Gunsmith
51	Hand Surgery Residency
36	Handicrafts and Model-Making
51	Health Aide
51	Health and Medical Administrative Services, Other
51	Health and Medical Assistants, Other
51	Health and Medical Biostatistics
51	Health and Medical Diagnostic and Treatment Services, Other
51	Health and Medical Laboratory Technol./Technicians, Other
51	Health and Medical Preparatory Programs, Other
31	Health and Physical Education/Fitness, Other
31	Health and Physical Education, General
13	Health Occupations Teacher Education (Vocational)
51	Health Physics/Radiologic Health
08	Health Products and Services Marketing Operations
51	Health Professions and Related Sciences, Other
34	Health-Related Knowledge and Skills, Other
51	Health System/Health Services Administration
13	Health Teacher Education
51	Health Unit Coordinator/Ward Clerk
51	Health Unit Manager/Ward Supervisor
15	Heating, Air Conditioning and Refrigeration Tech./Technician
47	Heating, Air Conditioning and Refrigeration Mechanic and Repairer
47	Heavy Equipment Main. and Repairer
16	Hebrew Language and Literature
51	Hematological Pathology Residency
51	Hematology Residency
51	Hematology Tech./Technician
53	High School Certificate of Competence
53	High School Certificates, Other
53	High School Equivalence Certificate
53	High School/Secondary Diplomas, Other

Code	Titles
13	Higher Education Administration
05	Hispanic-American Studies
30	Historic Preservation, Conservation and Architectural History
45	History and Philosophy of Science and Tech.
45	History, General
45	History, Other
13	History Teacher Education
08	Home and Office Products Marketing Operations, Other
19	Home Economics Communications
19	Home Economics, General
19	Home Economics, Other
13	Home Economics Teacher Education (Vocational)
20	Home Furnishings and Equipment Installers and Consultants, Other
20	Home Furnishings and Equipment Installers and Consultants, General
51	Home Health Aide
36	Home Maintenance and Improvement
20	Home Management
08	Home Products Marketing Operations
20	Homemaker's Aide
53	Honors/Regents High School Diploma
02	Horticulture Science
01	Horticulture Services Operations and Management, General
01	Horticulture Services Operations and Management, Other
51	Hospital/Health Facilities Administration
52	Hospitality/Administration Management
08	Hospitality and Recreation Marketing Operations, Other
08	Hospitality and Recreation Marketing Operations, General
52	Hospitality Services Management, Other
52	Hotel/Motel and Restaurant Management
08	Hotel/Motel Services Marketing Operations
20	Housing, Home Furnishings, and Equipment
19	Housing Studies, General
19	Housing Studies, Other
52	Human Resources Management
52	Human Resources Management, Other
24	Humanities/Humanistic Studies
15	Hydraulic Tech./Technician
51	Hypnotherapy
51	Immunopathology Residency
19	Individual and Family Development Studies, General
19	Individual and Family Development Studies, Other
42	Industrial and Organizational Psychology
50	Industrial Design
47	Industrial Electronics Installer and Repairer
47	Industrial Equipment Main. and Repairers, Other
47	Industrial Machinery Main. and Repairer
14	Industrial/Manufacturing Engineering
15	Industrial/Manufacturing Tech./Technician

Code	Titles
15	Industrial Production Technol./Technicians, Other
41	Industrial Radiologic Tech./Technician
51	Infectious Disease Residency
52	Information Processing/Data Entry Technician
11	Information Sciences and Systems
40	Inorganic Chemistry
20	Institutional Food Services Administrator
20	Institutional Food Workers and Administrators, General
20	Institutional Food Workers and Administrators, Other
47	Instrument Calibration and Repairer
15	Instrumentation Tech./Technician
52	Insurance and Risk Management
08	Insurance Marketing Operations
04	Interior Architecture
50	Interior Design
19	Interior Environments
50	Intermedia
51	Internal Medicine Residency
01	International Agriculture
13	International and Comparative Education
52	International Business
52	International Business Marketing
45	International Economics
52	International Finance
45	International Relations and Affairs
35	Interpersonal and Social Skills, General
35	Interpersonal and Social Skills, Other
35	Interpersonal Relationships Skills
52	Investments and Securities
05	Islamic Studies
16	Italian Language and Literature
16	Japanese Language and Literature
05	Jewish/Judaic Studies
32	Job Seeking/Changing Skills
09	Journalism
09	Journalism and Mass Communication, Other
13	Junior High/Intermediate/Middle School Teacher Education
22	Juridical Science/Legal Specialization(LL.M.,M.C.L.,J.S.D./S.J.D.)
12	Kitchen Personnel/Cook and Assistant Training
52	Labor/Personnel Relations and Studies
51	Laboratory Animal Medicine
51	Laboratory Medicine Residency
04	Landscape Architecture
01	Landscaping Operations and Management
15	Laser and Optical Tech./Technician
05	Latin American Studies
16	Latin Language and Literature (Ancient and Medieval)
22	Law (LL.B., J.D.)

Code	Titles
22	Law and Legal Studies, Other
43	Law Enforcement/Police Science
48	Leatherworkers and Upholsterers, Other
52	Legal Administrative Assistant/Secretary
36	Leisure and Recreational Activities, General
36	Leisure and Recreational Activities, Other
24	Liberal Art and Sciences, General Studies and Humanities, Other
24	Liberal Arts and Sciences/Liberal Studies
25	Library Assistant
25	Library Science/Librarianship
25	Library Science, Other
46	Lineworker
16	Linguistics
48	Lithographer and Platemaker
47	Locksmith and Safe Repairer
03	Logging/Timber Harvesting
52	Logistics and Materials Management
48	Machine Shop Assistant
48	Machinist/Machine Technologist
47	Major Appliance Installer and Repairer
12	Make-Up Artist
52	Management Information Systems and Business Data Processing, General
52	Management Science
26	Marine/Aquatic Biology
49	Marine Main. and Ship Repairer
49	Marine Science/Merchant Marine Officer
52	Marketing Management and Research, Other
08	Marketing Operations/Marketing and Distribution, Other
13	Marketing Operations Teacher Ed./Mkt. & Distribution Teacher Ed. (Voc.)
52	Marketing Research
46	Mason and Tile Setter
09	Mass Communications
12	Massage
14	Material Engineering
14	Materials Science
27	Mathematical Statistics
27	Mathematics
30	Mathematics and Computer Science
27	Mathematics, Other
13	Mathematics Teacher Education
12	Meatcutter
48	Mechanical Drafting
14	Mechanical Engineering
15	Mechanical Engineering/Mechanical Tech./Technician
15	Mechanical Engineering-Related Technol./Technicians, Other
48	Mechanical Typesetter and Composer
47	Mechanics and Repairers, Other
52	Medical Administrative Assistant/Secretary

Code	Titles
51	Medical Anatomy
51	Medical Assistant
51	Medical Biochemistry
51	Medical Biomathematics and Biometrics
51	Medical Cell Biology
51	Medical Clinical Sciences (M.S., Ph.D.)
51	Medical Dietician
51	Medical Genetics
51	Medical Illustrating
51	Medical Immunology
51	Medical Laboratory Assistant
51	Medical Laboratory Technician
51	Medical Microbiology
51	Medical Molecular Biology
51	Medical Neurobiology
51	Medical Nutrition
51	Medical Office Management
51	Medical Pathology
51	Medical Pharmacology and Pharmaceutical Sciences
51	Medical Physics/Biophysics
51	Medical Physiology
51	Medical Radiologic Tech./Technician
51	Medical Records Administration
51	Medical Records Tech./Technician
51	Medical Residency Programs, Other
51	Medical Technology
51	Medical Toxicology
51	Medical Transcription
40	Medicinal/Pharmaceutical Chemistry
51	Medicine (M.D.)
30	Medieval and Renaissance Studies
51	Mental Health Services, Other
50	Metal and Jewelry Arts
14	Metallurgical Engineering
15	Metallurgical Tech./Technician
40	Metallurgy
26	Microbiology/Bacteriology
16	Middle Eastern Languages and Literatures, Other
05	Middle Eastern Studies
29	Military Technologies
14	Mining and Mineral Engineering
15	Mining and Petroleum Technol./Technicians, Other
15	Mining Tech./Technician
26	Miscellaneous Biological Specializations, Other
47	Miscellaneous Mechanics and Repairers, Other
40	Miscellaneous Physical Sciences, Other
39	Missions/Missionary Studies and Misology
26	Molecular Biology

Code	Titles
47	Motorcycle Mechanic and Repairer
51	Movement Therapy
30	Multi/Interdisciplinary Studies, Other
51	Musculoskeletal Oncology Residency
30	Museology/Museum Studies
36	Music
50	Music Business Management and Merchandising
50	Music Conducting
50	Music, General
50	Music - General Performance
50	Music History and Literature
50	Music, Other
50	Music - Piano and Organ Performance
13	Music Teacher Education
50	Music Theory and Composition
51	Music Therapy
50	Music - Voice and Choral/Opera Performance
47	Musical Instrument Repairer
50	Musicology and Ethnomusicology
03	Natural Resources Conservation, General
03	Natural Resources Law Enforcement and Protective Services
03	Natural Resources Management and Policy
03	Natural Resources Management and Protective Services, Other
36	Nature Appreciation
51	Naturopathic Medicine
14	Naval Architecture and Marine Engineering
28	Navy/Marine Corps R.O.T.C./Naval Science
51	Neonatal-Perinatal Medicine Residency
51	Nephrology Residency
51	Neurological Surgery/Neurosurgery Residency
51	Neurology Residency
51	Neuropathology Residency
26	Neuroscience
52	Non-Profit and Public Management
41	Nuclear and Industrial Radiologic Technol./Technicians, Other
14	Nuclear Engineering
51	Nuclear Medical Tech./Technician
51	Nuclear Medicine Residency
41	Nuclear/Nuclear Power Tech./Technician
40	Nuclear Physics
51	Nuclear Radiology Residency
51	Nurse Assistant/Aide
01	Nursery Operations and Management
51	Nursing (R.N. Training)
51	Nursing Administration (Post-R.N.)
51	Nursing, Adult Health (Post-R.N.)
51	Nursing Anesthetist (Post-R.N.)
51	Nursing, Family Practice (Post-R.N.)

Code	Titles
51	Nursing, Maternal/Child Health (Post-R.N.)
51	Nursing Midwifery (Post-R.N.)
51	Nursing, Other
51	Nursing, Pediatric (Post-R.N.)
51	Nursing, Psychiatric/Mental Health (Post-R.N.)
51	Nursing, Public Health (Post-R.N.)
51	Nursing Science (Post-R.N.)
51	Nursing, Surgical (Post-R.N.)
26	Nutritional Sciences
51	Obstetrics and Gynecology Residency
51	Occupational Health and Industrial Hygiene
51	Occupational Medicine Residency
15	Occupational Safety and Health Tech./Technician
51	Occupational Therapy
51	Occupational Therapy Assistant
14	Ocean Engineering
40	Oceanography
08	Office Products Marketing Operations
52	Office Supervision and Management
51	Oncology Residency
52	Operations Management and Supervision
27	Operations Research
51	Ophthalmic Medical Assistant
51	Ophthalmic Medical Technologist
51	Ophthalmic/Optometric Services, Other
51	Ophthalmology Residency
51	Optical Technician/Assistant
51	Opticianry/Dispensing Optician
40	Optics
51	Optometric/Ophthalmic Laboratory Technician
51	Optometry (O.D.)
51	Oral Pathology Specialty
40	Organic Chemistry
52	Organizational Behavior Studies
01	Ornamental Horticulture Operations and Management
51	Orthodontics Specialty
51	Orthopedics/Orthopedic Surgery Residency
51	Orthoptics
51	Orthotics/Prosthetics
51	Osteopathic Medicine (D.O.)
51	Otolaryngology Residency
05	Pacific Area Studies
46	Painter and Wall Coverer
50	Painting
40	Paleontology
22	Paralegal/Legal Assistant
26	Parasitology
31	Parks, Recreation and Leisure Facilities Management

Code	Titles
31	Parks, Recreation and Leisure Studies
31	Parks, Recreation, Leisure and Fitness Studies, Other
39	Pastoral Counseling and Specialized Ministries
26	Pathology, Human and Animal
51	Pathology Residency
30	Peace and Conflict Studies
51	Pediatric Cardiology Residency
51	Pediatric Endocrinology Residency
51	Pediatric Hemato-Oncology Residency
51	Pediatric Nephrology Residency
51	Pediatric Orthopedics Residency
51	Pediatric Surgery Residency
51	Pediatrics Residency
51	Pedodontics Specialty
51	Perfusion Tech./Technician
51	Periodontics Specialty
12	Personal and Miscellaneous Services, Other
37	Personal Awareness and Self-Improvement, Other
37	Personal Decision-Making Skills
34	Personal Health Improvement and Maintenance
08	Personal Services Marketing Operations
36	Pet Ownership and Care
14	Petroleum Engineering
08	Petroleum Products Retailing Operations
15	Petroleum Tech./Technician
26	Pharmacology, Human and Animal
51	Pharmacy (B. Pharm., Pharm.D.)
51	Pharmacy Administration and Pharmaceutics
51	Pharmacy, Other
51	Pharmacy Technician/Assistant
38	Philosophy
38	Philosophy and Religion
10	Photographic Tech./Technician
50	Photography
51	Physical and Rehabilitation Medicine Residency
40	Physical and Theoretical Chemistry
13	Physical Education Teaching and Coaching
41	Physical Science Technol./Technicians, Other
40	Physical Sciences, General
40	Physical Sciences, Other
51	Physical Therapy
51	Physical Therapy Assistant
51	Physician Assistant
40	Physics, General
40	Physics, Other
13	Physics Teacher Education
42	Physiological Psychology/Psychobiology
26	Physiology, Human and Animal

Code	Titles
02	Plant Breeding and Genetics
26	Plant Pathology
26	Plant Physiology
02	Plant Protection (Pest Management)
02	Plant Sciences, General
02	Plant Sciences, Other
40	Plasma and High-Temperature Physics
51	Plastic Surgery Residency
15	Plastics Tech./Technician
50	Playwriting and Screenwriting
46	Plumber and Pipefitter
51	Podiatry (D.P.M., D.P., Pod.D.)
45	Political Science and Government, Other
45	Political Science, General
40	Polymer Chemistry
14	Polymer/Plastics Engineering
16	Portuguese Language and Literature
02	Poultry Science
51	Practical Nurse (L.P.N. Training)
51	Pre-Dentistry Studies
13	Pre-Elementary/Early Childhood/Kindergarten Teacher Education
22	Pre-Law Studies
51	Pre-Medicine Studies
51	Pre-Pharmacy Studies
39	Pre-Theological/Pre-Ministerial Studies
51	Pre-Veterinary Studies
48	Precision Metal Workers, Other
48	Precision Production Trades, Other
51	Preventive Medicine Residency
48	Printing Press Operator
50	Printmaking
51	Prosthodontics Specialty
43	Protective Services, Other
51	Psychiatric/Mental Health Services Technician
51	Psychiatry Residency
51	Psychoanalysis
42	Psychology, General
42	Psychology, Other
44	Public Administration
44	Public Administration and Services, Other
45	Public/Applied History and Archival Administration
52	Public Finance
51	Public Health Education and Promotion
51	Public Health, General
51	Public Health Medicine Residency
51	Public Health, Other
44	Public Policy Analysis
09	Public Relations and Organizational Communications

Code	Titles
51	Pulmonary Disease Residency
52	Purchasing, Procurement and Contracts Management
15	Quality Control and Safety Technol./Technicians, Other
15	Quality Control Tech./Technician
39	Rabbinical and Talmudic Studies (M.H.L./Rav)
26	Radiation Biology/Radiobiology
51	Radiation Oncology Residency
09	Radio and Television Broadcasting
10	Radio and Television Broadcasting Tech./Technician
51	Radioisotopic Pathology Residency
02	Range Science and Management
36	Reading
32	Reading, Literacy and Communication Skills
13	Reading Teacher Education
52	Real Estate
52	Receptionist
08	Recreation Products/Services Marketing Operations
51	Recreational Therapy
53	Regular High School Diploma
51	Rehabilitation/Therapeutic Services, Other
38	Religion/Religious Studies
39	Religious Education
39	Religious/Sacred Music
51	Respiratory Therapy Technician
51	Rheumatology Residency
15	Robotics Tech./Technician
16	Romance Languages and Literatures, Other
05	Russian and Slavic Area Studies
16	Russian Language and Literature
05	Scandinavian Area Studies
16	Scandinavian Languages and Literatures
42	School Psychology
13	Science Teacher Education, General
30	Science, Tech. and Society
41	Science Technol./Technicians, Other
50	Sculpture
13	Secondary Teacher Education
43	Security and Loss Prevention Services
37	Self-Awareness and Personal Assessment
37	Self-Esteem and Values Clarification
48	Sheet Metal Worker
48	Shoe, Boot and Leather Repairer
51	Sign Language Interpreter
16	Slavic Languages and Literatures (Other Than Russian)
47	Small Engine Mechanic and Repairer
13	Social and Philosophical Foundations of Education
42	Social Psychology
13	Social Science Teacher Education

Code	Titles
45	Social Sciences and History, Other
45	Social Sciences, General
13	Social Studies Teacher Education
44	Social Work
31	Socio-Psychological Sports Studies
45	Sociology
02	Soil Sciences
15	Solar Tech./Technician
40	Solid State and Low-Temperature Physics
16	South Asian Languages and Literatures
05	South Asian Studies
05	Southeast Asian Studies
16	Spanish Language and Literature
13	Spanish Language Teacher Education
13	Special Education, General
13	Special Education, Other
23	Speech and Rhetorical Studies
51	Speech-Language Pathology
51	Speech-Language Pathology and Audiology
13	Speech Teacher Education
31	Sport and Fitness Administration/Management
36	Sports and Exercise
51	Sports Medicine Residency
47	Stationary Energy Sources Installer and Operator
37	Stress Management and Coping Skills
14	Structural Engineering
51	Surgical/Operating Room Technician
15	Surveying
14	Systems Engineering
30	Systems Science and Theory
52	Taxation
13	Teacher Assistant/Aide
13	Teacher Education, Multiple Levels
13	Teacher Education, Specific Academic and Vocational Programs, Other
13	Teaching English as a Second Language/Foreign Language
13	Technical Teacher Education (Vocational)
50	Technical Theater/Theater Design and Stagecraft
21	Technology Education/Industrial Arts
13	Technology Teacher Education/Industrial Arts Teacher Education
14	Textile Sciences and Engineering
36	Theater
39	Theological and Ministerial Studies, Other
39	Theological Studies and Religious Vocations, Other
39	Theology/Theological Studies
40	Theoretical and Mathematical Physics
51	Theriogenology
51	Thoracic Surgery Residency
48	Tool and Die Maker/Technologist

Code	Titles
08	Tourism and Travel Services Marketing Operations, Other
08	Tourism Promotion Operations
26	Toxicology
13	Trade and Industrial Teacher Education (Vocational)
14	Transportation and Highway Engineering
49	Transportation and Materials Moving Workers, Other
36	Travel and Exploration
08	Travel Services Marketing Operations
52	Travel-Tourism Management
49	Truck, Bus and Other Commercial Vehicle Operator
01	Turf Management
12	Umpires and Other Sports Officials
48	Upholsterer
45	Urban Affairs/Studies
51	Urology Residency
51	Vascular Surgery Residency
49	Vehicle and Equipment Operators, Other
47	Vehicle and Mobile Equipment Mechanics and Repairers, Other
08	Vehicle and Petroleum Products Marketing Operations, Other
08	Vehicle Marketing Operations
08	Vehicle Parts and Accessories Marketing Operations
51	Veterinarian Assistant/Animal Health Technician
51	Veterinary Anesthesiology
51	Veterinary Clinical Sciences (M.S., Ph.D.)
51	Veterinary Dentistry
51	Veterinary Dermatology
51	Veterinary Emergency and Critical Care Medicine
51	Veterinary Internal Medicine
51	Veterinary Medicine (D.V.M.)
51	Veterinary Microbiology
51	Veterinary Nutrition
51	Veterinary Ophthalmology
51	Veterinary Pathology
51	Veterinary Practice
51	Veterinary Preventive Medicine
51	Veterinary Radiology
51	Veterinary Residency Programs, Other
51	Veterinary Surgery
51	Veterinary Toxicology
26	Virology
50	Visual and Performing Arts
50	Visual and Performing Arts, Other
53	Vocational High School Diploma
20	Vocational Home Economics, Other
51	Vocational Rehabilitation Counseling
12	Waiter/Waitress and Dining Room Manager
47	Watch, Clock and Jewelry Repairer
15	Water Quality and Wastewater Treatment Tech./Technician

Code	Titles
14	Water Resources Engineering
49	Water Transportation Workers, Other
48	Welder/Welding Technologist
05	Western European Studies
03	Wildlife and Wildlands Management
20	Window Treatment Maker and Installer
05	Women's Studies
03	Wood Science and Pulp/Paper Tech.
48	Woodworkers, General
48	Woodworkers, Other
36	Writing
51	Zoological Medicine
26	Zoology, General
26	Zoology, Other