

**U.S. Department of Education**  
Institute of Education Sciences  
NCES 2003-156

# **Baccalaureate and Beyond Longitudinal Study: 2000-01 (B&B: 2000/01) Methodology Report**

## **Technical Report**





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## **Technical Report**

**August 2003**

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# Executive Summary

## *2000/01 Baccalaureate and Beyond Longitudinal Study*

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### **Introduction**

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The 2000/01 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01), conducted by Research Triangle Institute (RTI) and sponsored by the U.S. Department of Education's National Center for Education Statistics (NCES), follows a cohort of students who were identified as recipients of a bachelor's degree during the 1999–2000 academic year. This cohort of students was first interviewed in the 1999–2000 cycle of the National Postsecondary Student Aid Study (NPSAS:2000), the base-year study for B&B:2000/01. B&B:2000/01, the first and only planned follow-up survey of this cohort, was conducted in 2001. The survey focused on time to degree completion, participation in post-baccalaureate education and employment, and the activities of newly qualified teachers.

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### **Sample Design**

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The respondent universe for the B&B:2000/01 follow-up survey consisted of all students who attended postsecondary educational institutions between July 1, 1999, and June 30, 2000, in the United States and Puerto Rico, and who received or expected to receive bachelor's degrees during this time frame. Approximately 11,700 confirmed and potentially eligible bachelor's degree recipients were selected for participation in B&B:2000/01. Of these, about 70 were determined during the follow-up survey to be ineligible. From the remaining nearly 11,630 eligible sample members, about 10,030 were located and interviewed in the follow-up survey.

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### **Instrumentation**

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The B&B:2000/01 follow-up interview focused primarily on the activities of respondents since receiving their bachelor's degree. The first section of the survey collected information on nonrespondents to the base-year survey (NPSAS:2000) and included

items to verify eligibility. The second section dealt with undergraduate enrollment history and loan burden. The third section gathered background and demographic information about respondents and their families. The fourth section focused on post-baccalaureate enrollment, including graduate and doctoral/first-professional programs, as well as technical and vocational programs. The fifth section collected extensive information on postbaccalaureate employment. The next section gathered data on professional licensure, certification, and job-related training. The final section specifically pertained to teaching experiences for newly qualified teachers.

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### **Data Collection Design and Outcomes**

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#### ***Training***

Training programs on successfully locating and interviewing sample members were developed for telephone staff. Topics covered included administrative procedures required for case management; quality control of interactions with sample members, parents, and other contacts; the purpose of B&B:2000/01 and the uses of the data to be collected; and the organization and operation of the computer-assisted telephone interview (CATI) program to be used in data collection. Tracing staff received additional training specific to the locating needs of the study (see discussion below).

#### ***Interviewing***

Using CATI, with telephone locating, interviewing began in July 2001. The overall unweighted response rate was 86 percent, after eliminating ineligibles from the original sample of about 11,700. The weighted overall response rate was 75 percent. Of those eligible sample members who were successfully located, the unweighted response rate was 94 percent. On average, it took about 19 minutes to complete the interview.

Sample members for whom no locating information was available were sent directly to the tracing unit for specialized tracing. The tracing unit was also used for intensive tracing, once all contact information was exhausted during attempts to conduct the telephone interview. About 630 cases in total were sent to the unit for intensive tracing; of these, nearly 400 sample members completed the interview, resulting in a 64 percent unweighted response rate for intensive tracing cases.

### **Refusal Conversion**

The ability of interviewers to gain the cooperation of sample members, and thus avoid refusals, is important to successful interviewing. RTI staffs its Telephone Survey Division with refusal conversion specialists who have received specialized training and are experienced in attempting to convert (interview) sample members who refuse to complete interviews. In B&B:2000/01, approximately 1,520 sample members refused at least once to participate in the interview. Of those, 70 percent were successfully converted and interviewed.

### **Indeterminate Responses**

Efforts were made to encourage responses to all interview questions and to limit indeterminates, defined as a “don’t know” response or a refusal to answer a question. As a result of these efforts, item nonresponse throughout the interview was low, with only 6 of 556 items having indeterminate response rates above 10 percent.

### **Online Coding**

The B&B instrument allowed computer-assisted online coding of literal responses for postsecondary institution, major field of study, occupation, and industry. These online coding systems were designed to improve data quality by capitalizing on the ability of respondents to clarify information at the time the coding was performed. Of those responses requiring online coding, the highest rates of uncodable responses were for elementary/secondary school and for postsecondary institutional coding (about 14 and 5 percent, respectively), most likely because the coding system included only U.S. institutions and some respondents attended foreign institutions. Major field of study, occupation, and industry codes all had less than 2 percent uncodable responses.

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## **Analysis Weights**

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Analysis weights were developed for the approximately 10,030 final respondents to the B&B:2000/01 interview. This was done by first testing for potential nonresponse bias; then adjusting for the effects of bias, and finally, poststratifying to known population totals. The quality of final weights was evaluated by a variety of methods. Overall institutional response rates were computed, as were illustrative design effects. An item nonresponse analysis was performed for selected variables. Variance estimations were calculated by either the Taylor series or balanced repeated replications (BRR) method.

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## **Data Files**

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The B&B:2000/01 restricted data file, documented by the electronic codebook (ECB), contains derived variable and interview data for the base year and B&B follow-up studies. Data collected from institutional records, government databases, and admission test vendors are also contained on the restricted file. The restricted file is available to researchers who have applied for, and received, authorization from NCES to access restricted research files. A separate public-use Data Analysis System (DAS), containing the derived variables and associated documentation, enables users to create summary tables with design-correct standard errors. The DAS is available online at <http://nces.ed.gov/das>.

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## **Products**

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The major products of B&B:2000/01 include the restricted research files with associated ECB, a public-use DAS, and this methodology report. In addition, a descriptive report provides an overview of data topics, such as time to degree, labor market experiences, entry to graduate school, and household demographics. A second descriptive report summarizes the experiences of newly qualified teachers.

# Foreword

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This report describes and evaluates the methods and procedures used for the full-scale 2000/01 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01). B&B:2000/01 included important changes from the previous B&B survey (conducted in 1994 with a follow-up in 1997) in sample design and collection of data. We hope that the information provided in this report will be useful to interested readers. This study was based on a nationally representative sample of institutions and students and may therefore be used to produce national estimates. Additional information about B&B:2000/01 and the B&B series is available on the web at <http://nces.ed.gov/surveys/b&b>.

C. Dennis Carroll  
Associate Commissioner  
Postsecondary Studies Division





# Acknowledgments

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Particular thanks are also extended to the study Technical Review Panel members, who provided considerable insight and guidance in development of the design and instrumentation of this study. Thanks are also extended to the many project staff members of the two contractors: Research Triangle Institute (RTI) and MPR Associates, Inc. At Research Triangle Institute, special acknowledgment is due to Lil Clark and Lynne Kline for their excellent and tireless efforts in preparing the various drafts and final version of this document.

Most of all, we are greatly indebted to the baccalaureate degree recipients who generously participated in the telephone follow-up survey. Their willingness to take the time to share information made this study a success.



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# Chapter 1

## Introduction, Background, and Purpose

---

This document describes, summarizes, and evaluates the methodological procedures and results for the full-scale 2000/01 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01). B&B:2000/01 was the follow-up study of bachelor's degree recipients identified during data collection in 2000. Research Triangle Institute (RTI), assisted by MPR Associates, Inc., conducted the study for the National Center for Education Statistics (NCES) of the U.S. Department of Education, as authorized by Title IV, Section 401 of the National Education Statistics Act of 1994 (P.L. 103-382).

This introductory chapter briefly describes the background, purposes, field test, and the schedule of activities and products of B&B:2000/01. In chapter 2, the study design and method are described. Overall outcomes of data collection are presented in chapter 3. Chapter 4 documents the quality of the data collected. Chapter 5 explains the methods used for variable construction and development of the data files. Chapter 6 provides a summary of the weighting procedures and estimate precision for the study. Materials used during the study are provided as appendixes to the report and cited, where appropriate, in the text.

### 1.1 Background and Purpose of the Baccalaureate and Beyond Study

B&B was designed to provide information of interest regarding higher education in the United States to policymakers, educators, and researchers. The focus of the study is on all types of baccalaureate degree holders, providing information regarding the supply of people trained in a variety of fields including education, science, and technology. As in the previous B&B study, base year data for potential B&B respondents were collected during National Postsecondary Student Aid Study (NPSAS) data collection.

NPSAS:2000, the base year collection for B&B:2000/01, was a comprehensive, nationwide study designed to determine how students and their families pay for postsecondary education and to provide demographic information on the postsecondary student population in the United States. NPSAS has been conducted since 1987 at 3- and 4-year intervals. NPSAS:93 served as the base year of data collection for the first Baccalaureate and Beyond Longitudinal Study (B&B:93/94). Students who were identified in NPSAS:93 as baccalaureate recipients during the 1992–93 school year were interviewed again in 1994 and 1997, and will be interviewed a fourth time in 2003. However, there will be no further follow-up with the B&B:2000/01 cohort.

One of the major issues addressed by the B&B studies is the length of time taken by undergraduates to earn bachelors' degrees. B&B:2000/01 permits continuation of the "time to degree" trend data provided by the preceding NCES Recent College Graduates (RCG) cross-

sectional study series and the B&B:93/94 longitudinal surveys. These data are periodically reported as indicators in the annual *Condition of Education* published by NCES.

Two other pertinent study issues concern the economic value of obtaining a bachelor's degree and the debt associated with degree attainment. B&B:2000/01 extends trend data from RCG and B&B:93/94 on employment status and income 1 year after graduation. The issue of student debt, through both federal student loan programs and the increased use of credit cards, is particularly relevant for recent college graduates. Data collected for B&B:2000/01 provide an estimate of the average debt accumulated by students in order to complete a bachelor's degree, and how this may affect students' future plans. With the addition of federal student loan history data from the U.S. Department of Education's National Student Loan Data System (NSLDS), B&B:2000/01 expands and improves information on student debt and repayment.

B&B:2000/01 gathered a variety of data on post-baccalaureate education, such as the demographics of those attending, fields of study, and whether these students also participated in the work force. It also offers an important opportunity to study early outcomes of newly qualified teachers, including entry and attrition, certification, and participation in the teaching profession, thus enabling the continuation of a series of earlier NCES teaching reports. B&B:93/94 provided the data for the NCES report on newly qualified teachers.<sup>1</sup> B&B:2000/01 will again collect these data and offers the opportunity for comparative analyses. These data can be used to determine whether recent graduates' perspectives regarding teaching or the likelihood to enter teaching have changed in the 7 years between cohorts. In addition, B&B:2000/01 provides information about the supply of graduates trained in science and technology, and about the graduates who are employed in those fields.

## **1.2 Overview of B&B:2000/01**

B&B:2000/01 occurred in two parts: (1) a field test and (2) the subsequent full-scale study, both of which are described below. There were two eligibility requirements for participation in the B&B:2000/01 full-scale study. First, a person had to have been enrolled at the sampled NPSAS school at some point during the 1999–2000 academic year; and second, either the student or institution must have indicated receipt or expected completion of a baccalaureate degree within the designated time frame (July 1, 1999, to June 30, 2000). Survey data were collected using computer-assisted telephone interviews (CATI). Over 10,000 respondents completed interviews for this study, with data collection occurring between July 9, 2001, and November 20, 2001.

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<sup>1</sup> Henke, R.R., Geis, S., Giambattista, J. (1996). *Out of the Lecture Hall and Into the Classroom: 1992-1993 College Graduates and Elementary/Secondary School Teaching, With an Essay on Undergraduate Academic Experiences* (NCES 96-899). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

### 1.3 Summary of B&B:2000/01 Field Test

The field test data collection period for the B&B:2000/01 was March 2000 to July 2000. The major purpose of the field test was to evaluate all operational and methodological procedures, instruments, and systems proposed for use in the first follow-up study. The field test sample for B&B:2000/01 comprised 860 students from the NPSAS:2000 field test sample. Data were collected from 700 respondents, resulting in an 81 percent response rate. Based on the results of this field test, several changes were made to the B&B:2000/01 full-scale study. These included the following:

- a change in the eligibility requirements for participation,
- the deletion of selected survey items,
- the modification of survey items based on field-test responses, and
- a reduction in the use of nonresponse incentive payments.

Previous cycles of NPSAS had required baccalaureate degree recipients to have been enrolled at the NPSAS institution during the NPSAS year. In the B&B:2000/01 field test, all baccalaureate degree recipients during the NPSAS year were considered potential sample members, regardless of whether they were enrolled at the NPSAS school during the NPSAS year. However, during the field test, it was determined that some questions were difficult to answer for those respondents who had received their degree at a school other than the NPSAS school. Therefore, the change in eligibility implemented in the B&B:2000/01 field test was reversed, effectively keeping eligibility requirements the same for the B&B:2000/01 full-scale study as has been used in the prior B&B studies.

Several items were deleted from the full-scale study because they were deemed unnecessary for analysis. Typically, item revisions involved adding more response categories (see appendix B for revised data elements). Other item modifications included changing item wording so it was more specific or easier for respondents to understand. For a complete summary of the B&B:2000/01 field test study and an in-depth description of the recommended changes to the current full-scale study, readers are encouraged to refer to the field test methodology report.<sup>2</sup> It is available online at the National Center of Education Statistics web site (<http://www.nces.ed.gov/pubsearch/pubsinfo.asp?pubid=200115>).

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<sup>2</sup>Biber, M.R., Link, M.W., Riccobono, J.A., and Siegel, P.H. (2001). *Baccalaureate and Beyond Longitudinal Study: 2000/01, Follow-up Field Test Methodology Report* (NCES 2001-15). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

#### 1.4 Schedule and Products for B&B:2000/01

B&B:2000/01 full-scale data collection took place between July 9 and November 20, 2001. Table 1.1 presents the operational schedule for the B&B: 2000/01 follow-up study.

**Table 1.1. Start and end dates for major B&B:2000/01 study activities**

Activity	Start date	End date
NPSAS:2000 data collection	May 22, 2000	February 28, 2001
B&B:2000/01 field test data collection	March 28, 2000	July 2, 2000
B&B:2000/01 Follow-up study		
-Pre-load base year data into CATI records	June 21, 2001	June 21, 2001
-CATI training	July 5, 2001	July 8, 2001
-Mailed student prenotification letters	June 27, 2001	June 28, 2001
-CATI data collection	July 9, 2001	November 20, 2001

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

A number of reports and data products are anticipated for the B&B:2000/01 study. These include the following:

- Electronically documented, restricted access research files (with an associated electronic codebook [ECB]) for research data users. The ECB is a tool that gives the user a vehicle to browse through the lists of variables and variables' descriptions for data sets. It also produces SAS or SPSS programs to access the data, Access files, and printable codebooks.
- A Data Analysis System (DAS) for public access to B&B:2000/01 data. The DAS is a Windows software application that provides public access to survey data files. The DAS allows users to specify the information they would like to have displayed in tabular form and, to some degree, the format of the resulting tables (which are fully labeled and usable). It can also create correlation matrices that can be used for higher-level statistical analyses.
- This methodology report for the follow-up study, providing details of sample design and selection procedures, data collection procedures, weighting methodologies, estimation procedures and design effects, and the results of nonresponse bias analyses.
- Two descriptive summaries: (1) a B&B descriptive summary with an overview that will focus on time to degree, labor market experiences, entry into graduate school, and household demographics; and (2) a report on newly qualified teachers that will compare the undergraduate experiences of new teachers with those of non-teachers.

# Chapter 2

## Design and Method of the Follow-up Study

---

A summary of the procedures used for the design and implementation of B&B:2000/01 is provided in this chapter. A brief explanation of the sampling methods used in NPSAS:2000 is included, along with detailed discussions of the subsequent sampling for B&B.

### 2.1 Sample Design and Selection

The B&B:2000/01 sample design had three stages, as illustrated by figure 2.1. The first two stages occurred within the NPSAS:2000 sample: a sample of NPSAS-eligible institutions and a sample of students within institutions. The third stage was B&B:2000/01 specific and provided subsamples from confirmed and potential baccalaureate recipients identified during the second stage of the NPSAS:2000 sample. In this chapter, an overview of each of these three stages is provided. Only a brief overview of the first two stages is presented because they are part of NPSAS:2000, which is described in detail elsewhere.<sup>3</sup> The third stage, unique to B&B:2000/01, is described in detail here.

#### 2.1.1 Target Population

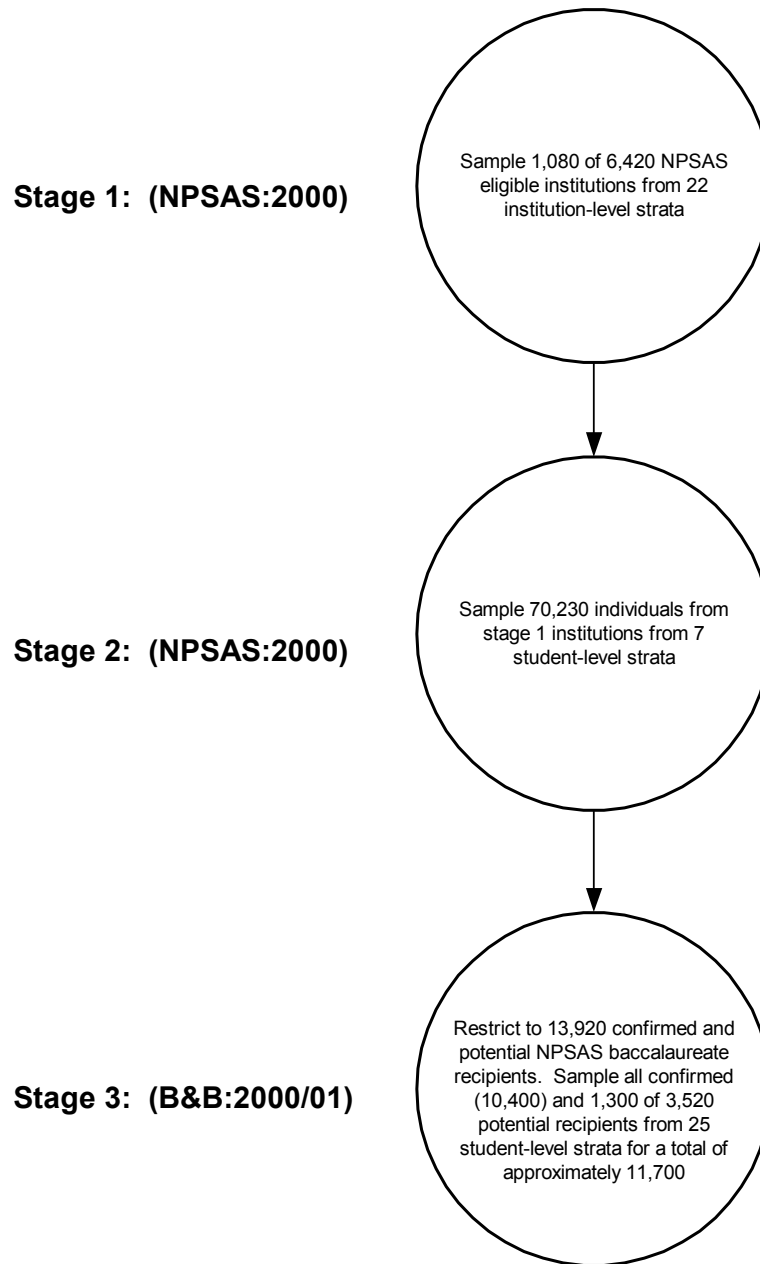
To define the target population for the B&B study, both eligible institutions and eligible students within these institutions need to be defined. Eligible institutions are those that satisfied the NPSAS eligibility criteria in the 1999–2000 academic year. An institution satisfied these criteria if the institution:

- offered an educational program designed for individuals who had completed secondary education;
- offered more than just correspondence courses;
- offered at least one academic, occupational, or vocational program of study lasting at least 3 months or 300 hours;
- offered courses open to more individuals than the employees or members of the company or group (e.g., union) that administered the institution;
- was located in the 50 states, the District of Columbia, or Puerto Rico;
- was not a U.S. service academy;

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<sup>3</sup>Riccobono, J. A., Cominole, M.B., Siegel, P.H., Gabel, T.J., Link, M.W. and Berkner, L.K. (2001). *National Postsecondary Student Aid Study, 1999–2000 (NPSAS:2000), Methodology Report* (NCES 2002-152). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Hereafter referred to as Riccobono et al. 2001.

**Figure 2.1. Stages of the B&B 2000/01 sample**



NOTE: Numbers have been rounded in accordance with NCES statistical standards in order to protect the confidentiality of respondents.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).



- was open to the public; and
- was a U.S. Department of Education Title IV participating institution.<sup>4</sup>

Eligible students were individuals who were enrolled at, and obtained or expected to obtain a baccalaureate degree from an eligible institution between July 1, 1999, and June 30, 2000. Numbers of students and institutions have been rounded in this report in accordance with NCES statistical standards to protect the confidentiality of respondents.

### **2.1.2 The First Stage of the NPSAS:2000 Sample**

The first stage of the NPSAS:2000 sample was a stratified sample of institutions, with a sampling frame derived from eligible institutions contained within the 1998–1999 Integrated Postsecondary Education Data Systems (IPEDS)<sup>5</sup> of all Title IV participating institutions of the United States and its territories. The variables used to define the strata were institutional control, highest level of offering, and percentage of baccalaureate degrees awarded in education. The crossing of the levels of these variables produced 22 non-empty strata from which to sample. Sample sizes within each stratum were developed in consultation with NCES.

Given the agreed-upon allocation, institutions were sequentially sampled within each stratum with probabilities proportional to size (pps) using a probability minimum replacement (pmr) algorithm (Chromy, 1979).<sup>6</sup> Summary statistics of the final institutional sample are given in table 2.1. From this table, it can be seen that about 1,080 of the total of approximately 6,420 institutions were selected into the sample. Of the selected institutions, about 290 with the largest eligible student bodies were certainty institutions, and so were included with probability equal to one. Further breakdown of the institutional sample according to stratum is provided in the table.

### **2.1.3 The Second Stage of the NPSAS:2000 Sample**

The second stage of the NPSAS:2000 sample was a stratified systematic sample of individuals within sampled institutions. There were seven student strata: baccalaureate business, baccalaureate non-business, other undergraduate, masters, doctoral, other graduate, and first-professional. The information needed to identify students within these strata was provided by the sampled institutions.

Target stratum sample sizes were found by first obtaining population totals for the 7 student strata crossed with the 22 institutional strata from the IPEDS census. These population totals allowed for the development of a proportional sample allocation, in which the allocations were further refined after discussion with NCES. Within strata for a given institution, students

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<sup>4</sup> Institutions participating in Title IV programs are accredited by an agency or organization recognized by the U.S. Department of Education, have a program of over 300 clock hours or 8 credit hours, have been in business for at least 2 years, and have a signed Program Participation Agreement (PPA) with the Office of Postsecondary Education (OPE), U.S. Department of Education.

<sup>5</sup> IPEDS is described as "a comprehensive system that collects institutional data about all primary providers of postsecondary education, and is built around a series of interrelated surveys designed to collect institution-level data in such areas as enrollments, program completions, faculty, staff, and finances." See the NCES Handbook of Survey Methods, NCES 2003-603 (p. 138).

<sup>6</sup>Chromy, J.R. (1979). Sequential sampling methods. *Proceedings of the American Statistical Association Section on Survey Research Methods*, 401–406. Hereafter referred to as Chromy 1979.

**Table 2.1. Institutional sampling rates and number of certainty and noncertainty institutions sampled, by institutional stratum for NPSAS:2000**

Institutional stratum <sup>1</sup>	Size of universe <sup>2</sup>	Sampling rate	Number of sample institutions		
			Total <sup>3</sup>	Certainty	Noncertainty
<b>All institutions</b>	6,420	0.17	1,080	290	800
<b>Public</b>					
1 Less-than-2-year	260	0.14	30	10	30
2 2-year	1,210	0.16	200	10	190
<b>Total less-than-4-year</b>	1,460	0.16	230	20	220
3 Bachelor's high education	20	0.29	10	0	10
4 Bachelor's low education	70	0.27	20	0	20
5 Master's high education	50	0.49	30	0	20
6 Master's low education	200	0.40	80	10	70
<b>Total 4-year non-doctorate-granting</b>	330	0.38	130	10	120
7 Doctorate-granting high education	30	1.00	30	30	0
8 Doctorate-granting low education	80	0.77	60	30	30
9 First-professional-granting high education	30	1.00	30	30	0
10 First-professional-granting low education	120	0.89	100	90	20
<b>Total 4-year doctorate-granting</b>	250	0.88	220	170	50
<b>Private not-for-profit</b>					
11 Less-than-2-year	110	0.10	10	0	10
12 2-year	310	0.07	20	#	20
<b>Total less-than-4-year</b>	420	0.08	40	#	30
13 Bachelor's high education	110	0.15	20	0	20
14 Bachelor's low education	400	0.09	40	0	40
15 Master's high education	120	0.31	40	0	40
16 Master's low education	410	0.20	80	10	80
<b>Total 4-year non-doctorate-granting</b>	1,050	0.16	170	10	170
17 Doctorate-granting high education	20	0.66	20	10	10
18 Doctorate-granting low education	90	0.31	30	#	20
19 First-professional-granting high education	80	0.71	60	30	30
20 First-professional-granting low education	290	0.23	70	30	30
<b>Total 4-year doctorate-granting</b>	490	0.35	170	80	90
<b>Private for-profit</b>					
21 Less-than-2-year	1,390	0.06	80	0	80
22 2-year or more	1,030	0.05	50	#	50
<b>Total private for-profit</b>	2,410	0.05	130	#	130

# Rounds to zero. All zeros provided in this table are actual values.

<sup>1</sup>Stratum reflects institutional categorization as determined from the 1998–99 IPEDS Institutional Characteristics file; some errors in this classification were uncovered when institutions were contacted.

<sup>2</sup>Based on the 1998–99 IPEDS Institutional Characteristics file.

<sup>3</sup>During institutional contacting, it was discovered that part of one school had recently split off and formed a separate institution. Both institutions were included in the sample, adding another institution to stratum 10, so the actual total sample size was increased by one.

NOTE: Institutions that offer baccalaureate degrees and higher were classified as either low or high education depending on the percentage of baccalaureate degrees awarded in education (based on the 1996-97 IPEDS completions file). Low education consisted of institutions in the bottom 80 percent of the distribution, while high education was the upper 20 percent. Details may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

were sampled systematically on a flow basis according to fixed inclusion probabilities. These inclusion probabilities were designed to provide overall stratum sample sizes that would equal in expectation the previously determined target stratum sample sizes.

Summary statistics from the final individual level sample are given in table 2.2. From this table, it can be seen that of the final NPSAS:2000 sample size of about 70,230 individuals, about 16,620 of them had been identified as potential baccalaureates by the institutions. Marginal counts and percentages for the student sample by institutional control, institutional level, and institutional sector (the cross of institutional control by institutional level) are also provided.

#### **2.1.4 The B&B:2000/01 Sample**

The third stage of the B&B:2000/01 sample was a subsample of potential baccalaureate recipients who were CATI nonrespondents in NPSAS:2000. This subsample from NPSAS nonrespondents allows the B&B:2000/01 final sample to be more representative of the target population of students receiving baccalaureate degrees. To collect the subsample, a sampling frame was designed, subsampling strata defined, sample allocations within strata determined, and then the stratified sample was selected.

**The sampling frame and sample size.** The B&B:2000/01 sample restricted the NPSAS:2000 target population to individuals who received baccalaureate degrees. To find these individuals, institutions identified potential baccalaureate recipients prior to the start of the second stage of sampling. By the completion of the second NPSAS:2000 stage, two relevant types of students could be identified: (1) individuals confirmed as receiving a degree by the NPSAS:2000 CATI interview, and (2) individuals who remained potential baccalaureates due to CATI nonresponse.

More explicitly, the confirmed baccalaureate recipients were obtained as follows. At the completion of NPSAS:2000 sampling, before CATI there were about 16,620 undergraduate students sampled as potential baccalaureate recipients. About 11,340 completed the NPSAS:2000 CATI interview, of which about 9,830 were confirmed as receiving a baccalaureate degree during the 1999–2000 academic year.<sup>7</sup> Of the about 40,980 other undergraduates sampled, about 24,620 completed the CATI interview. Of these, about 490 received a baccalaureate degree in the time frame to become eligible for the B&B:2000/01 study. Of the graduate and first-professional students, about 80 reported in NPSAS:2000 receiving a baccalaureate degree during the 1999–2000 academic year. Therefore, there were about 10,400 confirmed baccalaureate recipients for the B&B:2000/01 subsample (9,830 + 490 + 80 = 10,400).

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<sup>7</sup>Values presented in this paragraph can be found in table 4-21 of the NPSAS:2000 Methodology Report or the NPSAS:2000 data file.

**Table 2.2. Initial classification of NPSAS:2000 student sample, by type of institution and student stratum**

Institution type	Total sample <sup>1</sup>		Student sampling stratum <sup>2</sup>							
	Number	Percent	Baccalaureate sample <sup>3</sup>		Other under-graduate sample		Graduate sample <sup>3</sup>		First-professional sample	
			Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>All institutions</b>	70,230	100	16,620	100	40,980	100	11,280	100	1,350	100
<b>Institutional level</b>										
Less-than-2-year	6,670	10	†	†	6,670	16	†	†	†	†
2-year	13,240	19	†	†	13,240	32	†	†	†	†
4-year non-doctorate-granting	18,750	27	6,650	40	9,820	24	2,290	20	†	†
4-year doctorate-granting	31,570	45	9,980	60	11,250	28	8,990	80	1,350	100
<b>Institutional control</b>										
Public	43,750	62	10,750	65	25,970	63	6,540	58	490	36
Private not-for-profit	19,370	28	5,630	34	8,470	21	4,413	39	860	64
Private for-profit	7,110	10	250	2	6,540	16	330	30	†	†
<b>Institutional sector</b>										
Public less-than-2-year	1,530	2	†	†	1,530	4	†	†	†	†
Public 2-year	10,660	15	†	†	10,660	26	†	†	†	†
Public 4-year non-doctorate-granting	9,880	14	3,460	21	5,210	13	1,210	11	†	†
Public 4-year doctorate-granting	21,670	31	7,280	44	8,580	21	5,330	47	490	36
Private not-for-profit 2-year or less	1,840	3	†	†	1,840	5	†	†	†	†
Private not-for-profit 4-year non-doctorate-granting	8,010	11	3,030	18	4,040	10	930	8	†	†
Private not-for-profit 4-year doctorate-granting	9,530	14	2,600	16	2,590	6	3,480	31	860	64
Private for-profit less-than-2-year	4,520	6	†	†	4,520	11	†	†	†	†
Private for-profit 2-year or more	2,590	4	250	2	2,010	5	330	3	†	†

†Not applicable.

<sup>1</sup> The student sample was drawn from 999 institutions determined to be eligible and providing enrollment lists.

<sup>2</sup> As expected, the sampling frames misclassified some individual students as to baccalaureate, undergraduate, graduate, and first-professional status; statistics presented in this table are based on the sampling frame classification.

<sup>3</sup> The two baccalaureate strata have been combined, and the master's, doctorate, and other graduate strata have been combined.

NOTE: Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

For the about 5,280 potential baccalaureate recipients who did not complete a CATI interview during NPSAS:2000, about 3,980 were still classified as potential baccalaureate recipients after NPSAS:2000 abstraction of student records via computer-assisted data entry (CADE). Of these, about 3,520 had complete CADE information. After consideration of various sampling options and budgetary constraints, it was decided to use the about 3,520 nonresponding potential baccalaureate CADE respondents and the about 10,400 confirmed baccalaureates as the sampling frame for the B&B:2000/01 study. Of these nearly 13,920 individuals, all confirmed baccalaureates were sampled, as well as about 1,300 of the approximately 3,520 nonresponding potential baccalaureate recipients. This sample size (10,400 + 1,300 = 11,700 initial sample size) was determined to provide adequate representation of baccalaureate recipients and to provide a final sample of approximately 10,000 baccalaureate respondents in the final B&B:2000/01 sample.

**Sample strata.** Strata for the sampling of potential baccalaureate recipients were formed by crossing the levels of institutional control, highest level of offering (doctorate-granting or not), and nonrespondent group, resulting in 25 non-empty strata. The first two of these variables were available from the first-stage NPSAS:2000 institution level sample, while the nonrespondent group was created specifically for this purpose. The stratification by institutional control and highest level of offering was done to preserve the sample distribution by type of institution found in the NPSAS sample.

The nonrespondent group indicator was a five-level variable created to categorize individual NPSAS:2000 CATI response status. Its levels (shown in table 2.3) were defined as those expected to be most predictive of our ability to locate and interview individuals for the B&B:2000/01 sample.

**Table 2.3. Expected response rates of potential baccalaureate recipients to the follow-up study, by NPSAS:2000 nonresponse status**

NPSAS:2000 nonrespondent status	Number of individuals	Percent of nonrespondents	Percent expected response rate
Total	3,980	100	40
Located, nonrefusal	200	5	75
Located, refusal	1,370	34	40
Not located, no tracing	330	8	60
Not located, post-CATI tracing	1,590	40	25
Not located after field tracing, or hostile refusal	500	12	15

NOTE: Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

**Sample stratum sample sizes.** Stratum sample sizes of potential baccalaureate recipients were obtained by first determining the sample allocation that maximized the expected response rate subject to the constraint that the unequal weighting effect not exceed 3.0 for any of

the strata defined by institutional control and highest level of offering. The expected response rates required for the optimization were determined through a combination of previous study experience and the results of the B&B:2000/01 field test. For the base-year nonrespondents, these expected response rates are provided in table 2.3.

Given the obtained optimal stratum allocations, final strata allocations were found by increasing the sampling rates for the strata with higher expected response rates. Simulation was then used to verify that the design did not lead to excessive unequal weighting effects. The simulation evaluated four sampling designs to assess their influence on unequal weighting effects. These four designs were the defined two sample allocations (optimal and implemented), and two sampling methods (stratified simple random sampling or stratified probability proportional to size (pps) sampling) with the measure of size equal to the NPSAS:2000 study weight. In each simulation, a sample of about 1,300 CATI nonrespondents was selected and unequal weighting effects were computed, both overall and for the five non-empty levels of the cross of institutional control and highest level of offering. The results of these simulations are given in table 2.4, and demonstrate reduced unequal weighting effects from sampling with probabilities proportional to NPSAS:2000 study weights, as well as similar unequal weighting effects for the optimal and modified sample allocations. For this reason, the modified allocation was used and stratified pps sampling was conducted.

**Table 2.4. Simulation of unequal weighting effects of four sampling designs**

Type of four-year institution	Optimum allocation		Implemented allocation	
	Stratified simple random sample	Stratified probability minimum replacement	Stratified simple random sample	Stratified probability minimum replacement
<b>All institutions</b>	2.1	1.9	2.1	1.9
<b>Institutional sector</b>				
Public non-doctorate-granting	2.3	2.0	2.1	2.0
Public doctorate-granting	2.0	1.8	2.1	1.9
Private not-for-profit non-doctorate-granting	2.0	1.9	2.0	1.9
Private not-for-profit doctorate-granting	2.0	1.9	2.0	1.9
Private for-profit	1.9	1.5	1.6	1.5

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

The final sample allocation and sampling rates are presented in table 2.5. Sampling rates were lower in the hard to interview strata (strata 16–25 in the table) as compared to the easier to interview strata (1–15), although a number of these strata still have relatively large sample sizes.

**Within stratum sampling design.** Potential baccalaureate recipients were sampled using a stratified pps design, in which each individual’s measure of size was determined to be the estimate of their NPSAS:2000 study weight at the time of sample selection. To avoid multiple selection of any individual, an iterative method to identify certainty selections was used to select the remainder of the sample using a probability minimum replacement (pmr) algorithm (Chromy, 1979).<sup>8</sup> This resulted in partitioning the individuals in each stratum into two groups: individuals sampled with certainty and individuals sampled with probabilities proportional to NPSAS:2000 study weights.

<sup>8</sup> Chromy 1979.

**Table 2.5. Sample strata allocation and sampling rates among potential baccalaureate recipients**

Stratum	NPSAS:2000 tracing and response status	Type of institution	Number eligible	Sample number	Sampling rate
1	Located, nonrefusal	Public non-doctorate-granting	30	20	0.71
2		Public doctorate-granting	80	60	0.74
3		Private not-for-profit non-doctorate-granting	30	20	0.74
4		Private not-for-profit doctorate-granting	30	20	0.74
5		Private for-profit <sup>1</sup>	10	10	0.67
6	Located, refusal	Public non-doctorate-granting	240	90	0.37
7		Public doctorate-granting	590	220	0.37
8		Private not-for-profit non-doctorate-granting	210	80	0.37
9		Private not-for-profit doctorate-granting	240	90	0.37
10		Private for-profit <sup>1</sup>	20	10	0.39
11	Not located, no tracing	Public non-doctorate-granting	40	30	0.71
12		Public doctorate-granting	100	80	0.74
13		Private not-for-profit non-doctorate-granting	30	20	0.74
14		Private not-for-profit doctorate-granting	40	30	0.74
15		Private for-profit <sup>1</sup>	10	10	0.78
16	Not located, post-CATI tracing	Public non-doctorate-granting	260	80	0.29
17		Public doctorate-granting	640	190	0.29
18		Private not-for-profit non-doctorate-granting	220	70	0.29
19		Private not-for-profit doctorate-granting	220	60	0.29
20		Private for-profit <sup>1</sup>	50	10	0.30
21	Not located after field tracing, or hostile refusal	Public non-doctorate-granting	90	30	0.29
22		Public doctorate-granting	190	60	0.30
23		Private not-for-profit non-doctorate-granting	80	20	0.30
24		Private not-for-profit doctorate-granting	90	30	0.29
25		Private for-profit <sup>1</sup>	10	#	0.33

# Rounds to zero. All zeros provided in this table are actual values.

<sup>1</sup>These strata are collapsed over doctorate and nondoctorate granting institutions.

NOTE: Sampling rates were based on unrounded values but have been rounded for this table. Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01)

The iterative sampling method was implemented as follows. Label the  $n_h$  individuals in stratum  $h$  from 1 to  $n_h$ , let set  $A_h$  contain all individuals selected with certainty, and  $A'_h$  contain the rest. Let  $f_h(i)$  be the frequency of selection of individual  $i$  for a pmr design based on  $A_h$  and  $A'_h$ , let  $n(A_h)$  be the size of set  $A_h$ , and let  $S_i$  be the best available NPSAS:2000 study weight estimate for individual  $i$  at the time when the sample was selected. Begin by setting  $A_h = \{1, \dots, n_h\}$ ,  $A'_h$  as the empty set, and iterate as follows:

- 1) For each  $i$  in  $A_h$  find its expected frequency of selection:

$$E[f_h(i)] = \frac{n(A_h)S_i}{\sum_{j \in A_h} S_j}.$$

- 2) For any  $i$  in  $A_h$  with  $E[f_h(i)] \geq 1$ , transfer  $i$  from  $A_h$  to  $A'_h$ .

Iterations continued until  $E[f_h(i)] \leq 1$  for all  $i$  in  $A_h$ . A without-replacement pps design was implemented based on the final  $A_h$ , and  $A'_h$ .

## **2.2 Instrument Design**

Data for the B&B:2000/01 longitudinal cohort were collected by CATI. In preparation for the development of the CATI instrument, a comprehensive set of data elements was developed by reviewing the data elements used for the B&B:1993/94 cohort, the relationship of those elements to the NPSAS:2000 data elements, and relevance to current research and policy issues. A preliminary set of B&B:2000/01 data elements was refined with input from the study's Technical Review Panel (see appendix A for a list of members), as well as from NCES and other U.S. Department of Education staff. The final set of data elements, presented in appendix B, was then reviewed by the Office of Management and Budget (OMB) before the start of data collection.

Based on the set of data elements, the CATI instrument was structured by identifying section topics and determining the progression of items within sections. Individual items were designed from the data elements with several goals in mind:

- using NPSAS:2000 and B&B:1993/94 items when feasible,
- ensuring consistency with NPSAS:2000 and B&B:1993/94 items when items were not identical, and
- identifying and preparing wording for item verifications and probes as necessary.

These items were analyzed during the field test and modifications were made where necessary. Facsimile instruments may be found in appendix C.

Instrument sections were reviewed on a flow basis by NCES as well as by selected contractor and subcontractor staff. As depicted in figure 2.2, the first section determined eligibility for sample members who were nonrespondents in NPSAS:2000. The following sections collected information on postsecondary enrollment since high school completion, respondent demographics, post-baccalaureate education, employment, and teaching experiences.

To minimize the interview burden on respondents, the CATI instrument used existing data whenever feasible. Base year data from the NPSAS:2000 interview were preloaded into the CATI interview, dictating the flow of many portions of the interview. Certain questions were asked only if the data were missing from the prior interview.

The CATI interviews were programmed using Computer-Assisted Survey Execution System (CASES) 4.3 software.<sup>9</sup> In addition to a sample-member locating and contacting component, and informed consent screens employed before the start of the interview, the CATI system presented interviewers with screens of questions to be asked of the respondents. The software guided the interviewer and respondent through the interview, automatically skipping questions not applicable based on prior response patterns. Wording for probing and verification was suggested when a respondent provided a response that was out of range for a given item. As the CATI instrument was being designed and programmed, instrument documentation was

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<sup>9</sup> Computer-Assisted Survey Execution System, Version 3.4. University of California at Berkeley, CA.



entered into an integrated data dictionary system (DDS), which subsequently enabled users to produce deliverable data files with CATI variable documentation.

To better represent respondent groups that are particularly difficult to interview, such as CATI nonrefusals and sample members with a limited proficiency in English severe enough to preclude completing the entire interview even with assistance from a bilingual interviewer, an abbreviated instrument was developed that focused on several key items about the respondent's post-baccalaureate enrollment and work experiences. A copy of this abbreviated instrument is presented in appendix C. Use of an abbreviated instrument reduces the potential for nonresponse bias for questions on the abbreviated instrument. There remains, however, a potential for nonresponse bias for questions on the full CATI instrument that were not on the abbreviated instrument. An analysis of this potential bias can be found in section 6.5.5.

## **2.3 Data Collection Design**

The B&B:2000/01 data collection design involved tracing sample members to their current location, then conducting a computer-assisted telephone interview with them about their experiences since the NPSAS:2000 interview approximately one year earlier. Data collection activities are shown in figure 2.3 and included locating sample members, notification letter mailings, intensive tracing procedures, and interviewing.

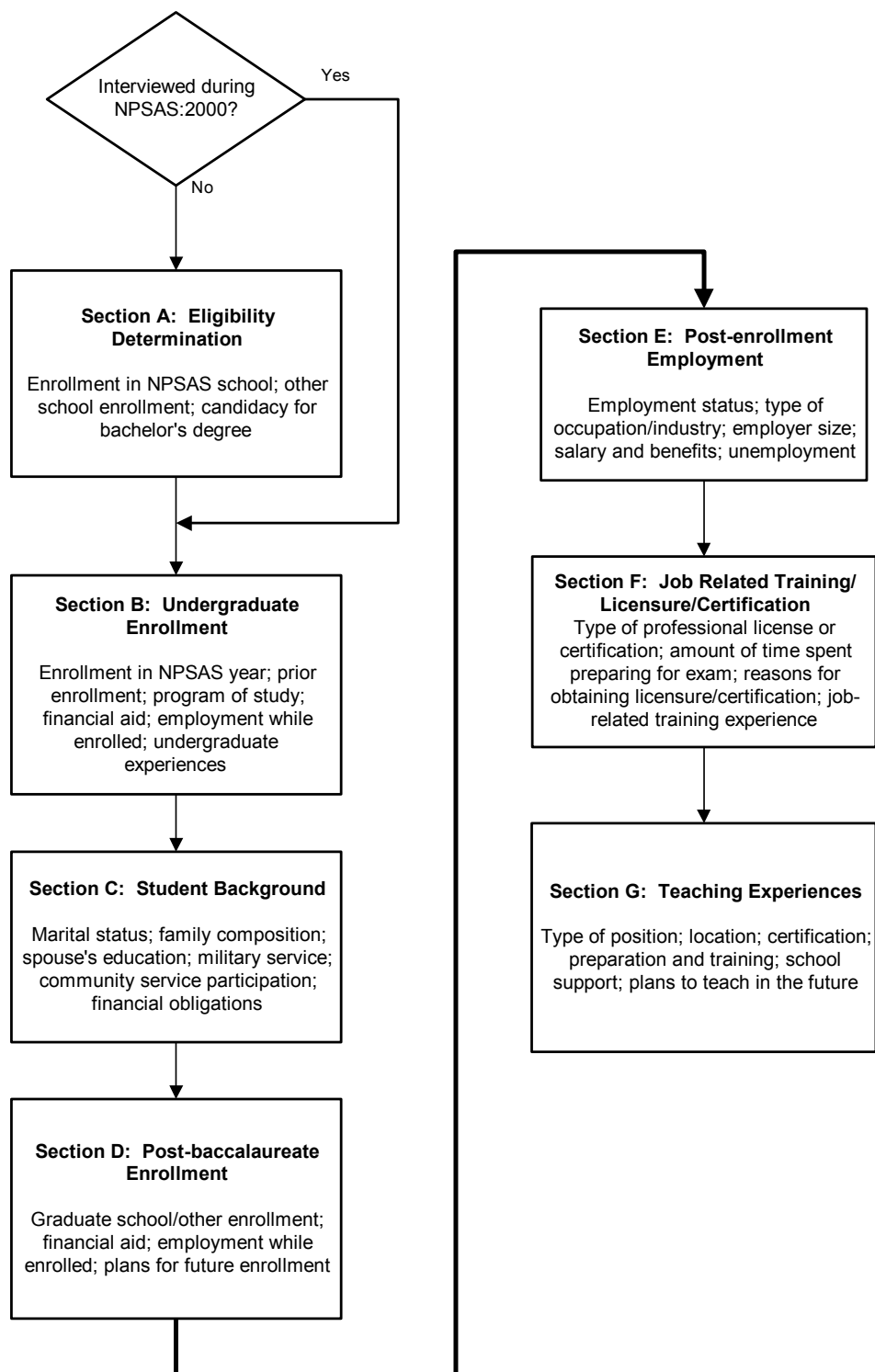
### **2.3.1 Pre-CATI Locating**

Before the start of interviewing, pre-CATI locating activities were employed to update address and telephone information for the sample members. This was a complex task. Initially, information received from NPSAS:2000 pertinent to this study was merged with the B&B:2000/01 locator database. This information was sent in batch mode first to the U.S. Postal Service National Change of Address (NCOA) system and then to Telematch in May 2001. These services provided updated address and telephone number information, respectively. Following the first round of NCOA and Telematch batch processes, the locator database was updated with the new information.

### **2.3.2 Student Notification Letter Mailing**

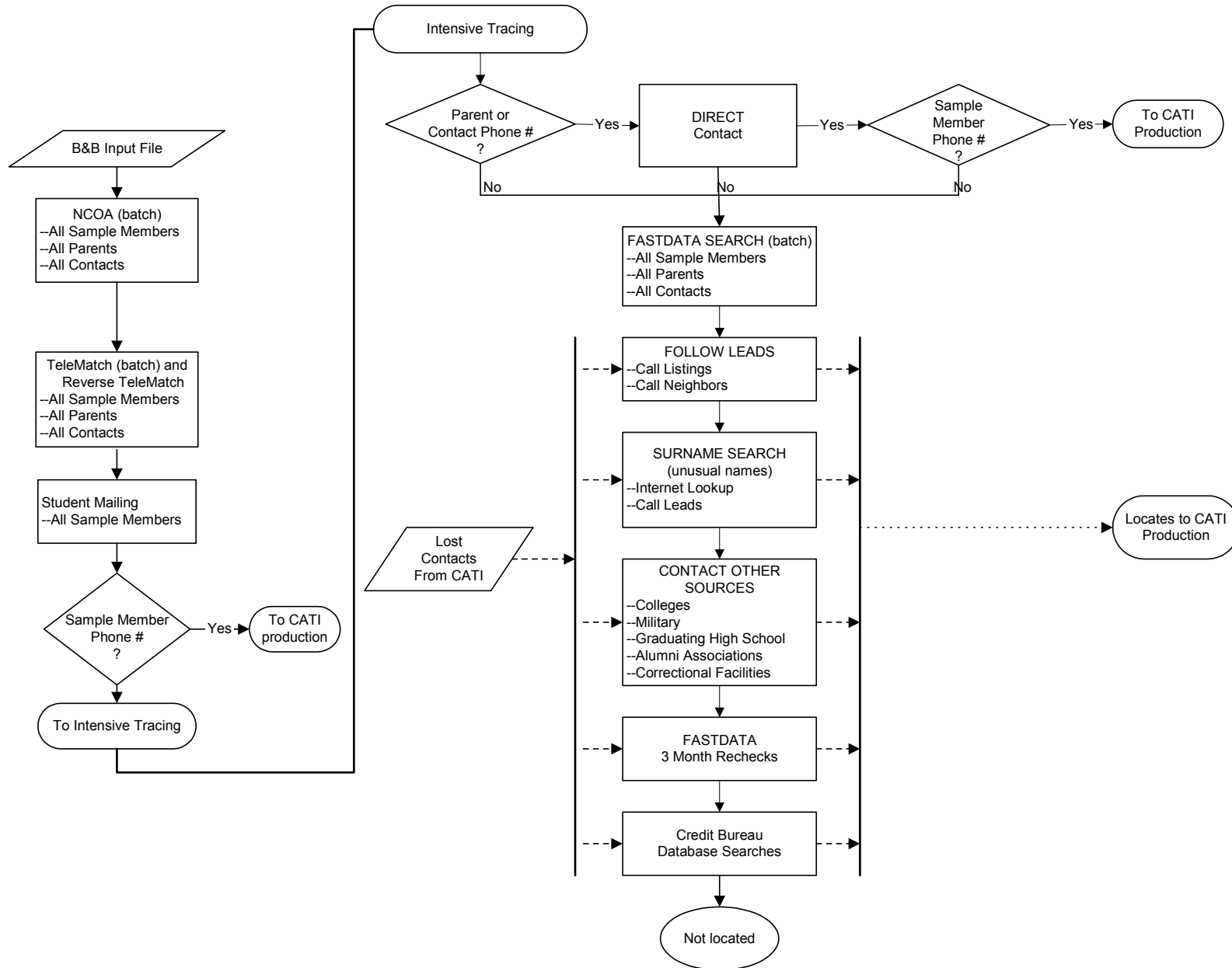
After addresses were updated, a notification mailing was sent to all sample members 1 week before data collection started to inform them of the study and their rights as participants. The mailing also gave sample members the opportunity to return an address update sheet. Samples of the lead letter, address update sheet, and information leaflet are included in appendix D. All locating information obtained from the student mailing was entered into the B&B:2000/01 locator database.

Figure 2.2. Structure and flow of B&B: 2000/01 follow-up student CATI



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

**Figure 2.3. Flow of locating and interviewing activities for B&B:2000/01 follow-up study**



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000-2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

### **2.3.3 CATI Locating**

Locating and tracing activities took place concurrently with efforts to gain cooperation from sample members. When assigned a case, the telephone interviewer called the telephone number designated by CATI as the best number (i.e., the number among all available locator numbers that appeared to have the greatest potential for contacting the sample member) and attempted to interview the designated sample member. When the person answering the call said that the sample member could not be reached at that number, the interviewer asked the person how to contact the sample member. If this did not provide the information needed, the interviewer initiated tracing procedures, using all other available information for other contact persons in an attempt to locate the student. When all tracing options available to the interviewer were exhausted, the case was assigned to RTI's Tracing Operations Unit (TOPS) for intensive tracing.

### **2.3.4 Intensive Tracing Efforts**

TOPS had access to both proprietary and public-domain locating databases. These provided real-time access to several consumer databases containing current address and phone listings for the majority of consumers with a credit history. In addition to the proprietary databases, TOPS had access to various other information sources, such as data miners, commercial list houses, and NCOA via a leased line. These sources provided the following searches: name, address, neighbor, business, phone matching searches, and status (decedent, incarcerated, incapacitated, or military personnel). TOPS employed these various information sources to locate respondents.

A two-tiered intensive tracing plan was used to locate B&B:2000/01 sample members. The first tier involved identifying sample members with Social Security numbers (SSNs) and processing that information through consumer database searches. If a search generated a new telephone number, that case was sent back to CATI for telephone interviewing. If a new address was generated but a new telephone number was not, tracers called directory assistance or accessed other databases to obtain telephone numbers for CATI. This first level of effort minimized the time that cases were out of production.

All remaining cases (those lacking new information from the SSN search) underwent a more intensive level of tracing in the second tier. The second tier of tracing activities included the following:

- checking directory assistance for telephone listings at various addresses;
- using electronic reverse-match databases to obtain the names and telephone numbers of neighbors, and then calling the neighbors;
- calling persons with the same unusual surname in small towns or rural areas to see if they were related to or knew the sample member;

- contacting the current or last known residential sources such as the neighbors, landlords, current residents, tax assessors, realtors, and other business establishments related to previous addresses associated with the sample member;
- calling colleges, military establishments, and correctional facilities to follow up on leads generated from other sources; and
- the use of various tracing web sites.

Tracers checked new leads produced by these tracing steps to confirm the addresses and telephone numbers for the sample members. When the information was confirmed, that case was returned to CATI for telephone interviewing. Cases that could not be located (e.g., there were no working telephone numbers or numbers for relevant neighborhood sources were unpublished) were reviewed by supervisors, and (if necessary) were finalized as unlocatable.

### **2.3.5 Interviewing**

**Training of interviewers.** The interviewer training program was designed to maximize the trainees' active participation. Training manuals included a training guide, an interviewer's manual, and a question-by-question specification manual. Training for telephone interviewers and supervisors was conducted during the first week in July in several sessions, totaling 14 hours, and consisted of lectures, demonstrations, and hands-on practice exercises with the instrument and online coding modules. Trainees were introduced to the procedural aspects of data collection for B&B:2000/01 and were given a thorough review of the instrument. Interviewers were also trained in techniques for gaining cooperation with sample members, parents, and other contacts, as well as techniques for addressing the concerns of reluctant participants and avoiding refusals. A copy of the training agenda and the table of contents from the training manual are located in appendix E.

**Telephone interviewing.** CATI locating and interviewing were conducted from July 9, 2001 through November 20, 2001. CATI procedures included attempts to locate, gain cooperation from, and interview sample members. For NPSAS:2000 nonrespondents, NPSAS and B&B eligibility determination was also necessary. Locating information gleaned from the pre-CATI locating sources described above was preloaded for each case. Additionally, information previously collected through NPSAS:2000 was preloaded to personalize interviews and reduce respondent burden.

An automated call scheduler assigned cases to interviewers based on time of day, day of week, existence of precise appointments, and type of case. Case assignment was designed to maximize the likelihood of contacting and interviewing sample members, and cases were assigned to various queues for this purpose. Some of the queues included new cases, Spanish-language cases, initial refusals, and various appointment queues (appointments set by the sample member, appointments suggested by locator sources, and appointments for cases that were initial refusals).

For each case, a calling roster prioritized the names and telephone numbers for the interviewers to call. The roster included address information provided by schools and students. For example, addresses might have been permanent or local student addresses, parent addresses, and the addresses of other contacts from the NPSAS:2000 study. Up to six roster lines were preloaded with contact information. New roster lines were added as the result of CATI tracing and intensive tracing efforts.

Once located, some sample members required special treatment. To gain cooperation from those who initially refused to participate (including locator sources who acted as “gatekeepers” to prevent access to the sample member), certain interviewers were trained in refusal conversion techniques. Sample members and their locator sources who spoke only Spanish were assigned to bilingual interviewers.

## **2.4 Data Files**

The final B&B:2000/01 data files were prepared in accordance with NCES-specified ECB format guidelines. Activities important to ensuring quality across data file preparation methods are described below.

### **2.4.1 Data Availability Throughout Data Collection Period**

During data collection, RTI updated master data files containing completed case data. A master data file structure was retained across all CATI applications to concatenate data into a single data set containing all respondents. CATI data were extracted periodically to facilitate advance preparation of variable documentation. This extraction also enabled review of frequency distributions and data analysis while data were being collected.

### **2.4.2 Data Editing**

Data became available for editing during the data collection period, which allowed for feedback to the project staff on data quality as well as more accurate analysis of response data. As a quality check, the original skip logic was recreated to ensure that respondents followed the appropriate path within the CATI instrument. These edit checks were important for correcting errant paths that the interviewer may have followed but later corrected. Edit checks ensured that, for particular data elements, responses occurred logically. This process also allowed evaluation of the other case: when questions that the respondent should have been asked were missed. Reserve codes indicated instances in which raw data were updated to reflect the proper logical path. The data editing process is discussed in detail in chapter 5. During data collection, interviewing staff were also able to notify project staff of CATI irregularities via “problem sheets,” so problems in instrument logic could be corrected.

## **2.5 Integrated Management System**

All aspects of the study were under the control of an integrated management system (IMS). The IMS consisted of several components or modules:

- Management
- Receipt Control System (RCS)
- CATI

This modular structure allowed for the streamlining of related tasks and resulted in a centralized, easily accessible repository for project data and documents. These modules are described in more detail below.

The Management module of the IMS contained tools and strategies to assist project staff and the NCES project officer in managing the study. All information pertinent to the study could be found via the World Wide Web in a secure desktop environment, including schedules, monthly progress reports, project plans and specifications, information related to the Technical Review Panel (TRP), and project deliverables. Also available in the management module were the latest version of the CATI instrument, daily RCS module status reports, and daily data collection reports.

The RCS module monitored activities related to data collection, including tracing and locating, thereby enabling project staff to perform stage-specific activities, track case status, identify problems early, and implement solutions effectively. Several applications used the RCS's locator data for daily tasks: (1) the mailout program produced mailings to parent/contacts and sample members, (2) the query system enabled administrators to review the locator information and status for a particular case, and (3) the mail return system enabled project staff to update the locator database as lead mailings or reply sheets were returned. The RCS also interacted with the tracing operation system database, sending locator data between the two systems as necessary.

The CATI module managed development of the CATI instrument within the data dictionary system (DDS). The DDS consisted of a set of linked relational files and associated utilities for developing and documenting the instrument. Developing the CATI instrument with the DDS ensured that all variables were linked to their item/screen wording and were thoroughly documented. Also included within the CATI module was online coding software ("user exits") that collected detail on schools attended, enrollment, industry, occupation, and major field of study.





# Chapter 3

## Data Collection Procedures

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This chapter evaluates the procedures used for the B&B:2000/01 study. Three general areas were evaluated: respondent locating, obtaining respondent interviews, and the efforts expended in obtaining the interview.

### 3.1 Locating Outcomes

One of the biggest challenges facing data collection was the aggressive 5-month schedule for completing the targeted 10,000 interviews. The effort required the use of a number of varied tracing approaches and continual refinement of these techniques to locate sample members in sufficient time to interview them. The level of time and effort required to complete the locating and interviewing steps with sample members varied considerably. Some sample members were reached and interviewed on the first contact attempt. Others required considerable tracing (contacting parents, former roommates, etc.) before they were successfully located and interviewed.

A high percentage (86 percent) of sample members were located and interviewed as part of B&B:2000/01. This is at least partially because the B&B:2000/01 study is a relatively quick follow-up. Base-year data were collected for respondents only 1 year earlier during NPSAS:2000, which aids the success of locating efforts. Even for this highly mobile population of recent college graduates, locating is much easier 1 year after initial contact than in a later follow-up.

#### 3.1.1 Student Locating and Interviewing

Figure 3.1 presents a schematic of the outcomes of student locating, interviewing, and related case-resolution activities. Data were collected almost exclusively by CATI, with about 200 cases completed using hard-copy questionnaires administered by field locating staff. The small set of approximately 30 field locators was used near the end of data collection to locate cases in which centralized tracing efforts failed to turn up a valid address or telephone number for the sample member. Field locators were persons in close regional proximity to the last known address of the sample member, and who had access to additional sources of information to assist in locating hard-to-find cases.

Figure 3.1 summarizes the attempts that were made to locate the approximately 11,700 sample members. Overall, about 10,690 of these cases (91 percent) were located, about 760 (7 percent) were *not* located, about 190 (2 percent) were considered “exclusions,”<sup>10</sup> and

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<sup>10</sup>B&B exclusion cases were considered “out-of-scope” for locating and interviewing operations. Among the 190 B&B:2000/01 sample members classified as exclusions, 170 were out of the country for the duration of the data collection period, 10 sample members were deceased, and 10 were incapacitated and unable to complete the survey.

approximately 70 (<1 percent) were ineligible<sup>11</sup> for the study based on their responses to the eligibility questions in the instrument.

Student interviewing results are also shown in figure 3.1. A total of about 10,030 (of the approximately 11,520 remaining cases after removing the exclusions) were interviewed. Many completed the entire interview (about 9,650), while approximately 380 completed a partial or abbreviated interview. A small number of the interviews (about 10) were classified as partial because the respondent broke off after completing part of the interview. A break-off represented an explicit or implicit refusal, but such cases could not be converted or recontacted to complete the interview by the end of the data collection period. The remaining number of these interviews (about 370), however, resulted from the administration of an abbreviated interview that consisted of a minimal set of questions from the full interview. Over half of this group represented interviews with Spanish-speaking respondents.

A total of about 1,420 cases were not interviewed. These sample members included approximately 760 who were not located. In addition, nearly 660 potentially eligible students were located but were not interviewed. Of these, about 530 were explicit final refusals for which subsequent attempts at interviewing were determined to be infeasible or unwise. Cases not interviewed also included about 130 sample members for whom the data collection period expired before they could complete the interview; such cases clearly reflect, at least in part, the constricted data collection period.<sup>12</sup>

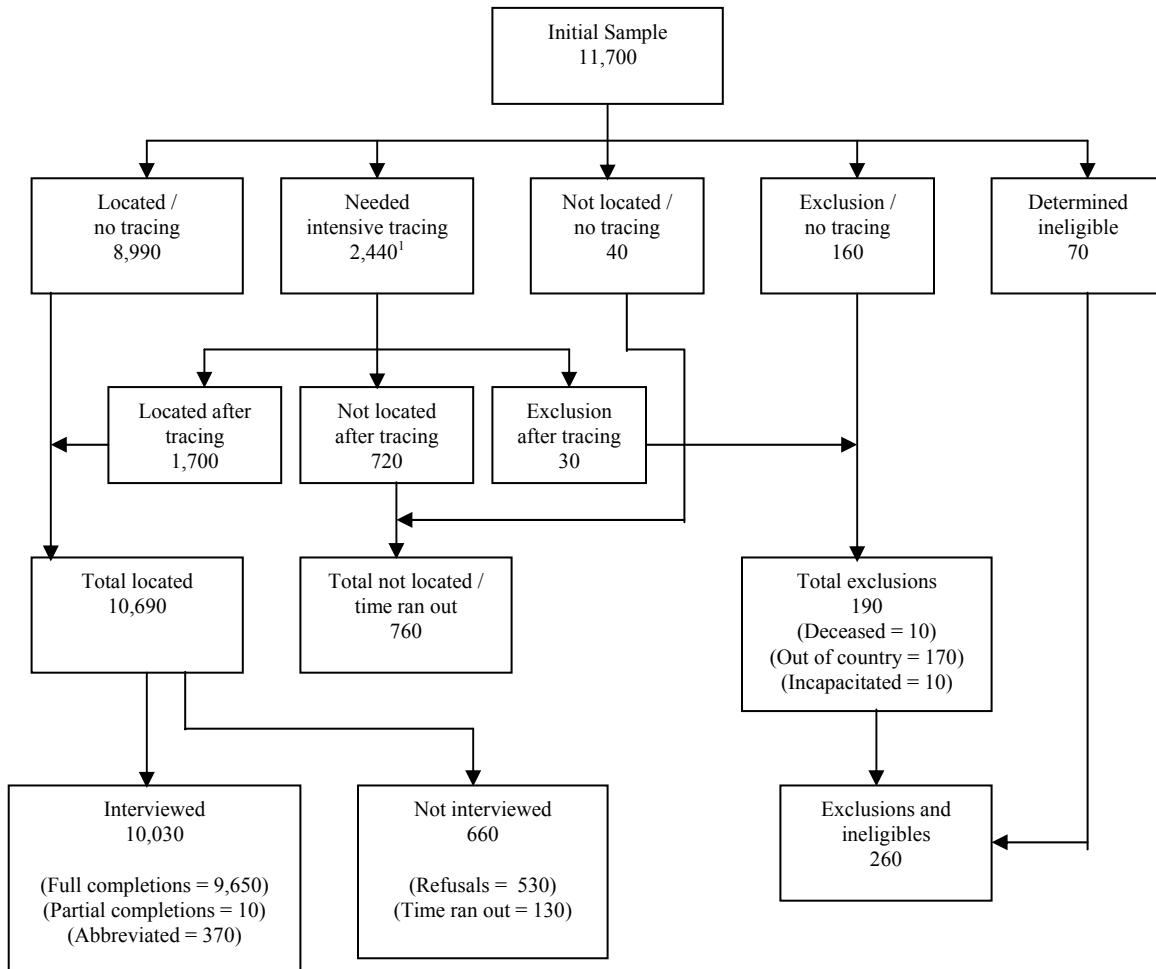
An unweighted CATI response rate for B&B:2000/01 can be calculated as the number of respondents interviewed divided by the initial sample size minus the ineligibles: student CATI response rate =  $10,030 / (11,700 - 70) = 86$  percent. The weighted overall CATI response rate was 75 percent.

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<sup>11</sup>In NPSAS, persons could have been CADE eligible but CATI ineligible if they told us in the interview that they did not attend the NPSAS school at any time during the NPSAS year (7/99–6/00) or had not received their baccalaureate degree from the NPSAS institution. CADE eligibility was determined based on the records from the institution—CATI eligibility was determined based on responses in CATI.

<sup>12</sup>This group likely contained an unknown number of implicit refusal cases—i.e., individuals who after first contact used answering machines or friends/relatives as gatekeepers, as well as those who continued to make (and then break) appointments for an interview in the future.

Figure 3.1. B&B:2000/01 results of locating and interviewing activities



<sup>1</sup>Includes all cases sent to RTI's Tracing Operations (TOPS) for intensive locating efforts. Overall, 130 cases required pre-CATI intensive tracing only, 1,200 required post-CATI intensive tracing only, and 1,100 required both pre- and post-CATI intensive tracing.

NOTE: Final sample including interviewed and exclusions = 11,630. Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

Locating and interviewing rates varied by base year respondent status. Table 3.1 provides results for B&B:2000/01 student locating and interviewing (for those located) by respondent status in the base year study (NPSAS:2000).<sup>13</sup> In terms of locating, nearly 96 percent of the NPSAS:2000 respondents were located, compared to 73 percent of NPSAS:2000 nonrespondents. There were also differences in interview rates among the two groups. Among base year respondents, 94 percent of the located sample members successfully completed interviews during the B&B:2000/01 follow-up study, compared to 69 percent of located NPSAS:2000 nonrespondents.

**Table 3.1. B&B:2000/01 student locating and interview results, by respondent status in NPSAS:2000**

NPSAS:2000 respondent status	Total	Located		Interviewed, given locate	
		Number	Percent	Number	Percent
Total	11,630	10,870	94	10,030	92
NPSAS:2000 respondent	10,400	9,970	96	9,400	94
NPSAS:2000 nonrespondent	1,240	910	73	630	69

NOTE: Statistics exclude 70 B&B-ineligible sample members (as determined in CATI). Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

### 3.1.2 Pre-data Collection Tracing and Locating Efforts

Prior to the start of data collection, RTI took a number of steps to ensure that the locating information being fed into CATI was as accurate as possible. The pre-CATI tracing and locating efforts involved batch tracing for all cases, using database matching with National Change of Address (NCOA) and Telematch databases, pre-data collection intensive locating by the tracing operations unit, and mailing of advance letters with requests for sample members to return locating update sheets with new address and telephone information. These steps helped get data collection off to a fast start.

**Batch matching to NCOA database.** One month prior to the start of data collection, all of the B&B:2000/01 cases, including subject and contact information, were sent to the NCOA for address updating. The NCOA file is a consolidated file that contains approximately 108 million permanent change-of-address records filed with the U.S. Postal Service, retained on the file for a 3-year period from the move-effective date.

Table 3.2 provides the locate and interview rates for cases sent to NCOA for address updating. Of the nearly 11,490 eligible cases sent to NCOA, about 1,780 (16 percent) were returned with new or confirmed address information. For cases in which locating information was confirmed, 92 percent resulted in contact with the sample member. Of these, 93 percent resulted in a completed interview. For those cases where NCOA did not return a match, 94 percent of the cases were located, of which 92 percent completed the interview.

<sup>13</sup>The statistics in table 3.1 exclude 70 B&B:2000/01 ineligible sample members determined during CATI interviewing and 190 exclusions; they do not exclude any potential ineligibles likely to be part of the unlocatables.

**Table 3.2. B&B:2000/01 locate and interview rates, by pre-CATI NCOA processing**

Student mailing status	Total	Contacted		Interviewed, given contact	
		Number	Percent	Number	Percent
Total	11,490	10,750	94	9,940	93
Confirmed/new information from NCOA	1,780	1,650	92	1,530	93
No new information from NCOA	9,710	9,110	94	8,410	92

NOTE: Statistics exclude 70 B&B-ineligible sample members (as determined in CATI) and 140 cases with insufficient address information to send to NCOA. Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

**Batch matching to Telematch database.** The second step in the pre-data collection batch processing involves sending all address information, including updates from NCOA, to Telematch for reverse telephone look-up services. Telematch provides a computerized residential telephone number look-up service using a database of more than 130 million U.S. telephone numbers. Table 3.3 provides the results of the batch matching to Telematch. Of the 11,490 eligible B&B:2000/01 records submitted, two-thirds (67 percent) were returned with new or confirmed telephone information.

**Table 3.3. B&B:2000/01 locate and interview rates, by pre-CATI Telematch processing**

Student mailing status	Total	Contacted		Interviewed, given contact	
		Number	Percent	Number	Percent
Total	11,490	10,750	94	9,940	93
Confirmed/new information from Telematch	7,670	7,340	96	6,850	93
No new information from Telematch	3,820	3,420	90	3,090	90

NOTE: Statistics exclude 70 B&B-ineligible sample members (as determined in CATI) and 140 cases with insufficient address information to send to Telematch. Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

**Intensive pre-data collection centralized tracing.** All NPSAS:2000 nonrespondent cases, as well as those cases without a valid address or telephone number, received intensive tracing. These are the cases believed to be the most difficult to locate at the outset of the study. As shown in table 3.4, about 1,240 cases were sent TOPS for advance tracing. Of those, 70 percent (about 910 cases) were ultimately located, and just over two-thirds of those (69 percent) completed the full, partial, or abbreviated hard-copy interview.

**Table 3.4. B&B:2000/01 contact and interview rates, by pre-CATI intensive tracing efforts**

Tracing status	Total	Contacted		Interviewed, given contact	
		Number	Percent	Number	Percent
Total	11,630	10,870	94	10,030	92
No intensive tracing required	10,400	9,970	96	9,400	94
Intensive tracing required	1,240	910	73	630	69

NOTE: Statistics exclude 70 B&B-ineligible sample members. Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

**Lead letter and locator mailing to students.** One week before the start of data collection, sample members were sent a letter and address update sheet. Each sample member was asked to review, correct, and return the sheet. Letters were mailed to about 11,630 sample members, and approximately 1,090 address update sheets with new or confirmed information were received (9 percent of the total sample).

Not surprisingly, sample member contact and interview rates varied considerably by whether a sample member returned the address update sheet (see table 3.5). While the return rate for these sheets was just over 9 percent, the contact and interview rates for those who did return the forms was nearly universal. More than 99 percent of those who returned the form completed the interview.

**Table 3.5. B&B:2000/01 locate and interview rates, by student return of address update form**

Student mailing status	Total	Contacted		Interviewed, given contact	
		Number	Percent	Number	Percent
Total	11,630	10,870	94	10,030	92
Returned update form	1,090	1,080	99	1,070	99
No update form returned	10,540	9,790	93	8,960	92

NOTE: Statistics exclude 70 B&B-ineligible sample members (as determined in CATI). Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

### 3.1.3 Tracing and Locating Efforts During Data Collection

Tracing during data collection took many forms. In addition to the contacting and locating done as part of the CATI contacting and interviewing processes, an array of other approaches was used to locate sample members and encourage them to participate in the survey. These efforts included centralized tracing by TOPS, in-person tracing by field locators, batch tracing (for a second time) to NCOA and Telematch, batch tracing to an additional vendor (TransUnion), mailout of a hard-copy questionnaire, and a postcard follow-up.

**Intensive locating during data collection.** Intensive tracing efforts were required for cases in which preloaded CATI locating information did not result in contact with the sample member. These cases were assigned to TOPS for intensive centralized tracing. The final locate and interview rates for cases requiring centralized tracing are provided in table 3.6. Of the approximately 11,630 eligible cases, nearly one in five (20 percent) required TOPS intensive tracing during data collection. Of these, 69 percent were located and, of those located, just under 92 percent were interviewed.

**Table 3.6. B&B:2000/01 contact and interview rates, by post-CATI intensive tracing efforts**

Tracing status	Total	Contacted		Interviewed, given contact	
		Number	Percent	Number	Percent
Total	11,630	10,870	94	10,030	92
No intensive tracing required	9,330	9,280	100	8,560	92
Intensive tracing required	2,310	1,600	69	1,470	92

NOTE: Statistics exclude 70 B&B-ineligible sample members (as determined in CATI). Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

**Source of locating information for completed interviews.** Locating students in a longitudinal study is a complex task, requiring multiple sources of information. Leads developed through one source may need to be verified using another data source or locating technique. For hard-to-locate sample members, generally no single source of information is adequate to achieve the level of locating required. Rather, a successful locating effort requires blending multiple sources of information. Table 3.7 provides an overview of the sources used during intensive tracing of the hard-to-reach B&B:2000/01 sample members. Note that although the table provides information on the number and percentage of sample members who were ultimately located when a particular source was used, most of the cases were traced using multiple sources.

**Table 3.7. B&B:2000/01 locate rates, by tracing source used during intensive tracing efforts**

Tracing source	Cases involving intensive tracing		
	Total	Individuals located	
		Number	Percent
Consumer database search	2,026	1,362	67
Directory assistance	1,995	1,330	67
Database–address search	1,756	1,145	65
Internet search	1,925	1,263	66
Database–reverse phone lookup	1,272	819	64
Database–name search	1,065	636	60
Database–neighbor search	406	234	56

NOTE: Most cases were traced using multiple sources, and therefore, the numbers and percentages are not mutually exclusive.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

A number of techniques proved effective in the locating effort. Contact was made with approximately two-thirds of the cases in which the following locating sources were used: consumer databases (67 percent), directory assistance (67 percent), searches of proprietary databases (65 percent), Internet searches (66 percent), and database searches using reverse telephone look-ups—that is, matching a telephone number to a known address (64 percent). Look-ups using just names or neighbor searches located over half of these sample members.<sup>14</sup>

**Database matching of nonrespondent cases.** To secure the highest possible response rate for B&B:2000/01, the address and telephone number information for cases that had not responded by October 1, 2001, were resubmitted to NCOA and Telematch to see if further updates could be obtained. Additionally, in the last month of data collection for B&B:2000/01, all nonrespondent cases were also processed against the TransUnion credit service database.

The results of the second batch processing through NCOA are shown in table 3.8. Of the approximately 3,400 nonrespondent cases sent to NCOA, only about 320 (about 10 percent) turned up with new or confirmed information. Of these, 68 percent were ultimately located, and 77 percent of located sample members completed the interview.

**Table 3.8. B&B:2000/01 locate and interview rates, by nonrespondent NCOA processing**

Student mailing status	Total	Contacted		Interviewed, given contact	
		Number	Percent	Number	Percent
Total	3,400	2,650	78	2,040	77
Confirmed/new information from NCOA	320	220	69	170	78
No new information from NCOA	3,080	2,430	79	1,860	77

NOTE: Statistics exclude 50 cases sent to NCOA but later determined to be ineligible. Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

The results of the nonrespondent processing through Telematch are shown on table 3.9. Over half (57 percent) of the nearly 3,190 cases submitted to Telematch produced either new or confirmed telephone numbers. Among the cases in which the locating information was updated, 83 percent were contacted, and of those contacted, 77 percent completed the interview.

<sup>14</sup> Neighbor searches involve the use of databases to identify the addresses and telephone numbers of properties or apartments located in close proximity to the sample member's last known address. The assumption is that current or former neighbors may be able to provide current locating information for the sample member.



**Table 3.9. B&B:2000/01 locate and interview rates, by nonrespondent Telematch processing**

Student mailing status	Total	Contacted		Interviewed, given contact	
		Number	Percent	Number	Percent
Total	3,190	2,440	77	1,860	76
Confirmed/new information from Telematch	1,830	1,510	83	1,160	77
No new information from Telematch	1,360	940	69	700	75

NOTE: Statistics exclude 50 cases sent to Telematch but later determined to be ineligible. Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

In the last month of data collection, RTI secured access to a new consumer database batch processing service offered by TranUnion. All nonrespondent cases as of October 15, 2001, were submitted for matching against this service to identify new leads or confirm information already obtained. A total of about 2,650 cases were submitted for processing, of which 98 percent were returned with either new information or a confirmation of an existing telephone number or address (see table 3.10). Among the cases returned with a match, 73 percent were located by study’s end. Seven of every 10 previously nonresponding sample members who could be contacted through these efforts completed the survey.

**Table 3.10. B&B:2000/01 locate and interview rates, by results of nonrespondent TransUnion processing**

Student mailing status	Total	Contacted		Interviewed, given contact	
		Number	Percent	Number	Percent
Total	2,650	1,910	72	1,326	70
Confirmed/new information from TransUnion	2,600	1,900	73	1,320	70
No new information from TransUnion	50	10	20	10	100

NOTE: Statistics exclude 50 cases sent to TransUnion but later determined to be ineligible. Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

**Field locating.** In an effort to boost response rates in the final month, 630 cases were sent to field locators, who encouraged located sample members either to complete the full interview by calling RTI’s CATI facilities or to complete a hard-copy<sup>15</sup> interview with the field locator. Of the nearly 630 cases sent to the field, about 400 sample members completed interviews, for an unweighted response rate of 64 percent (see table 3.11). Half of the completes (50 percent) were hard-copy completions obtained by the field staff. The other 50 percent were

<sup>15</sup> A hard-copy interview is one completed using a paper version of the abbreviated instrument.

completed by telephone after the field locator either provided the CATI facilities with new contact information or prompted the sample member to call in to complete the survey.

**Table 3.11. B&B:2000/01 locate and interview rates for field locator cases**

Case status	Number	Percent
Total cases	630	100
Complete-total	400	64
(Complete-by telephone)	200	32
(Complete-by abbreviated hard-copy questionnaire)	200	32
Located-time ran out	20	3
Located-refused	10	2
Located-confirmed exclusion	10	2
Located-confirmed ineligible	10	2
Not located	180	29

NOTE: Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

## 3.2 Interviewing Outcomes

### 3.2.1 Hard-copy Questionnaire Mailout and Postcard Follow-up

During the final month of data collection, hard-copy abbreviated instruments were mailed to all nonresponding sample members for whom a valid mailing address was available. Two weeks later, persons who had not yet responded were sent a postcard reminder. Both the mailing and the postcard informed the sample members that they could complete the hard-copy and return it in a business reply envelope (provided in each mailout packet) or call into a toll-free number at our CATI facilities to complete the interview.

Questionnaires were mailed to about 2,630 nonresponding sample members (see table 3.12). By the end of the study, completions were obtained from approximately 1,630 of these individuals (62 percent). Among these responding sample members, about 1,390 sample members (85 percent) completed the survey by telephone, while about 250 sample members (15 percent) completed and returned the hard-copy abbreviated questionnaires.

**Table 3.12. B&B:2000/01 locate and interview rates, by end of study hard-copy questionnaire mailout and postcard follow-up**

Student mailing status	Total	Contacted		Interviewed, given contact	
		Number	Percent	Number	Percent
Sent abbreviated hard-copy questionnaire	2,630	2,120	81	1,630	77
Sent postcard reminder	1,250	570	46	340	60

NOTE: Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

### 3.2.2 Refusal Conversion Efforts

Refusal conversion procedures were used to gain cooperation from individuals who refused to participate when contacted by telephone interviewers. Refusals came not only from sample members, but also from spouses, housemates, parents, and other gatekeepers. When either a sample member or a gatekeeper refused to participate in the locating or interviewing effort, the case was referred to a specially trained refusal-conversion specialist in RTI's Telephone Survey Department. There were about 1,520 initial refusals among the B&B:2000/01 sample (13 percent of the eligible sample of approximately 11,630). Of the potential pool of eligible initial refusal cases, 64 percent were successfully converted and completed interviews.

**Table 3.13. B&B:2000/01 conversion of initial refusals, by respondent status in NPSAS:2000**

NPSAS:2000 field test respondent status	Number of initial refusals	Interviewed, given initial refusal	
		Number	Percent
Total	1,520	970	64
Respondent	1,270	890	70
Nonrespondent	260	80	31

NOTE: Statistics exclude 10 refusal cases found to be B&B ineligible (as determined in CATI). Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

The success of refusal conversion varied considerably according to the sample member's response status in the base year study (see table 3.13). Among respondents to the NPSAS:2000 interview, 70 percent of those who initially refused to be interviewed (or whose gatekeeper refused) ultimately completed the B&B:2000/01 interview. For base year nonrespondents who initially refused in B&B:2000/01, 31 percent were successfully converted.

### 3.3 Interview Burden, Time, and Effort

#### 3.3.1 Timing

This section reviews the effort and burden associated with the B&B:2000/01 student interview. Interview length was examined by considering the timing analysis statistics. This information is useful because it provides evidence that can reduce respondent burden, reduce data collection effort and cost, and improve data quality for future studies. The effort required to locate and interview sample members for the study was evaluated using the average interview time.

The CATI instrument development was embedded with time stamps at the start and end of the interview, as well as at the beginning and end of each interview screen, which could include up to eight related items. The time stamps measured the elapsed time to complete each segment of the interview. This enabled project staff to monitor the time required to complete specific interview items, the online coding programs, sections of the interview, and the interview as a whole.

Table 3.14 presents timing results for the B&B:2000/01 study cohort. The time (in minutes) needed to conduct a student interview is shown to respondents by interview section. Sections are listed in the table in the order in which they were presented to respondents. There were fluctuations in the number of cases completing each section for two reasons: (1) some respondents broke off the interview before completing all of the sections (partial interview), and (2) certain sections of the interview applied to selected groups of respondents (see figure 2.2), so timing results are presented for the overall cohort and by subgroup. For example, Section A was designed for base year nonrespondents, so the number of cases in that group was less than that for the rest of the instrument. Respondents who were currently teaching skipped Section E (on post-baccalaureate employment) and proceeded directly to the teaching section.

Overall average administration time to complete the interview was 19 minutes. Both respondents and nonrespondents to the NPSAS:2000 base year study took an average of approximately 19 minutes to complete the interview. As indicated in Table 3.14, base year respondents took longer to complete the sections on student background, post-baccalaureate enrollment, post-baccalaureate employment, training and certification, and teaching experience when compared to base year nonrespondents.

For respondents who had taught since graduating, the average interview time was 24 minutes, compared to 18 minutes for those who had not taught. Teachers took longer to complete many of the interview sections. These included sections on student background, post-baccalaureate enrollment, training and certification, and, as would be expected, teaching experience. On one section, post-baccalaureate employment, teachers took less time because many employment questions were skipped once teaching status had been confirmed.

### **3.3.2 Number of Calls and Response Rates**

Telephone interviewers made over 214,000 telephone calls during the data collection period, with an average of 18 calls per sample member.<sup>16</sup> An average of 17 calls per case was required to obtain the completed cases. Among the completed cases, nearly 44 percent were completed with fewer than 10 calls, an additional 41 percent required 10 to 29 calls, and just over 15 percent of the completed cases required 30 or more call attempts.

Of the total calls made, one in four resulted in contact with an individual. An answering machine was reached on 44 percent of the attempts, reflecting the heavy usage of such devices among this population. An answering machine was reached at least once (and often multiple times) for three of every four B&B sample members. The remaining 30 percent of calls made were other noncontacts (busy, ring/no answer, fax line, pager, etc.).

As might be expected, the number of completed interviews remained steady during data collection, and then completions tapered off towards the end as cases were harder to reach. Table 3.15 provides a summary of the proportion of total responses obtained for each week of data collection.

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<sup>16</sup>These figures are based on calls made by telephone interviewers and exclude calls made by TOPS in the course of attempting to locate sample members.

**Table 3.14. Average minutes to complete B&B:2000/01 student interview, by interview section, NPSAS:2000 response status, and teaching status**

CATI section	Total		NPSAS:2000 nonrespondent		NPSAS:2000 respondent		B&B:2000/01 nonteachers		B&B:2000/01 teachers	
	Average time	Number of cases	Average time	Number of cases	Average time	Number of cases	Average time	Number of cases	Average time	Number of cases
Section A – eligibility (NPSAS nonrespondents)	0.42	540	0.42	540	†	9,120	0.41	450	0.43	90
Section B – enrollment history	6.16	9,650	6.09	540	6.16	9,110	6.19	7,640	6.05	2,010
Section C – student background	2.74	9,630	2.64	540	2.74	9,090	2.72	7,630	2.80	2,000
Section D – post-baccalaureate education	3.00	9,630	2.60	540	3.02	9,090	2.91	7,630	3.33	2,000
Section E – post-baccalaureate employment	4.20	9,620	4.02	540	4.21	9,090	4.46	7,620	3.20	2,000
Section F – training and certification	1.47	9,270	1.32	540	1.47	9,090	1.29	7,620	2.14	2,000
Section G – teaching experience	1.74	9,610	1.52	530	1.75	9,080	0.45	7,610	6.62	2,000
Total interview	19.29	9,620	18.51	540	19.33	9,080	18.05	7,620	24.01	2,000

† Not applicable.

NOTE: A section was considered complete if the amount of time to complete the section was greater than zero and the section completion flag was set. Section outliers were removed from the timing calculations (20 in section A, 10 in section B, 20 in section C, 10 in section D, 10 in section E, 0 in section F, and 20 in section G). Respondents may have completed one or more sections but not completed the entire interview. Only completed cases were included in the total interview timing results. Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

**Table 3.15. Proportion of total responses by time period (in weeks)**

Week	Weekly completes	Cumulative completes	Cumulative percent of total respondents
1	730	730	7
2	890	1,620	16
3	790	2,410	24
4	640	3,050	30
5	600	3,650	36
6	590	4,240	42
7	650	4,890	49
8	620	5,510	55
9	590	6,100	61
10	680	6,780	68
11	550	7,330	73
12	430	7,760	77
13	370	8,130	81
14	380	8,510	85
15	270	8,780	88
16	380	9,160	91
17	350	9,510	95
18	250	9,760	97
19	230	9,990	100
20	40	10,030	100

NOTE: Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

# Chapter 4

## Evaluation of Data Quality

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A variety of methods were designed to assess the data quality of the B&B:2000/01 follow-up study. This chapter describes these methods and provides the results of them. Table 4.1 provides a summary of the types of data quality evaluation used in the study. Each will be described in the sections below.

**Table 4.1. Summary of B&B:2000/01 data quality evaluations**

Major area of evaluation	Evaluation approaches
<b>Instrument quality</b>	<ul style="list-style-type: none"> <li>• Analyze distribution of indeterminate responses (“refused” and “don’t know”) for interview sections and individual items.</li> <li>• Analyze the frequency of help text usage for each item.</li> </ul>
<b>CATI administration</b>	<ul style="list-style-type: none"> <li>• Analyze success and accuracy of online coding of industry/occupation and major course of study.</li> <li>• Debrief interviewers, refusal converters, bilingual interviewers, monitors, and supervisors in quality circle meetings.</li> <li>• Analyze silent monitoring quality control data, including accuracy of question delivery and data entry.</li> </ul>

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

### 4.1 Indeterminate Responses

Special keyed entry by interviewers (F3=don’t know or F4=refused) allowed the CATI interview to accommodate responses of “don’t know” and “refused” to every interview item. Refusal responses to interview questions were most common for items considered sensitive by respondents, while “don’t know” responses may have resulted from a number of potential circumstances. The most obvious reason a respondent will offer a “don’t know” response is that the answer is truly unknown or in some way inappropriate for the respondent. “Don’t know” responses may also be evoked when (1) question wording is not understood by the respondent (with no explanation by the interviewer), (2) the respondent hesitates to provide a “best guess” response (with insufficient prompting from the interviewer), or (3) a respondent implicitly refuses to answer a question. “Refused” and “don’t know” responses need to be reduced to the

greatest extent possible. These responses introduce indeterminacies in the data, and must be resolved by imputation or subsequently dealt with during analysis.

Overall item nonresponse rates were low, with only 6 items of 556 containing over 10 percent missing data. These items are shown in table 4.2 and are grouped by interview section. Item nonresponse rates were calculated based on the number of sample members for whom the item was applicable and asked. One item with a high rate of nonresponse pertained to income. Many respondents were reluctant to provide information about personal and family finances. Among those who were not reluctant, many simply did not know, perhaps because they were in new careers, recently changed jobs, or were in job transition. In addition, the items pertaining to the lifetime learning tax credit also garnered a high number of “don’t know” responses. These “don’t know” responses are most likely attributable to respondents’ unfamiliarity with the tax credit because of its relatively recent implementation.

**Table 4.2. B&B:2000/01 interview item nonresponse for items with more than 10 percent “don’t know” or “refused”**

CATI section and variable name	Label	Number asked	Percent don’t know	Percent refused	Combined percent
Student background					
C_INCS99	Spouse’s income in 2000	3,060	11	11	21
C_SPLON	Money borrowed in loans—not from family	2,340	11	1	12
Post-baccalaureate enrollment					
D_CREDIT	Claim lifetime learning tax next year	4,140	16	1	16
Post-baccalaureate employment					
E_SIZE	Number of employees at company	5,250	11	#	12
E_CURINC	Current annual income	9,990	7	6	13
E_TIME	Time scale of pay <sup>1</sup>	680	15	3	18

# Rounds to zero.

<sup>1</sup>Time scale of pay refers to per hour, week or month.

NOTE: Statistics are based on student sample members for whom specific items were applicable and asked. Items applicable to fewer than 100 sample members were excluded from consideration. Details may not sum to zero due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

## 4.2 Help Text

Online help text was available for every screen in the CATI instrument. Having additional information available at the touch of a key was beneficial to interviewers, particularly at the beginning of data collection, when the flow and content of the instrument were new to the data collection personnel. Online help text access served to immediately clarify response categories on item wording while interviewers were still on the telephone with the respondent. Help text screens displayed information designating to whom the item applied, the type of information requested in the item, and definitions of words or phrases in the item.

Counters were used to determine the number of times each help screen was accessed, making it possible to identify items that were confusing to interviewers or respondents.



Table 4.3 presents CATI items having the highest rates of help text usage,<sup>17</sup> along with their rates of indeterminacy. Overall, the rates of help text usage were very low. Two questions concerning the lifetime learning tax credit had a large number of accesses to help text, almost certainly because of student unfamiliarity with it. The help text included a thorough explanation of the lifetime learning tax credit that telephone interviewers were able to read to respondents unfamiliar with the credit. The other items were accessed only a few times each. The available help text with term definitions was vital in helping telephone interviewers explain unknown terms to respondents. As a result, respondents were able to better understand and answer the survey items.

**Table 4.3. Item-level rates of help text access for B&B:2000/01**

CATI variable name	Label	Number of times help text was accessed	Rate of help text usage <sup>1</sup>	Rate of indeterminacy <sup>2</sup>
D_LIFLNG	Claimed lifetime learning tax credit	286	5.6	10.0
G_FSTPOS	Teaching position held in first job	15	3.6	0.0
G_PRCMP	Complete teacher education program	21	3.2	0.0
D_CREDIT	Claim lifetime learning tax credit next year	112	2.7	0.2
G_EDPGM	Completed a teacher education program	15	1.7	0.0
G_LNFNOW	Taking advantage of loan forgiveness now	4	1.1	0.0
G_EXAM	Taken national/state-level exam	5	1.1	0.0
G_FSTCLS	Sections taught per day—first job	2	1.0	0.0
G_CRTCRS	Taken course for exam—teachers	4	1.0	0.0
G_SUBL2	Long-term substitute—current job	4	1.0	0.0

<sup>1</sup>The rate presented is the number of times the help text for each item was accessed, divided by the number of times that particular item was administered.

<sup>2</sup>The rate of indeterminacy is the number of “don’t know” and “refused” responses, divided by the number of times the item was administered.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

### 4.3 Online Coding

The B&B:2000/01 CATI instrument included tools that allowed computer-assisted online assignment of codes to literal responses for postsecondary education institutions attended, major field of study, occupation, and industry. Online coding systems were designed to improve data quality by capitalizing on the availability of the respondent at the time the coding was performed. Interviewers could request clarification or additional information if a particular text string could not be successfully coded on the first attempt, an advantage not afforded when coding occurs after the interview is complete. Interviewers were trained to use effective probing techniques to ensure that each response was appropriately coded. Because both the literal string and selected code were captured in the data file for major field of study and occupation/industry responses, subsequent quality control recoding by project staff was easily incorporated into data collection procedures.

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<sup>17</sup>The requirement for item inclusion in the table was a rate of help text usage greater than or equal to 1 percent.

Institutional coding was used to assign six-digit Integrated Postsecondary Educational Data Systems (IPEDS) unit identification numbers for each postsecondary institution that the respondent reported attending. To facilitate coding, the IPEDS coding system asked for the state in which the school was located, followed by the city, and finally the name of the postsecondary institution. The system relied on a look-up table, or coding dictionary, of institutions. This dictionary was constructed from the 1998–99 IPEDS Institutional Characteristics (IC) file. Additional postsecondary information on institutional level and control was retrieved from the look-up table after coding for use for later sections of the interview.

Major field of study, occupation, and industry coding used a dictionary of word and code associations. The online procedures for these coding operations consisted of four steps:

- the interviewer keyed the verbatim text provided by the respondent;
- the dictionary system displayed words that were associated with the words in the text string, and the interviewer was given the choice of either accepting a word that might help in terms of coding, or ignoring a word that was of no help;
- standard descriptors associated with identified codes were displayed for the interviewer; and
- the interviewer selected a standard descriptor that was listed.

The first step in the online coding process after interviews were completed was the upcoding of literal strings that were deemed “uncodable” by telephone interviewers. A string was considered uncodable if the telephone interviewer could not categorize it during the interview. Project staff then attempted to upcode these strings into appropriate categories after the completion of the interview. Table 4.4 summarizes the upcoding effort and indicates that very few strings were uncodable. The elementary/secondary school where teachers were employed and institutional codes (IPEDS) had the highest rate of uncodable items. This was most likely due to two factors: (1) to code uncodable items, it is necessary for there to be an exact match to the school name, so any missing information (such as city or state) made it more difficult to reconcile the problem items; and (2) foreign schools were not included in the IPEDS coding system, making these items uncodable with no possibility of further coding.

**Table 4.4. Success rates for online coding procedures: Upcoding**

<b>Coding procedure</b>	<b>Coding attempts<sup>1</sup></b>	<b>Number originally uncodable</b>	<b>Percent originally uncodable</b>	<b>Percent successfully coded</b>
Elementary/secondary school	1,490	205	13.8	97.1
IPEDS	21,232	1,021	4.8	97.0
Major field of study	8,235	150	1.8	99.4
Occupation	6,912	76	1.1	99.6
Industry	6,307	55	0.9	99.2

<sup>1</sup>Because these items may have been asked multiple times in an interview (e.g., current major, future major), the total number of coding attempts may exceed the total number of completed interviews.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

The second step to ensure data quality was the recoding process, in which 10 percent of the major field of study, occupation, and industry coding results were then examined and recoded when necessary. Verbatim strings were evaluated for completeness and appropriateness of the assigned codes. Overall, six of the verbatim strings in the sample were too vague to evaluate. Strings for occupation had the highest number of recodes, while industry and major field of study strings required relatively little recoding. Furthermore, none of the recoded cases resulted in a shift across broad categories. Table 4.5 shows the results of the online coding procedures.

**Table 4.5. Success rates for online coding procedures: Recoding**

Coding procedure	Coding attempts sampled	Number too vague	Percent too vague	Number recoded	Percent recoded
Major field of study	778	1	.01	30	3.9
Occupation	642	1	.02	81	12.6
Industry	561	4	.07	15	2.7

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

#### 4.4 CATI Quality Circle Meetings

Quality circle meetings were vital components of the follow-up study operation and evaluation. During these regularly scheduled meetings, interviewers, supervisors, and project technical staff met to discuss issues relevant to locating respondents and conducting CATI interviews in the most effective manner. These meetings proved to be a good tool for communication, as they provided a forum to discuss many elements of the CATI instrument. Telephone interviewers attended the quality circle (QC) meetings on a rotating basis to ensure representation of various experiences, opinions, and challenges faced. Summaries of discussions and decisions were distributed to all telephone interviewers and supervisors in a newsletter. An electronic copy of this newsletter was sent to project staff not in attendance, so those who did not attend the meeting could also benefit. Table 4.6 provides a summary of these meetings.

**Table 4.6. Quality circle meeting summary**

Description of activities	
<b>Number of meetings</b>	Six
<b>Attendees</b>	<ul style="list-style-type: none"> <li>• Project technical staff</li> <li>• Telephone supervisors</li> <li>• Telephone interviewers</li> </ul>
<b>Issues addressed</b>	<ul style="list-style-type: none"> <li>• Clarification of item responses and interpretation of meanings.</li> <li>• Additions to and/or revisions of CATI items and response options.</li> <li>• Changes to help text and procedures.</li> <li>• Submission of problem sheets and notification of supervisors.</li> <li>• Reminders to focus on coding and accuracy.</li> <li>• Stressing the importance of providing detailed case comments.</li> <li>• General morale boosting and reinforcement of positive interviewing techniques.</li> </ul>

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

QC meetings addressed the concerns of project staff regarding the survey instrument and were critical in providing prompt solutions to problems encountered by interviewers. Throughout the duration of the survey, a variety of issues were addressed at the QC meetings. Some of the issues covered in quality circle meetings included the following:

- *Clarification of item responses and interpretation of meanings.* Misinterpretation of questions was addressed consistently. For example, some respondents were claiming to be teachers in areas not considered valid for this study (e.g., college professors, swim instructors). To prevent an interview from proceeding along an inappropriate path, interviewers were instructed to emphasize ‘at the K-12 level’ when asking a respondent if they were currently employed as a teacher, teacher’s aide, or substitute teacher.
- *Changes to the instrument.* Minor modifications to the instrument that were made after interviewer training were explained and demonstrated. This was to ensure that interviewers were aware of the changes and could work with them effectively.
- *Help screens.* Interviewers were reminded of the help text feature, which was available for every CATI item via the F10 function key. The help text screens provided additional explanation to allow interviewers to verify the intent of questions, as well as definitions of unfamiliar terms. Any changes to help text were also discussed. Interviewers were also able to use the F1 function key for quick access to student information, a calculator, roster lines, and case level comments.
- *Problem sheets.* Issues identified on problem sheets and proper documentation procedures were also discussed. Problem sheets were used to convey a variety of information regarding the interview, including data corrections, case anomalies, and areas of confusion.

QC meetings helped to refine interviewer skills and gave project staff feedback that was influential in making the survey clear for respondents and interviewers alike. Interviewers were reminded to focus on coding and accuracy. Overall, the QC meetings were used to help project staff and programmers refine the instrument, to ensure that the most accurate information was obtained during data collection, and to provide reinforcement of positive interviewing techniques.

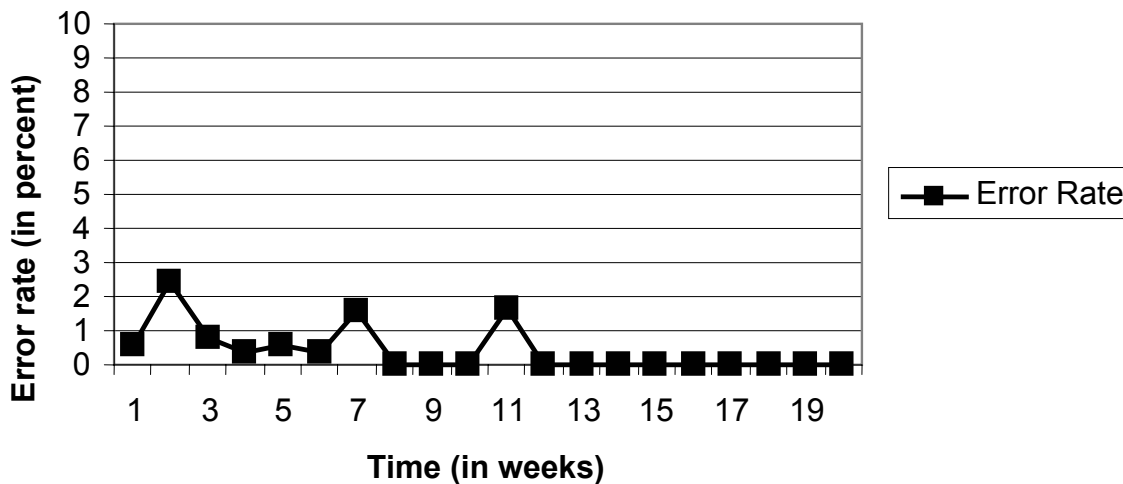
#### **4.5 Quality Assurance CATI Monitoring**

Monitoring of telephone data collection leads to better interviewing and better quality survey data, as well as improvements in costs and efficiency in telephone facilities. Monitoring in the B&B:2000/01 follow-up study helped to meet these important quality objectives:

- reduction in the number of interviewer errors,
- improvement in interviewer performance by reinforcing good interviewer behavior, and
- assessment of the quality of the data being collected.

Monitors listened to up to 20 questions as the interviews were in progress, and for each question evaluated two aspects of the interviewer-respondent interchange: (1) whether the interviewer delivered the question correctly and (2) whether the interviewer keyed the appropriate response. Each of these measures was quantified, and daily, weekly, and cumulative reports were produced for the study's IMS. During the data collection period, 14,952 items were monitored. The majority of the monitoring was conducted during the first half of data collection. Toward the end of data collection, monitoring efforts were scaled back due to the lighter caseload being worked by telephone interviewers, the greater experience of the interviewers, and the satisfaction by project staff that the process was in appropriate control. Figure 4.1 shows error rates for question delivery; figure 4.2 shows error rates for data entry. During data collection, the error rates were monitored to ensure that they were within the upper and lower control limits for these measures.<sup>18</sup>

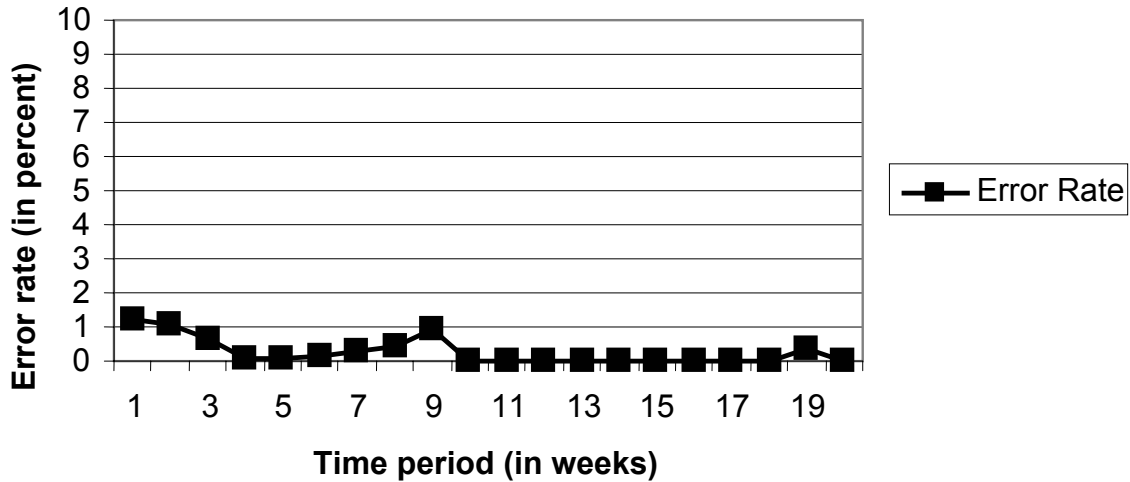
**Figure 4.1. Monitoring error rates for CATI question delivery**



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

<sup>18</sup> The upper and lower control limits were defined by three times the standard error of the cumulative proportion of errors to the number of questions observed for the period (+3 \* SE for the upper limit; -3 \* SE for the lower limit). These values represent the upper and lower boundaries of expected normal range of statistical variation for the data during the observation period.

Figure 4.2. Monitoring error rates for CATI data entry



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

Throughout the monitoring period, error rates remained within acceptable limits, typically below 1 percent. Among the 14,592 items observed, there were 141 total CATI question delivery errors and 91 total data entry errors. This resulted in overall error rates of less than 1 percent for both question delivery (0.94 percent) and data entry (0.6 percent).

# Chapter 5

## Variable Construction and File Development

### 5.1 Overview of the B&B:2000/01 Files

The B&B:2000/01 data files contain student level and institution level data collected from student interviews, institution records, and government financial aid databases. The primary analysis file, from which the study Data Analysis System (DAS) was constructed, contains data for a total of approximately 10,030 study respondents. The primary analysis file contains over 400 variables, developed from multiple B&B:2000/01 data sources.

Throughout the data collection period, data were processed and examined for quality control purposes. Editing of student data began shortly after the start of CATI data collection, when procedures and programs for this purpose were first developed. Anomalous values were investigated and resolved, where appropriate, through the use of data corrections and logical imputations. As shown in table 5.1, numerous interim data files were delivered to NCES for review, with each delivery including more of the study data.

**Table 5.1. Interim file deliveries**

Date	Description
10/04/2001	Delivery of about 7,900 completed interviews.—CATI
11/28/2001	Delivery of about 10,030 completed interviews. —CATI
12/17/2001	First interim delivery of student information file, school information file, CATI preload file coding file, and verbatim text file.
02/01/2002	Second interim delivery of student information file, school information file, CATI preload file coding file, and verbatim text file.
02/11/2002	Final delivery of student information file, school information file, CATI pre-load file coding file, and verbatim text file.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000-2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

Complete data obtained through the B&B:2000/01 study are on the restricted files and documented by the electronic codebook (ECB). These files and the ECB are available to researchers who have applied for and received authorization from NCES to access restricted research files. Authorization may be obtained by contacting the NCES Data Security Office.

The restricted use B&B:2000/01 ECB contains information about the following files:

- B&B:2000/01 analysis file—Contains analytic variables derived from all B&B data sources as well as selected direct CATI variables for the approximately 10,030 study respondents. [B01DER.DAT]
- B&B:2000/01 CATI student data file—Contains student level raw data collected from approximately 10,030 interview respondents. This file excludes any CATI “verbatim” variables, which are on the B&B:2000/01 Verbatim Data File described below. [B01STUD.DAT]
- B&B:2000/01 CATI school data file—Contains institution data obtained from the B&B:2000/01 student interview. It is a student level file; however, a student can have more than one record in the file. There is a separate record for each postsecondary institution that students reported they had attended since beginning their postsecondary education (up to 5 institutions collected during the NPSAS interview, up to 6 additional institutions collected in the follow up interview). [B01SCH.DAT]
- B&B:2000/01 coding results file—Contains the verbatim text and resulting code from B&B:2000/01 for post-baccalaureate major field of study, and for employed students, industry and occupation. Linkage to other data files is through the student ID. [B01COD.DAT]
- B&B:2000/01 verbatim data file—Contains item level records (i.e., one record per variable) for text variables collected in B&B:2000/01 CATI. It is possible to have multiple records per student or no records for a student. [B01VERB.DAT]
- B&B:2000/01 CATI preload file—Contains the data preloaded into the student interview for the approximately 10,030 CATI respondents. Preload data should not be used for analysis purposes, as they may have been updated during the interview. These data are provided for methodological purposes only. [B01PREL.DAT]
- B&B:2000/01 weights file—Contains all the sampling and analysis weights created for B&B:2000/01. There is a separate record for each of the approximately 10,030 B&B:2000/01 respondents. [B01WT.DAT]
- B&B:2000/01 nonresponse bias analysis file—Contains records for the approximately 11,700 members of the B&B:2000/01 sample. The variables included in this dataset allow nonresponse bias analysis and weight adjustment as detailed in chapter 6 of this report. [BB01SAMP.DAT]
- NPSAS:2000 analysis file—Contains analytic variables derived from all NPSAS data sources as well as selected direct CATI variables for the approximately 10,030 B&B:2000/01 respondents. [N2KDER.DAT]
- NPSAS:2000 CADE data file—Contains raw data collected from institutional records for the approximately 10,030 B&B:2000/01 study respondents. This includes about 9,610 respondents with sufficient data to be considered NPSAS CADE respondents, but also includes study respondents not considered CADE respondents. This file excludes any CADE “verbatim” variables such as responses to “Other, specify” items. [N2KCADE.DAT]



- NPSAS:2000 CATI student data file—Contains student level raw data collected from about 9,400 B&B:2000/01 respondents to the student interview during the base year study. This file excludes any CATI “verbatim” variables, which are located on the NPSAS:2000 verbatim data file described below. [N2KCATI.DAT].
- NPSAS:2000 CATI school data file—Contains institution data obtained from the student interview during the base year study. It is a student level file; however, a student can have more than one record in the file. There is a separate record for each postsecondary institution that students reported they had attended during the study year (up to five institutions). [N2KSCH.DAT]
- NPSAS:2000 coding results file—Contains the verbatim text and resulting code from NPSAS:2000 for post-baccalaureate major field of study, and for employed students, industry and occupation. Linkage to other data files is through the student ID. [N2KCODE.DAT]
- NPSAS:2000 verbatim data file—Contains item level records (i.e., one record per variable) for text variables collected either during CADE or NPSAS CATI. It is possible to have multiple records per student or no records for a student. [N2KVERB.DAT]
- NPSAS:2000 CATI preload file—Contains the data preloaded into the NPSAS student interview for the 9,400 B&B study respondents who were also NPSAS CATI respondents. It also contains records for the additional 630 B&B respondents who were NPSAS nonrespondents, for a total of 10,030 records. Preload data should not be used for analysis purposes, as they may have been updated during the interview. These data are provided for methodological purposes only. [N2KPREL.DAT]
- NPSAS:2000 Scholastic Aptitude Test (SAT) data file—Contains SAT data for the approximately 3,780 B&B study respondents who matched to Educational Testing Service (ETS) for the 1995–1999 test years. [N2KSAT.DAT]
- NPSAS:2000 American College Test (ACT) data file—Contains ACT data for about 4,000 B&B study respondents who matched to the ACT database for cohort years 1991–1992 through 1999–2000. [N2KACT.DAT]
- NPSAS:2000 institution data file—Contains selected institution level variables for about 690 NPSAS sampled institutions with B&B respondents. This file can be linked to the CATI Student Data File and CADE Data File by the IPEDS number. [N2KINST.DAT]
- CPS 2001/2002 data file—Contains data received from the central processing system (CPS) for approximately 1,480 study respondents who matched to the 2001–2002 financial aid application files. [CPS01.DAT]
- CPS 1999/2000 data file—Contains data received from the central processing system for the approximately 5,740 B&B study respondents who matched to the 1999–2000 financial aid application files. [CPS99.DAT]
- NSLDS file—Contains raw loan level data received from the National Student Loan Data System for the nearly 6,750 study respondents who received loans during the

- 2000–2001 year. This is a history file with separate records for each transaction in the loan files. [NSLDS.DAT]
- Pell data file—Contains raw grant level data received from the NSLDS for the B&B study respondents who received Pell Grants during the NPSAS year or prior years. This is a history file with separate records for each transaction in the Pell system. [PELL.DAT]
  - Private school data file—Contains data about private schools in the United States. This file was used to extract selected information about the private schools at which B&B respondents taught. [PSS.DAT]

## **5.2 Data Coding and Editing**

The B&B:2000/01 data were coded and edited using procedures developed and implemented for previous NCES-sponsored studies. The coding and editing procedures fell into two categories:

1. Online coding and editing performed during data collection, and
2. Post-data-collection data editing.

### **5.2.1 Online Coding and Editing**

The B&B:2000/01 follow-up study had one major data collection system: CATI. The CATI system included edit checks to ensure that data collected were within valid ranges. To the extent feasible, this system incorporated across-item consistency edits. While more extensive consistency checks would have been technically possible, use of such edits was limited to prevent excessive respondent burden.

The CATI system included online coding systems used for the collection of industry, occupation, and major field of study data. Additionally, the CATI system included a coding module used to obtain IPEDS information for postsecondary institutions that the student attended (other than the NPSAS institution from which they were sampled). Below is a description of the online range and consistency checks and the online coding systems incorporated into the B&B:2000/01 CATI systems.

Data for the B&B:2000/01 sample from all NPSAS:2000 files were delivered along with B&B:2000/01 files. Users of the data files can find NPSAS:2000 coding and editing process reported in detail in the NPSAS:2000 Methodology Report.<sup>19</sup> Users of the data files from this study are encouraged to refer to that report for further information.

### **B&B:2000/01 CATI Range and Consistency Checks**

- Range checks were applied to all numerical entries, such that only valid numeric responses could be entered.

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<sup>19</sup> Riccobono et al. 2001.

- Major field of study was entered by telephone interviewers as a text string. The coding software standardized and analyzed the text, and attempted to match the entry to a database. The interviewer was presented with one or more choices from which to select the appropriate entry in the coding dictionary.
- Student's occupation (if the student was employed) was coded by concatenating text strings entered for job title and job duties. The coding software then standardized and analyzed the text, and attempted to match the entry to the coding dictionary. The interviewer was presented with one or more choices, confirming entry with the student when multiple choices were presented.
- Student's industry (if the student was employed) was entered as a text string. The coding software then standardized and analyzed the text, and attempted to match the entry to the coding dictionary. The interviewer was presented with one or more choices, confirming entry with the student when multiple choices were presented.
- All postsecondary institutions in which the student had been enrolled since beginning his/her postsecondary education were selected from a list, based on the respondent's report and the interviewer's entry of the city and state in which the institution was located. Upon selection, the name of the institution, as well as selected IPEDS variables (institutional level, control, tuition) were inserted into the CATI database.
- If the respondent had taught since earning the bachelor's degree, the name of the elementary or secondary school in which the respondent taught was entered as a text string and coded in the elementary/secondary school user exit in a process similar to IPEDS (i.e., collect state, city, then school name). Additional variables such as county, district, lowest and highest grades offered, and whether the school is public or private, were obtained from the NCES Private School Survey (PSS) and Common Core of Data (CCD) data files.
- A verification check was triggered if the number of hours worked per week while enrolled exceeded 60 hours.
- A verification check was triggered if respondents stated that they worked more than 4 jobs.
- A verification check was triggered if earnings and income exceeded \$1,000,000.
- A verification check was triggered if the respondent reported a mortgage payment over \$4,000.
- A verification check was triggered if the respondent stated that they had 10 or more credit cards.
- A verification check was triggered if the respondent stated that they had become a teacher after completing their bachelor's degree, but reported that they started their job prior to July 1999.

### **5.2.2 Post-Data-Collection Editing**

Following data collection, the information collected in CATI was subjected to various checks and examinations. These checks were intended to confirm that the database reflected appropriate skip-pattern relationships and different types of missing data by inserting special

codes. There are a variety of explanations for missing data within individual data elements. For example, an item may not have been applicable to certain students, a respondent may have refused to answer a particular item, or a respondent may not have known the answer to the question. Table 5.2 lists the set of consistency codes used to assist analysts in understanding the nature of missing data associated with B&B:2000/01 data elements.

**Table 5.2. Description of missing data codes**

Missing data code	Description
-1	Don't know (CATI variables) Data not available (CADE variables)
-2	Refused (CATI variables only)
-3	Not applicable—(CADE and CATI variables only)
-6	Bad data, out of range
-7	Item was not reached (abbreviated and partial CATI interviews)
-8	Item was not reached due to a CATI error
-9	Data missing, reason unknown (CATI variables)

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/2001).

Skip-pattern relationships in the database were examined by methodically running cross-tabulations between gate items and their associated nested items. In many instances, gate-nest relationships had multiple levels within the CADE or CATI instrument. That is, items nested within a gate question may themselves have been gate items for additional items. Therefore, validating the gate-nest relationships often required much iteration and many multiway cross-tabulations.

The data cleaning and editing process for the B&B:2000/01 data involved a multistage process that consisted of the following steps:

Step 1. Blank or missing data were replaced with -9 for all variables in the CADE or CATI database. Also, a one-way frequency listing of every variable in the database was generated to confirm that no missing or blank values remained. These same one-way frequencies revealed any out-of-range or outlier data values, which were investigated and checked for reasonableness against other data values. Example: hourly wages of .10, rather than 10.

Some standard variable recodes were performed during this step. All Yes/No CATI variables were recoded from 1=Yes/2=No to 1=Yes/0=No. RTI's Telephone Survey Department standard is to use 1 for Yes and 2 for No. However, 1/0 for Yes/No works much better in the DAS and ECB, so the conversion was made in the editing process.

Step 2. Using CADE or CATI source code as specifications, all gate-nest relationships were defined in SAS code. The format of the SAS statement should have been as follows: IF gate variable EQUAL gate value AND nest variable EQUAL -9 THEN nest variable EQUAL -3.

This code replaced –9’s with –3’s (the not applicable code) as appropriate or –1 when the response to the gate was indeterminate (don’t know or refusal). Two-way cross-tabulations between each gate-nest combination revealed either numbers of nonreplaced –9 codes or “valid” responses in items that should have been skipped. Each such instance was investigated to ensure skip-pattern integrity. Typically, resolution involved reprogramming the gate-nest relationship to be consistent with the CADE or CATI instrument.

Some logical imputations could occur during this step if nonnegative values were assigned to variables that were “missing” and whose values could have been implicitly determined (and were thereby skipped in CADE or CATI). For instance, if the student did not work while enrolled, then the amount earned should have been coded to \$0 rather than –3 or –9. If a student indicated that he or she was not disabled, then the “nested” disability items under the gate question were logically imputed to “no.” On certain occasions, values were filled in that were previously skipped because they had a preloaded value. For example, B&B:2001 respondents who were also NPSAS:2000 respondents were not asked about their 1999–2000 enrollment since that information was collected during the NPSAS interview. Enrollment data for the 1999–2000 school year were imputed from the base year data for these cases.

Another step that occurred at this stage involved merging to external databases—IPEDS, PSS, and CCD. During the CATI interview, both postsecondary institutions and elementary/secondary schools (for respondents who were teachers) were coded online. Subsequent to the interview, these files were merged by the school code to pick up additional information including level, control, district, county, etc. for delivery with the B&B:2000/01 data.

- Step 3. Based on the section completion indicators, and/or the abbreviated interview indicator, the code replaced –9 and –3 with –7 (item not administered). This code allows analysts to easily distinguish items not administered from items that were either skipped or left blank unintentionally.
  
- Step 4. One-way frequencies on all categorical variables were regenerated and examined. Variables with high counts of –9 were investigated. Frequencies were checked for out-of-range or outlier data items. Responses in the one-way frequencies were checked to confirm that they had corresponding entries in the VALCODES documentation file. If there were any remaining –9 codes, they were replaced with the appropriate data code.

Step 5. Descriptive statistics were produced for all continuous variables using SAS PROC UNIVARIATE. The SAS program first temporarily recoded all values less than zero to missing. Minimum, median, maximum, and mean values were examined to assess reasonableness of responses. Anomalous data pattern values were investigated and corrected as necessary.

### **5.3 Composite and Derived Variable Construction**

Analytic variables were created by examining the data available for each student from the various data sources, establishing relative priorities of the data sources—on an item-by-item basis—and reconciling discrepancies within and between sources. In some cases, the derived or composite variables were created by simply assigning a value from the available source of information given the highest priority. In other cases, raw interview items were recoded or otherwise summarized to create a derived variable. A listing of the set of analysis variables derived for B&B:2000/01 appears in appendix F. Specific details regarding the creation of each variable appear in the variable descriptions contained in the ECB and DAS.

# Chapter 6

## Weighting and Variance Estimation

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This chapter describes the weighting and variance estimation methods used in B&B:2000/01. Since the B&B:2000/01 sample was obtained from a complex survey design, estimates based on the sample will usually be computed using statistical analysis weights. These analysis weights primarily account for the unequal probabilities of selection in the sample. However, they also contain adjustments to account for the potential bias due to nonresponse, and are poststratified to known population totals to improve overall efficiency. Weights can be developed for use with a variety of variance estimation approaches and here weights are provided for two approaches: Taylor series and balance repeated replication.

This chapter describes the development of the final study weights, starting with a description of how initial design-based sample weights were obtained, and continuing through later adjustments up to the construction of final weights for two different variance estimation approaches. Included is an evaluation of the adequacy of the weights and adjustments and a description of the two methods provided for obtaining variance estimates from the final weights. Aspects of the B&B:2000/01 statistical analysis not related to weight development are provided in the appendices: survey design effects are described in appendix G, and item nonresponse analysis is provided in appendix H. Instructions for the use of the final analysis weights are provided in appendix I.

Section 6.1 describes how initial B&B:2000/01 weights were obtained from NPSAS:2000 weights and the B&B:2000/01 sampling design. Section 6.2 provides a summary of the types of nonresponse observed in the B&B:2000/01 sample and compares response behavior of individuals in NPSAS:2000 and B&B:2000/01. Tests for nonresponse bias are reported in section 6.3. Nonresponse adjustment is the subject of section 6.4, including selection of model predictors, an overview of the adjustment model (see also appendix F), and summary statistics for the successive adjustments of location nonresponse, refusal nonresponse, nonrefusal nonresponse, and poststratification. Section 6.5 summarizes weight and adjustment factor distributions and applies a variety of methods to evaluate the performance of the adjustment methods. It also provides both a brief analysis of potential bias due to the use of abbreviated interviews and the overall estimated study response rates. Finally, section 6.6 describes the two supported methods of variance estimation (Taylor series and balanced repeated replication), as well as how weights and analysis strata were developed.

### 6.1 Obtaining Initial Weights

The B&B:2000/01 sample design includes the first two stages of the NPSAS:2000 sample design and an additional B&B:2000/01-specific stage in which a subsample was selected from confirmed and potential baccalaureate recipients identified at the end of the NPSAS:2000 sample. All confirmed baccalaureate recipients were selected into the B&B:2000/01 sample,

while (nonresponding) potential baccalaureate recipients were randomly selected according to probabilities based on a measure of size, which was the estimate of the NPSAS:2000 study weight at the time of sample selection. Once the B&B:2000/01 sample had been selected, initial B&B:2000/01 weights were obtained by adjusting the NPSAS:2000 study weights for both the B&B:2000/01 subsample design and the presence of study-ineligible individuals on the B&B:2000/01 sampling frame. These two adjustments are now described in more detail.

### 6.1.1 Subsampling Weight Adjustment

For the B&B:2000/01 study, the sampling frame contained about 10,400 NPSAS:2000 confirmed baccalaureates and about 3,520 CATI nonresponding potential baccalaureates who were CADE respondents. This represented the NPSAS:2000 second-stage sample restricted—to the extent possible—to the target population of baccalaureate recipients.

To adjust the NPSAS:2000 study weights for subsample selection, the about 13,920 individuals on the subsample frame are numbered from  $i=1, \dots, 13,920$ , and  $w_{1i}^*$  is the final NPSAS:2000 study weight for individual  $i$ . From section 2.1.2, the selection probability  $\pi_i$  for individual  $i$  is as follows:

$$\pi_i = \begin{cases} 1 & \text{if individual } i \text{ is a confirmed baccalaureate or} \\ & \text{certainty selection, and} \\ \frac{n(A_i)S_i}{\sum_{j \in A_i} S_j} & \text{otherwise.} \end{cases}$$

where  $A_i$  contains all non-certainty individuals in the stratum to which  $i$  belongs, and  $n(A_i)$  is the number of certainty selections in that stratum. The measure of size for individual  $i$  is given by  $S_i$ .

The subsampling weight component  $a_{1i}^*$  for individual  $i$  is then the reciprocal of this probability  $a_{1i}^* = \pi_i^{-1}$ , and the weight  $w_{2i}^*$  for individual  $i$  which accounts for subsampling is then  $w_{2i}^* = w_{1i}^* a_{1i}^* I_i$ , where  $I_i$  is an indicator variable for the presence of individual  $i$  in the subsample:

$$I_i = \begin{cases} 0 & \text{if individual } i \text{ is not in the subsample,} \\ 1 & \text{if individual } i \text{ is in the subsample.} \end{cases}$$

Since each individual on the sampling frame has different sample weights  $w_{1i}^*$ , the estimate of the subpopulation total,  $\sum_{i=1}^{13920} w_{1i}^*$ , is not preserved by these adjusted weights; that is,  $\sum_{i=1}^{13920} w_{2i}^* \neq \sum_{i=1}^{13920} w_{1i}^*$ . A simple ratio adjustment was made to account for this total based on the full sample by rescaling the weights of sampled potential baccalaureate recipients so that the subpopulation total was preserved. Denote the set of all about 3,520 potential baccalaureate recipients as  $B$ . The ratio adjustment can be stated as follows:

$$a_{2i}^* = \begin{cases} \frac{\sum_{j \in B} w_{1j}^*}{\sum_{j \in B} w_{2j}^*} & \text{if } i \in B, \text{ and} \\ 1 & \text{otherwise.} \end{cases}$$



The new ratio-adjusted weight is then  $w_{3i}^* = w_{2i}^* a_{2i}^*$ . In the B&B:2000/01 study, the observed adjustment was, in fact, very small,  $a_{2i}^* = 0.99993$  for all  $i \in B$ .

### 6.1.2 Eligibility Weight Adjustment

At the conclusion of B&B:2000/01 sampling, some of the potential baccalaureate recipients had unconfirmed eligibility due to nonresponse, so an additional weight adjustment was made in compensation. This adjustment was made within weighting classes defined by the five non-empty levels of institutional sector (the cross of institutional control and institutional level). Within each class, the proportion eligible was estimated using the observed proportions in the B&B:2000/01 respondents.

The estimated proportion eligible  $\hat{p}_j$  in level  $j$  of institutional sector is as follows:

$$\hat{p}_j = \frac{\sum_{i \in A_j} w_{3i}^* I_i}{\sum_{i \in A_j} w_{3i}^* J_i} \quad j = 1, \dots, 5$$

where  $A_j$ , for  $j=1 \dots, 5$ , is a set of individuals in level  $j$  of institutional sector,  $I_i=1$  if individual  $i$  is eligible,  $I_i=0$  otherwise,<sup>20</sup> and  $J_i=1$  if the eligibility status of individual  $i$  is known,  $J_i=0$  otherwise.<sup>21</sup> The adjustment factor  $a_{3i}^*$  for the eligibility of individual  $i$  is then

$$\begin{aligned} a_{3i}^* &= 1 && \text{if individual } i \text{ is known eligible,} \\ &= 0 && \text{if individual } i \text{ is known ineligible, or} \\ &= \hat{p}_j && \text{if } i \in A_j \text{ and individual } i \text{ is of unknown eligibility.} \end{aligned}$$

The initial weight for individual  $i$  in the B&B:2000/01 study is then  $w_{1i} = w_{3i}^* a_{3i}^*$ .

## 6.2 Response Classification of the Collected Sample

The nonresponse that was observed in B&B:2000/01 can be classified into a variety of types, and this classification will be used later in fitting models for nonresponse adjustment. An overview of the distribution of the types of nonresponse in the B&B:2000/01 subsample is now provided. Overall, the B&B:2000/01 subsample had an unweighted 86 percent response rate; of the about 11,700 individuals selected in the B&B:2000/01 subsample, a total of about 10,030 were respondents.

Nonresponse was classified into three types for later use with weight adjustment models:

- *location nonresponse* (unable to locate),
- *refusal nonresponse*, and
- *nonrefusal nonresponse* (e.g., still attempting to schedule interview, language barriers).

<sup>20</sup>Individuals were considered eligible if they were either NPSAS:2000 confirmed baccalaureate recipients who were B&B:2000/01 nonrespondents, or if they were B&B:2000/01 respondents who confirmed receiving a degree.

<sup>21</sup>Eligibility status was known if they were eligible as described above, or if they were revealed to be ineligible during the B&B:2000/01 CATI interview, or if they were deceased.

The distribution of these types of nonresponse among all sampled individuals is provided in table 6.1. Within the table, it can be seen that location was the most common type of nonresponse at 7 percent of the sample, followed by refusal at 5 percent, and nonrefusal at 3 percent.

**Table 6.1. B&B 2000/01 respondent classifications and observed sample counts and percentages**

<b>Response status</b>	<b>Classification</b>	<b>Total</b>	<b>Percent</b>	<b>Cumulative classification</b>	<b>Cumulative total</b>	<b>Cumulative percent</b>
Respondent	Respondent	10,030	86	Respondent	10,030	86
Nonrespondent	Nonrefusal	300	3	Nonrefusals	10,330	88
	Refusal	530	5	Located	10,860	93
	Location	760	7	Eligible	11,620	99
Excluded	Ineligible	80	1	Sampled	11,700	100

NOTE: Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

The five categories of response status are also grouped according to a “cumulative classification” that was used in fitting nonresponse models. Beginning with the approximately 10,030 respondents, this classification successively groups the response status categories of table 6.1, leading to cumulative classifications of respondents, nonrefusals (respondents plus nonrefusal nonrespondents), located (respondents and nonrespondents who were located), all eligible sample students, and finally, all 11,700 sampled students. From table 6.1, for example, it can be seen that there were a total of 10,330 nonrefusals, which is equal to 10,030 respondents plus 300 nonrefusal nonrespondents.

Since the B&B:2000/01 subsample was drawn from the NPSAS:2000 sample, individual response status can be compared across these two samples, and this comparison is made in table 6.2. The counts in the table show that individuals who were NPSAS:2000 CATI respondents had a 90 percent response rate in B&B:2000/01, while NPSAS:2000 CATI nonrespondents had a response rate of 48 percent. The counts also show that rankings of the various response types according to sample size are the same across the two groups.

**Table 6.2. B&B:2000/01 respondent classification counts and percentages, by NPSAS:2000 CATI response status**

B&B:2000/01 classification	NPSAS:2000 CATI respondents	Percent of NPSAS:2000 CATI respondents	NPSAS:2000 CATI nonrespondents	Percent of NPSAS:2000 CATI nonrespondents
All individuals	10,400	100	1,300	100
Respondents	9,400	90	630	48
Nonrespondents				
Nonrefusal	210	2	90	7
Refusal	350	3	180	14
Location	430	4	330	26
Ineligible	10	#	70	5

# Rounds to zero.

NOTE: Individuals in the B&B:2000/01 sample were restricted NPSAS CADE respondents as discussed in section 2.1.4. Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

In addition to types of nonrespondents, two types of respondents can also be considered: late respondents and refusal conversions. Late respondents should show similar behavior to location nonrespondents and refusal-conversion respondents should show similar behavior to refusal nonrespondents. With these comparisons in mind, these respondent types are discussed in section 6.3.3. Late respondents were defined as individuals who responded after October 15, 2001. There were about 1,430 late respondents in the B&B:2000/01 subsample, 14 percent of the total number of respondents. Refusal conversions were individuals who initially refused to participate in the interview, but later were convinced to respond. There were about 970 refusal conversions, 10 percent of the total number of respondents.

### 6.3 Assessing Nonresponse Bias

The substantial amount of unit nonresponse in the B&B:2000/01 sample of NPSAS:2000 CATI nonrespondents may lead to nonresponse bias in survey estimates. With outside knowledge from NPSAS:2000 of variable values for both B&B:2000/01 respondents and nonrespondents, however, tests for potential nonresponse bias can be performed to check if any bias can be detected. This section defines nonresponse bias and presents the results of such tests for the B&B:2000/01 sample.

#### 6.3.1 Nonresponse Bias: Definition and Tests

Nonresponse bias can occur when survey respondents and nonrespondents differ in their response distributions for variables of interest. Unit nonresponse is considered here, the type that occurs when a sampled individual does not respond to any of the survey questions.<sup>22</sup> Another type of nonresponse, item nonresponse, occurs when otherwise responding individuals fail to respond to specific survey questions. Item nonresponse is considered separately in appendix H.

<sup>22</sup>Unit nonresponse is referred to throughout this report as simply “nonresponse.” Item nonresponse is referred to specifically as “item nonresponse.”

Suppose that a design-unbiased estimator  $\bar{y}$  is available to estimate population mean  $\mu$  from the target population of interest. Estimator  $\bar{y}$  may be a good estimator to use with no nonresponse, but in the presence of nonresponse it can easily become biased. To estimate and correct for this bias, a model for nonresponse is required.

Assume that the population can be divided into two groups: a group of responders and a group of nonresponders. Each of these groups may have a different distribution for  $y$ , the variable of interest, and as a result, the means can differ between the two groups: for the responders  $\mu_R$  and for the nonresponders  $\mu_{NR}$ . The proportion of nonresponders will be  $\eta$  (the nonresponse rate), and the proportion of responders therefore is  $1 - \eta$ . A mixture model structure for nonresponse is being assumed. A consequence of this mixture model is that the population mean  $\mu$  can be expressed in terms of the subpopulation means and nonresponse rate as follows:

$$\mu = (1 - \eta)\mu_R + \eta\mu_{NR}.$$

The bias  $B(\bar{y}_R)$  of the estimator  $\bar{y}_R$  of mean response in the respondent group is defined as follows:

$$\begin{aligned} B(\bar{y}_R) &= E[\bar{y}_R] - \mu \\ &= \mu_R - \mu \end{aligned}$$

because  $\bar{y}_R$  is unbiased for  $\mu_R$ , and the bias is the difference between the mean of the respondent group and the mean of the population as a whole.

This bias can be estimated for variables whose values are known for both respondents and nonrespondents. Substituting the mixture model population mean expression and replacing parameters with their estimates gives the following:

$$\hat{B}(\bar{y}_R) = \bar{y}_R - ((1 - \hat{\eta})\bar{y}_R + \hat{\eta}\bar{y}_{NR}) = \hat{\eta}(\bar{y}_R - \bar{y}_{NR}),$$

where  $\hat{\eta}$  is the estimated nonresponse rate, and  $\bar{y}_{NR}$  is the nonrespondent sample mean. Similar to a coefficient of variation, the bias can be adjusted by dividing through by the respondent mean. This gives the relative bias

$$\hat{RB}(\bar{y}_R) = \frac{\hat{B}(\bar{y}_R)}{\bar{y}_R}.$$

The variance of the bias can be estimated as:

$$\hat{V}ar(\hat{B}(\bar{y}_R)) = \hat{\eta}^2 \hat{V}ar(\bar{y}_R - \bar{y}_{NR}).$$

This variance can be estimated in SUDAAN by Taylor series linearization, taking into account the covariance between  $\bar{y}_R$  and  $\bar{y}_{NR}$  induced by the multistage stratified sampling design.

### 6.3.2 Nonresponse Bias Analysis for Selected NPSAS:2000 Variables

Prior to making any adjustments for nonresponse bias, statistical tests were performed to test for the presence of nonresponse bias. Two tests of bias were performed: a test for bias at a specific level of a variable, and a test for bias over all levels of a variable. The first test is a *t*-test based on the difference in proportions in the responding and nonresponding groups at a given variable level; the second is a chi-square test of heterogeneity of the distributions of respondents and nonrespondents over all levels of a given variable. Both of these tests are conducted in SUDAAN, which takes account of the complex survey design as well as potential cluster correlation in the data.

Nonresponse bias was tested in variables that were available for both respondents and nonrespondents in the B&B:2000/01 sample. Since all individuals in the B&B:2000/01 sampling frame were NPSAS:2000 CADE respondents, the NPSAS:2000 CADE variables were available for the nonresponse analysis. Of these variables, the ones that were selected are as follows:

- Type of institution,
- Type of institution crossed with enrollment category,
- Institution region,
- Gender,
- Age,
- Race,
- Hispanic,
- Citizenship,
- Attendance status,
- Income,
- Applied for aid,
- Received federal aid,
- Received Pell Grant,
- Received Stafford Loan,
- Received state aid,
- Received institution aid, and
- Received any aid.

For compatibility with later nonresponse modeling, only categorical variables were used in the nonresponse analysis. Some of the above variables, such as age, are therefore collapsed versions of initially continuous variables.

Since these variables are all categorical, the response associated with each individual is simply the category to which the individual belongs, and so the mean parameters being estimated for respondents and nonrespondents are vectors of proportions.

The results of the nonresponse bias *t*-tests are given in table 6.3. From this table it can be seen that many levels of the tested variables had significant nonresponse bias. The only variables that did not show any levels of significant nonresponse bias were the two institution level variables—institutional sector and the cross of institutional control and enrollment category—and the individual level variables indicating recipient of Pell grant or state aid. All other variables had at least one significant *t*-test. Note that in cases of two-level variables, if one *t*-test is significant, the other is as well. This consistency occurs because the test is a two sample test of proportions, and is invariant to the labeling of the levels. For example, the test of bias comparing percent male respondents against percent male nonrespondents is the same as the test of bias comparing percent female respondents (100 percent minus percent male respondents) to percent female nonrespondents (100 percent minus percent male nonrespondents).

The results of the nonresponse bias chi-squared tests are given in table 6.4 and are consistent with the results of the *t*-tests. Most variables with at least one significant *t*-test had a significant chi-square test, and significant chi-square tests typically had at least one significant *t*-test.

### **6.3.3 Analysis of Selected B&B:2000/01 Variables for Potential Nonresponse Bias**

In addition to testing for nonresponse bias directly by comparing distributions of respondents and nonrespondents on levels of variables known for both, behavior suggestive of nonresponse can be tested using variables with values known only for B&B:2000/01 CATI interview respondents. To do this, respondents are divided into two groups, one of which has nonresponse-like behavior. Two comparisons are considered: late respondents versus other (not late) respondents, and refusal conversions versus other (never-refused) respondents.

For the comparison of late respondents versus other (not late) respondents, significant differences in means would be suggestive of potential nonresponse bias due to inability to locate sampled individuals. The results of *t*-tests among means of these two groups for selected B&B:2000/01 CATI interview variables are given in table 6.5. The table shows that there are significant differences for levels of ever married, supports children, and military status. Enrollment in 2000–2001 and previous teaching experience show no significant differences among their levels.

**Table 6.3. Nonrespondents versus respondents: Percentages and bias tests for selected NPSAS:2000 variables**

Variable description	Number of respondents	Number of non-respondents	Percent respondent distribution	Percent nonrespondent distribution	Non-response bias	Percent relative bias	P-value
<b>Institutional sector</b>							
<b>Public 4-year</b>	6,460	1,030	65	66	-0.0008	-0.1	0.78
Non-doctorate-granting	2,060	300	19	18	-0.0023	1.2	0.37
Doctorate granting	4,400	730	46	48	-0.0031	-0.7	0.30
<b>Private not-for-profit 4-year</b>	3,450	540	34	33	0.0010	0.3	0.74
Non-doctorate-granting	1,920	260	20	17	0.0053	2.7	0.03
Doctorate-granting	1,530	280	14	16	-0.0043	-3.1	0.03
<b>Private for-profit 4-year</b>	120	30	1	1	-0.0001	-1.2	0.77
<b>Institutional control and enrollment category</b>							
<b>Public</b>							
Fewer than 1,000	10	0	#	0	#	#	0.16
1,000-2,499	120	10	1	1	0.0005	6.0	0.21
2,500-4,999	360	60	4	3	0.0007	2.0	0.62
5,000-9,999	1,090	150	9	8	0.0021	2.4	0.09
10,000-19,999	1,780	260	18	17	0.0007	0.4	0.77
20,000 or more	3,110	560	34	37	-0.0049	-1.4	0.09
<b>Private not-for-profit</b>							
Fewer than 1,000	270	30	2	2	0.0009	4.1	0.25
1,000-2,499	840	110	8	7	0.0028	3.4	0.04
2,500-4,999	880	130	9	9	0.0003	0.3	0.86
5,000-9,999	590	100	6	6	-0.0006	-1.0	0.67
10,000 or more	870	160	9	10	-0.0026	-3.0	0.14
<b>Private for-profit</b>							
Fewer than 999	20	10	#	#	0.0001	4.0	0.39
1,000 or more	100	20	1	1	-0.0003	-2.9	0.54
<b>Institution region</b>							
New England	600	130	7	9	-0.0034	-5.1	0.04
Mid East	1,860	280	18	17	0.0015	0.8	0.44
Great Lakes	1,670	250	16	16	0.0010	0.6	0.63
Plains	860	130	9	8	0.0020	2.3	0.26
South East	2,410	310	23	18	0.0072	3.2	0.00*
South West	990	180	10	12	-0.0034	-3.5	0.09
Rocky Mountains	400	50	4	3	0.0015	4.0	0.22
Far West	1,130	250	13	17	-0.0068	-5.2	0.00*
Outlying Area	110	20	1	1	0.0004	2.9	0.64
<b>Gender</b>							
Male	3,850	710	41	46	-0.0091	-2.2	0.00*
Female	6,180	890	59	54	0.0091	1.5	0.00*
<b>Age</b>							
21 or younger	2,660	360	26	22	0.0077	2.9	0.00*
22	2,510	380	24	22	0.0042	1.8	0.09
23	1,340	230	13	14	-0.0005	-0.4	0.82
24 to 27	1,580	330	16	22	-0.0103	-6.3	0.00*
28 or older	1,950	310	20	21	-0.0012	-0.6	0.63
<b>Race</b>							
White	8,170	1,180	80	73	0.0127	1.6	0.00*
Black or African American	790	140	8	9	-0.0016	-1.9	0.34
Asian	460	170	5	12	-0.0116	-22.4	0.00*
American Indian/Alaska Native	80	10	1	1	-0.0001	-1.3	0.85
Native Hawaiian/Other Pacific Islander	60	20	1	1	-0.0012	-17.4	0.06
Other	480	70	5	4	0.0019	3.8	0.13
<b>Hispanic</b>							
Yes	700	160	8	11	-0.0042	-5.0	0.04*
No	9,330	1,440	92	89	0.0042	0.5	0.04*
<b>Citizenship</b>							
U.S. citizen	9,610	1,400	95	86	0.0166	1.7	0.00*
Resident alien	290	70	3	5	-0.0032	-9.4	0.02*
Foreign/international student	130	120	2	9	-0.0134	-85.4	0.00*

See notes at end of table.

**Table 6.3. Nonrespondents versus respondents: Percentages and bias tests for selected NPSAS:2000 variables—Continued**

Variable description	Number of respondents	Number of non-respondents	Percent respondent distribution	Percent nonrespondent distribution	Nonresponse bias	Percent relative bias	P-value
<b>Attendance status</b>							
Full-time/full year, 1 institution	4,900	740	47	44	0.0059	1.3	0.04
Full-time/full year, more than 1 institution	380	40	3	2	0.0015	5.0	0.07
Full-time/part year	2,100	310	21	18	0.0056	2.7	0.02
Part-time/full year, 1 institution	1,150	210	13	15	-0.0034	-2.6	0.10
Part-time/full year, more than 1 institution	150	10	1	1	0.0008	8.0	0.09
Part-time/part year	1,360	280	15	21	-0.0106	-7.1	0.00*
<b>Parents' income (for dependent students)</b>							
Less than \$10,000	190	30	2	2	-0.0001	-0.5	0.92
\$10,000-\$19,999	300	50	3	3	-0.0005	-1.7	0.61
\$20,000-\$29,999	520	80	5	5	0.0005	1.0	0.67
\$30,000-\$39,999	500	80	5	5	-0.0009	-1.8	0.43
\$40,000-\$49,999	590	90	6	5	0.0006	1.0	0.62
\$50,000-\$59,999	580	90	6	6	0.0007	1.2	0.56
\$60,000-\$69,999	580	90	6	5	0.0001	0.2	0.93
\$70,000-\$79,999	500	70	5	4	0.0009	1.8	0.45
\$80,000-\$99,999	820	110	8	6	0.0041	5.1	0.00
\$100,000 or more	1,260	170	13	9	0.0068	5.2	0.00*
<b>Student's income (for independent students)</b>							
Less than \$5,000	680	130	6	8	-0.0027	-4.5	0.10
\$5,000-\$9,999	600	110	6	7	-0.0024	-4.0	0.12
\$10,000-\$19,999	840	140	9	9	-0.0005	-0.6	0.75
\$20,000-\$29,999	560	120	6	8	-0.0033	-5.5	0.06
\$30,000-\$49,999	740	130	7	10	-0.0039	-5.6	0.03
\$50,000 or more	770	120	9	8	0.0006	0.7	0.72
<b>Applied for aid</b>							
Yes	5,930	810	57	50	0.0137	2.4	0.00*
No	4,100	780	43	50	-0.0137	-3.2	0.00*
<b>Receipt of federal aid</b>							
Yes	5,220	710	51	43	0.0141	2.8	0.00*
No	4,810	880	49	57	-0.0141	-2.9	0.00*
<b>Receipt of Pell grant</b>							
Yes	2,350	340	22	21	0.0022	1.0	0.34
No	7,680	1,250	78	79	-0.0022	-0.3	0.34
<b>Receipt of Stafford loan</b>							
Yes	4,510	620	45	38	0.0115	2.6	0.00*
No	5,520	970	56	62	-0.0115	-2.1	0.00*
<b>Receipt of state aid</b>							
Yes	1,950	260	17	15	0.0035	2.1	0.08
No	8,080	1,340	83	85	-0.0035	-0.4	0.08
<b>Receipt of institution aid</b>							
Yes	3,360	470	31	28	0.0067	2.2	0.01*
No	6,670	1,120	69	73	-0.0067	-1.0	0.01*
<b>Receipt of any aid</b>							
Yes	7,080	970	69	60	0.0163	2.4	0.00*
No	2,950	620	31	40	-0.0163	-5.3	0.00*

# Rounds to zero. All zeros provided in this table are actual values.

\*Difference between respondents and nonrespondents is significant at the  $.05/(c-1)$  level, where  $c$  is the number of categories within the primary variable.

NOTE: Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).



**Table 6.4. Nonrespondents versus respondents: Chi-square tests for selected NPSAS:2000 variables**

Variable description	Chi-square	Degrees of freedom	P-value
Institutional sector	9.9	4	0.05*
Institutional control and enrollment category	17.2	12	0.15
Institution region	26.2	8	0.00*
Gender	8.4	1	0.00*
Age	23.4	4	0.00*
Race	40.6	5	0.00*
Hispanic	4.3	1	0.04*
Citizenship	72.7	2	0.00*
Attendance status	29.9	5	0.00*
Income of independent students and parents of dependent students	39.2	15	0.00*
Applied for aid	21.8	1	0.00*
Receipt of federal aid	24.4	1	0.00*
Receipt of Pell grant	0.9	1	0.34
Receipt of Stafford loan	17.2	1	0.00*
Receipt of state aid	3.1	1	0.08
Receipt of institution aid	6.0	1	0.01*
Receipt of any aid	31.5	1	0.00*

\* Significant at the  $\alpha=.05$  level.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

**Table 6.5. Late respondents versus other respondents: Percentages and bias tests for selected B&B:2000/01 variables**

Variable description	Number of other respondents	Number of late respondents	Percent other respondents distribution	Percent late respondents distribution	Late respondent bias	Percent relative bias	P-value
<b>Ever married</b>							
Yes	3,170	460	36	31	0.0078	2.2	0.01*
No	5,400	970	64	69	-0.0078	-1.2	0.01*
<b>Have children</b>							
Yes	1,640	180	19	16	0.0045	2.4	0.02*
No	6,860	940	81	84	-0.0045	-0.6	0.02*
<b>Military status</b>							
Veteran	270	30	3	3	0.0007	2.1	0.56
Active duty	90	20	1	2	-0.0016	-15.0	0.14
Reserves	80	10	1	#	0.0008	8.7	0.00*
None	7,900	1,040	92	93	-0.0006	-0.1	0.76
Non-citizen	190	30	3	2	0.0006	2.3	0.48
<b>Enrolled in 2000–01</b>							
Yes	3,130	440	35	36	0.0000	0.0	1.00
No	5,410	740	65	65	0.0000	0.0	1.00
<b>Teacher</b>							
Yes	1,800	210	17	16	0.0020	1.1	0.29
No	6,700	910	83	84	-0.0020	-0.2	0.29

# Rounds to zero.

\*Difference between converted refusals and other respondents is significant at the  $.05/(c-1)$  level, where c is the number of categories within the primary variable.

NOTE: Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

The chi-square tests of heterogeneity for late-respondents versus other respondents are given in table 6.6. Ever married, supports children, and military status have significant heterogeneity, while enrollment in 2000–2001 and previous teaching experience do not. These results are consistent with those of the *t*-tests, and suggest the potential for location nonresponse bias associated with variable levels with significant tests.

**Table 6.6. Late respondents versus other respondents: Chi-square tests of heterogeneity for selected B&B:2000/01 variables**

Variable description	Chi-square	Degrees of freedom	P-value
Ever married	7.6	1	0.00*
Have children	5.2	1	0.02*
Military status	12.5	4	0.02*
Enrolled in 2000–01	0.0	1	0.99
Teacher	1.1	1	0.29

\* Significant at the  $\alpha=.05$  level.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

For the comparison between groups of converted refusals versus other respondents who never refused, significant differences in means would suggest potential refusal bias among the true nonrespondents. Converted refusals are respondents who initially refused to be surveyed but later agreed. Results of *t*-tests and chi-square tests for converted refusals versus other respondents for selected B&B:2000/01 CATI variables are given in tables 6.7 and 6.8. These tables show that no significance was detected on either *t*-tests or chi-square tests for any of the selected variables. These analyses do not suggest any potential refusal nonresponse bias related to these variables.

**Table 6.7. Converted refusals versus other respondents: Percentages and bias tests for selected B&B:2000/01 variables**

Variable description	Number of nonrefusals	Number of converted refusals	Percent nonrefusal distribution	Percent converted refusal distribution	Converted refusal bias	Percent relative bias	P-value
<b>Ever married</b>							
Yes	3,210	420	35	38	-0.0040	-1.2	0.12
No	5,820	550	65	62	0.0040	0.6	0.12
<b>Have children</b>							
Yes	1,630	200	18	21	-0.0032	-1.8	0.27
No	7,110	700	82	79	0.0032	0.4	0.27
<b>Military status</b>							
Veteran	270	20	3	2	0.0010	3.0	0.11
Active duty	90	10	1	3	-0.0016	-15.0	0.14
Reserves	80	10	1	1	0.0001	1.2	0.86
None	8,110	830	92	91	0.0016	0.2	0.31
Non-citizen	200	20	2	4	-0.0011	-4.4	0.27
<b>Enrolled in 2000–01</b>							
Yes	3,270	300	35	32	0.0036	1.0	0.21
No	5,540	610	65	68	-0.0036	-0.6	0.21
<b>Teacher</b>							
Yes	1,830	180	17	15	0.0024	1.4	0.16
No	6,890	710	83	85	-0.0024	-0.3	0.16

NOTE: None of the p-values in this table were significant at the .05(c-1) level, where c is the number of categories within the primary variable. Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

**Table 6.8. Converted refusals versus other respondents: Chi-square tests of heterogeneity for selected B&B:2000/01 variables**

Variable description	Chi-square	Degrees of freedom	P-value
Ever married	2.52	1	0.11
Have children	1.19	1	0.28
Military status	5.61	4	0.23
Enrolled in 2000–01	1.57	1	0.21
Teacher	1.94	1	0.16

NOTE: None of the p-values in this table were significant at the .05 level.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

All of the above tests were restricted to individuals who were item respondents in the CATI interview. There should not be any substantial effect of item nonresponse, as none of the selected variables had more than an estimated 2 percent item nonresponse rate.

#### 6.4 Adjusting for Nonresponse Bias and Poststratification

The analysis of the previous section suggests some nonresponse bias in a number of the NPSAS:2000 variables. This nonresponse bias can be reduced by adjusting individual weights using variables whose values are known for both respondents and nonrespondents. Further adjustment can be accomplished by poststratification to make the weights consistent with known population totals.

In this section, methods used to perform weight adjustments are described, as well as their application to the B&B:2000/01 initial weights. The results and performance of these adjustment methods also are discussed. Weight adjustment proceeds in the following stages: identification of model predictors, generalized exponential model (GEM) adjustment for nonresponse, and finally GEM poststratification adjustment.

##### 6.4.1 Identification of Model Predictors

Predictors used in the nonresponse modeling included all variables identified for nonresponse analysis in section 6.3.2, as well as certain potentially important interactions. To identify these interactions without attempting a methodologically challenging step-wise regression procedure, the Chi-square automatic interaction detection (CHAID) algorithm (Kass, 1980)<sup>23</sup> was used. CHAID is a hierarchical clustering algorithm that successively partitions individuals according to categorical predictors for a categorical dependent variable. The algorithm begins with all study individuals as a whole, and cycles over each predictor, finding for each predictor an optimal partition of the individuals according to its levels. The most significant optimal partition is then retained, and the CHAID algorithm is again applied to the members of that partition to find further partitions using the remaining predictors. The algorithm is stopped after a specified number of partitioning steps or if none of the partitions at a given step is found to be significant.

<sup>23</sup>Kass, G.V. (1980). An exploratory technique for investigating large quantities of data. *Applied Statistics*, 119–127.

Application of the CHAID algorithm provided interaction terms for each of the three nonresponse adjustment models: location, refusal, and other. For each model, CHAID was run for up to three segments, resulting in identification of two-way and three-way interactions. Segments were retained if they were both statistically and practically significant.

#### 6.4.2 GEM Nonresponse and Poststratification Adjustments

Four adjustment steps were successively applied to the initial B&B:2000/01 weights to adjust for nonresponse bias and known population totals. There were three adjustment steps for nonresponse bias: adjustment for inability to locate, adjustment for refusal to respond, and adjustment for nonrefusal nonresponse. Since population totals for some variables were available through the IPEDS institutional census, there was also a fourth poststratification adjustment to make the sample weights consistent with the known postsecondary totals. All adjustments were made by successive application of a GEM.

The RTI-proprietary GEM (Folsom and Singh, 2000<sup>24</sup>; Chen, Penne, and Singh, 2000<sup>25</sup>) is a generalization of a logit model. It has several desirable features for weight adjustments, including the following:

1. It is a generalization of the commonly used, well known, and accepted adjustment approaches: the raking ratio method and the logit method (see e.g., Deville and Särndal, 1992).<sup>26</sup> For this reason, initial weights are perturbed minimally, bounds can be specified, and poststratification control totals met.
2. It allows for individual-specific bounds on the weight adjustment factors, allowing for the application of special adjustments to those weights identified as having extreme values.

The application of GEM to each adjustment step of the B&B:2000/01 study is described in appendix J.

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<sup>24</sup>Folsom, R.E. and Singh A.C. (2000). The generalized exponential model for sampling weight calibration for extreme values, nonresponse, and poststratification. *Proceedings of the American Statistical Association Section on Survey Research Method*, 598–603.

<sup>25</sup>Chen, P., Penne, M.A., and Singh, A.C. (2000). Experience with the generalized exponential model for weight calibration for the national household survey on drug abuse. *Proceedings of the American Statistical Association Section on Survey Research Methods*, 604–609.

<sup>26</sup>Deville, J.C. and Särndal, C.E. (1992). Calibration estimation in survey sampling. *Journal of the American Statistical Association*, 87: 376–382.

Indexing the eligible individuals in the selected B&B:2000/01 sample from about  $i = 1, \dots, 11620$ , the four weight adjustments were as follows:

$a_{1i}$	location nonresponse adjustment
$a_{2i}$	refusal nonresponse adjustment
$a_{3i}$	nonrefusal nonresponse adjustment
$a_{4i}$	poststratification adjustment.

These weight adjustment factors provide us with successive adjusted weights:

$w_{2i} = a_{1i} w_{1i}$	location nonresponse adjusted
$w_{3i} = a_{2i} w_{2i}$	refusal nonresponse adjusted
$w_{4i} = a_{3i} w_{3i}$	nonrefusal nonresponse adjusted
$w_{5i} = a_{4i} w_{4i}$	poststratification adjusted.

Summary statistics for the GEM for each nonresponse adjustment stage are provided in tables 6.9, 6.10, and 6.11. Each table lists in its left-most column the levels of predictor variables used in the model. The main-effects predictors are the same as those used for the nonresponse bias analysis of section 6.3.2. Interaction terms were obtained from the CHAID algorithm as described in section 6.4.1 and are listed at the bottom of the tables. For each interaction, the variables and their levels are listed in the order of CHAID partitioning.

For all individuals and by predictor level, the tables provide the number of individuals with nonzero weight, number of individuals in the nonresponse category, and the mean weight adjustment. These tables again show the general trend, whereby the largest adjustments occur at earlier adjustment stages.

**Table 6.9. Location nonresponse sample sizes and mean location weight adjustments at all levels of GEM predictor variables**

Variable description	Number located	Number not located	Mean weight adjustment
<b>All individuals</b>	11,620	760	1.15
<b>Institutional control</b>			
Public	7,490	500	1.11
Private not-for-profit	3,990	250	1.21
Private for-profit	150	20	1.24
<b>Institutional control and enrollment category</b>			
<b>Public</b>			
Fewer than 2,500	130	10	1.10
2,500–4,999	420	30	1.25
5,000–9,999	1,230	60	1.09
10,000–19,999	2,040	120	1.11
20,000 or more	3,670	280	1.11
<b>Private not-for-profit</b>			
Fewer than 1,000	300	20	1.18
1,000–2,499	950	60	1.15
2,500–4,999	1,020	60	1.14
5,000–9,999	690	50	1.18
10,000 or more	1,030	70	1.35
<b>Private for-profit</b>			
Fewer than 1,000	30	#	1.11
1,000 or more	120	10	1.27
<b>Institution region</b>			
New England	740	50	1.17
Mid East	2,140	110	1.12
Great Lakes	1,920	130	1.14
Plains	980	50	1.13
South East	2,720	160	1.13
South West	1,170	100	1.16
Rocky Mountains	450	20	1.10
Far West	1,370	130	1.22
Outlying Area	130	10	1.37
<b>Gender</b>			
Male	4,560	350	1.17
Female	7,070	410	1.13
<b>Age</b>			
21 or younger	3,010	170	1.15
22	2,890	180	1.12
23	1,560	120	1.13
24 to 27	1,910	160	1.17
28 or older	2,260	140	1.18
<b>Race</b>			
White	9,350	530	1.12
Black or African American	930	90	1.23
Asian	630	90	1.29
American Indian/Alaska Native	90	10	1.28
Native Hawaiian/Other Pacific Islander	80	10	1.17
Other	550	40	1.21
<b>Hispanic</b>			
Yes	860	100	1.30
No	10,760	660	1.13
<b>Citizenship</b>			
U.S. citizen	11,010	660	1.14
Resident alien	360	40	1.26
Foreign/international student	250	70	1.58

See notes at end of table.

**Table 6.9. Location nonresponse sample sizes and mean location weight adjustments at all levels of GEM predictor variables—Continued**

Variable description	Number located	Number not located	Mean weight adjustment
<b>Attendance status</b>			
Full-time/full year, 1 institution	5,650	340	1.12
Full-time/full year, more than 1 institution	420	10	1.23
Full-time/part year	2,410	150	1.13
Part-time/full year, 1 institution	1,360	110	1.17
Part-time/full year, more than 1 institution	160	#	1.15
Part-time/part year	1,640	140	1.20
<b>Parents' income (for dependent students)</b>			
Less than \$10,000	220	20	1.15
\$10,000–\$19,999	350	30	1.16
\$20,000–\$29,999	600	40	1.14
\$30,000–\$39,999	590	50	1.13
\$40,000–\$49,999	670	40	1.13
\$50,000–\$59,999	670	40	1.13
\$60,000–\$69,999	670	40	1.11
\$70,000–\$79,999	570	30	1.12
\$80,000–\$99,999	930	40	1.12
\$100,000 or more	1,420	70	1.13
<b>Student's income (for independent students)</b>			
Less than \$5,000	800	60	1.17
\$5,000–\$9,999	710	60	1.15
\$10,000–\$19,999	980	80	1.16
\$20,000–\$29,999	680	60	1.18
\$30,000–\$49,999	870	60	1.18
\$50,000 or more	890	50	1.18
<b>Applied for aid</b>			
Yes	6,740	410	1.14
No	4,880	350	1.15
<b>Receipt of federal aid</b>			
Yes	5,930	360	1.14
No	5,690	400	1.15
<b>Receipt of Pell grant</b>			
Yes	2,690	180	1.14
No	8,930	580	1.15
<b>Receipt of Stafford loan</b>			
Yes	5,130	320	1.14
No	6,490	440	1.15
<b>Receipt of state aid</b>			
Yes	2,200	130	1.11
No	9,420	630	1.15
<b>Receipt of institution aid</b>			
Yes	3,830	220	1.13
No	7,790	540	1.15
<b>Receipt of any aid</b>			
Yes	8,050	480	1.14
No	3,580	280	1.16
<b>NPSAS response status</b>			
CADE only	1,230	330	1.40
CATI only	470	30	1.33
CADE and CATI	9,930	400	1.11
<b>Telephone numbers available</b>			
0 or 1 number	700	110	1.31
2 numbers	1,730	120	1.15
3 numbers	2,580	140	1.14
4 numbers	2,500	120	1.12
5 numbers	2,030	90	1.12
6 numbers	1,130	60	1.11
7 or more numbers	950	130	1.24

See notes at end of table.

**Table 6.9. Location nonresponse sample sizes and mean location weight adjustments at all levels of GEM predictor variables—Continued**

Variable description	Number located	Number not located	Mean weight adjustment
<b>Number of times answering machine was encountered</b>			
None	2,350	210	1.19
Once	1,540	70	1.14
More than once	7,730	480	1.14
<b>Student was in field cluster area</b>			
Yes	6,220	390	1.15
No	5,400	380	1.15
<b>Interaction segments</b>			
1=CADE respondent, Zero answering machine contacts, In field cluster area	170	50	1.52
2=CADE respondent, Zero answering machine contacts, Not in field cluster area	130	70	2.16
3=CADE respondent, One or more answering machine contacts, Zero or one phone numbers available	120	20	1.26
4=CADE respondent, One or more answering machine contacts, Two or more phone numbers available	820	190	1.33
5=CATI or CADE&CATI respondent, Zero or one phone numbers available, US citizen or resident alien	460	20	1.21
6=CATI or CADE&CATI respondent, Zero or one phone numbers available, Foreign/International student	20	#	1.15
7=CATI or CADE&CATI respondent, Two or more phone numbers available, Age 21 or less	2,660	90	1.12
8=CATI or CADE&CATI respondent, Two or more phone numbers available, Age 22 or more	7,250	310	1.12

# Rounds to zero.

NOTE: Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).



**Table 6.10. Refusal nonresponse sample sizes and mean refusal weight adjustments at all levels of GEM predictor variables**

Variable description	Number nonrefusals	Number refusals	Mean weight adjustment
<b>All individuals</b>	10,860	530	1.06
<b>Institutional control</b>			
Public	6,990	340	1.06
Private not-for-profit	3,740	180	1.06
Private for-profit	130	10	1.02
<b>Institutional control and enrollment category</b>			
<b>Public</b>			
Fewer than 2,500	130	#	1.01
2,500–4,999	390	30	1.10
5,000–9,999	1,170	50	1.05
10,000–19,999	1,920	90	1.05
20,000 or more	3,390	170	1.06
<b>Private not-for-profit</b>			
Fewer than 1,000	290	10	1.05
1,000–2,499	900	30	1.04
2,500–4,999	960	60	1.06
5,000–9,999	640	30	1.06
10,000 or more	950	50	1.05
<b>Private-for-profit</b>			
Fewer than 1000	20	#	1.03
1,000 or more	110	10	1.02
<b>Institution region</b>			
New England	690	50	1.09
Mid East	2,030	120	1.06
Great Lakes	1,790	90	1.05
Plains	930	50	1.06
South East	2,570	100	1.04
South West	1,070	50	1.07
Rocky Mountains	430	20	1.06
Far West	1,240	60	1.05
Outlying Area	120	#	1.02
<b>Gender</b>			
Male	4,200	230	1.06
Female	6,660	300	1.05
<b>Age</b>			
21 or younger	2,850	100	1.04
22	2,710	130	1.04
23	1,450	80	1.07
24 to 27	1,740	110	1.08
28 or older	2,120	120	1.06
<b>Race</b>			
White	8,820	440	1.05
Black or African American	840	30	1.05
Asian	540	40	1.07
American Indian/Alaska Native	80	#	1.09
Native Hawaiian/Other Pacific Islander	70	10	1.22
Other	510	20	1.04
<b>Hispanic</b>			
Yes	760	30	1.04
No	10,100	500	1.06
<b>Citizenship</b>			
U.S. citizen	10,360	490	1.05
Resident alien	330	20	1.06
Foreign/international student	180	20	1.14

See notes at end of table.

**Table 6.10. Refusal nonresponse sample sizes and mean refusal weight adjustments at all levels of GEM predictor variables—Continued**

Variable description	Number nonrefusals	Number refusals	Mean weight adjustment
<b>Attendance status</b>			
Full-time/full year, 1 institution	5,300	240	1.05
Full-time/full year, more than 1 institution	400	10	1.02
Full-time/part year	2,260	110	1.05
Part-time/full year, 1 institution	1,250	80	1.08
Part-time/full year, more than 1 institution	150	#	1.03
Part-time/part year	1,490	100	1.08
<b>Parents' income (for dependent students)</b>			
Less than \$10,000	200	10	1.03
\$10,000–\$19,999	320	20	1.06
\$20,000–\$29,999	560	20	1.04
\$30,000–\$39,999	540	20	1.04
\$40,000–\$49,999	630	30	1.05
\$50,000–\$59,999	630	30	1.05
\$60,000–\$69,999	630	30	1.06
\$70,000–\$79,999	540	20	1.04
\$80,000–\$99,999	890	40	1.04
\$100,000 or more	1,350	60	1.05
<b>Student's income (for independent students)</b>			
Less than \$5,000	740	40	1.06
\$5,000–\$9,999	660	30	1.06
\$10,000–\$19,999	900	40	1.05
\$20,000–\$29,999	620	40	1.09
\$30,000–\$49,999	810	60	1.10
\$50,000 or more	840	50	1.05
<b>Applied for aid</b>			
Yes	6,330	250	1.05
No	4,530	280	1.07
<b>Receipt of federal aid</b>			
Yes	5,570	220	1.04
No	5,290	310	1.07
<b>Receipt of Pell grant</b>			
Yes	2,510	100	1.04
No	8,350	430	1.06
<b>Receipt of Stafford loan</b>			
Yes	4,810	190	1.04
No	6,050	350	1.07
<b>Receipt of state aid</b>			
Yes	2,070	80	1.05
No	8,790	450	1.06
<b>Receipt of institution aid</b>			
Yes	3,610	140	1.04
No	7,260	390	1.06
<b>Receipt of any aid</b>			
Yes	7,570	300	1.05
No	3,300	230	1.08
<b>NPSAS response status</b>			
CADE only	900	180	1.29
CATI only	440	10	1.03
CADE and CATI	9,520	340	1.04

See notes at end of table.

**Table 6.10. Refusal nonresponse sample sizes and mean refusal weight adjustments at all levels of GEM predictor variables—Continued**

Variable description	Number nonrefusals	Number refusals	Mean weight adjustment
<b>Telephone numbers available</b>			
0 or 1 number	600	70	1.14
2 numbers	1,610	100	1.07
3 numbers	2,440	100	1.05
4 numbers	2,390	90	1.04
5 numbers	1,940	60	1.03
6 numbers	1,070	40	1.04
7 or more numbers	820	80	1.11
<b>Number of times answering machine was encountered</b>			
None	2,140	70	1.06
Once	1,480	40	1.03
More than once	7,250	420	1.06
<b>Student was in field cluster area</b>			
Yes	5,840	300	1.06
No	5,020	230	1.05
<b>Interaction segments</b>			
1=CADE only respondent, Age 27 or less, Receipt of federal aid in base year	360	50	1.20
2=CADE only respondent, Age 27 or less, No receipt of federal aid in base year	400	80	1.31
3=CADE only respondent, Age 28 or more, Receipt of aid in base year	60	10	1.27
4=CADE only respondent, Age 28 or more, No receipt of aid in base year	80	30	1.78
5=CATI only or CADE&CATI respondent, Less than two or more than six phone numbers available, Age 23 or less	810	50	1.06
6=CATI only or CADE&CATI respondent, Less than two or more than six phone numbers available, Age 24 or more	420	50	1.15
7=CATI only or CADE&CATI respondent, More than 1 but less than 7 phone numbers available	8,730	250	1.03

# Rounds to zero.

NOTE: Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

**Table 6.11. Nonrefusal nonresponse sample sizes and mean nonrefusal weight adjustments at all levels of GEM predictor variables**

Variable description	Number respondents and nonrefusal nonrespondents	Number other nonrespondents	Mean weight adjustment
<b>All individuals</b>	10,330	300	1.03
<b>Institutional control</b>			
Public	6,650	190	1.03
Private not-for-profit	3,560	110	1.03
Private for-profit	120	10	1.08
<b>Institutional control and enrollment category</b>			
<b>Public</b>			
Fewer than 2,500	130	#	1.01
2,500–4,999	360	#	1.02
5,000–9,999	1,120	30	1.02
10,000–19,999	1,830	50	1.03
20,000 or more	3,220	110	1.04
<b>Private not-for-profit</b>			
Fewer than 1,000	280	10	1.04
1,000–2,499	870	30	1.04
2,500–4,999	910	20	1.03
5,000–9,999	610	20	1.03
10,000 or more	900	30	1.03
<b>Private for-profit</b>			
Fewer than 1,000	20	#	1.12
1,000 or more	100	10	1.07
<b>Institution region</b>			
New England	640	30	1.05
Mid East	1,910	60	1.03
Great Lakes	1,700	30	1.02
Plains	880	20	1.03
South East	2,470	60	1.03
South West	1,020	30	1.04
Rocky Mountains	410	10	1.03
Far West	1,180	60	1.06
Outlying Area	120	#	1.00
<b>Gender</b>			
Male	3,980	130	1.04
Female	6,360	180	1.03
<b>Age</b>			
21 or younger	2,750	90	1.03
22	2,580	80	1.02
23	1,360	30	1.03
24 to 27	1,640	60	1.05
28 or older	2,000	50	1.04
<b>Race</b>			
White	8,390	220	1.03
Black or African American	810	20	1.03
Asian	500	40	1.12
American Indian/Alaska Native	80	#	1.02
Native Hawaiian/Other Pacific Islander	60	#	1.04
Other	500	20	1.04
<b>Hispanic</b>			
Yes	730	30	1.04
No	9,600	270	1.03
<b>Citizenship</b>			
U.S. citizen	9,860	250	1.03
Resident alien	310	20	1.18
Foreign/international student	160	30	1.25

See notes at end of table.

**Table 6.11. Nonrefusal nonresponse sample sizes and mean nonrefusal weight adjustments at all levels of GEM predictor variables—Continued**

Variable description	Number respondents and nonrefusal nonrespondents	Number other nonrespondents	Mean weight adjustment
<b>Attendance status</b>			
Full-time/full year, 1 institution	5,070	170	1.03
Full-time/full year, more than 1 institution	390	10	1.05
Full-time/part year	2,160	60	1.03
Part-time/full year, 1 institution	1,170	20	1.02
Part-time/full year, more than 1 institution	150	#	1.05
Part-time/part year	1,400	40	1.03
<b>Parents' income (for dependent students)</b>			
Less than \$10,000	200	#	1.02
\$10,000–\$19,999	310	10	1.04
\$20,000–\$29,999	540	20	1.03
\$30,000–\$39,999	520	20	1.03
\$40,000–\$49,999	600	10	1.02
\$50,000–\$59,999	600	20	1.03
\$60,000–\$69,999	600	20	1.04
\$70,000–\$79,999	520	20	1.03
\$80,000–\$99,999	850	30	1.03
\$100,000 or more	1,290	30	1.02
<b>Student's income (for independent students)</b>			
Less than \$5,000	700	20	1.04
\$5,000–\$9,999	630	20	1.06
\$10,000–\$19,999	860	30	1.03
\$20,000–\$29,999	580	20	1.04
\$30,000–\$49,999	760	20	1.04
\$50,000 or more	790	20	1.03
<b>Applied for aid</b>			
Yes	6,080	150	1.02
No	4,250	150	1.04
<b>Receipt of federal aid</b>			
Yes	5,350	130	1.02
No	4,980	170	1.04
<b>Receipt of Pell grant</b>			
Yes	2,410	60	1.03
No	7,920	240	1.03
<b>Receipt of Stafford loan</b>			
Yes	4,630	120	1.02
No	5,700	190	1.04
<b>Receipt of state aid</b>			
Yes	1,990	40	1.03
No	8,340	260	1.03
<b>Receipt of institution aid</b>			
Yes	3,470	110	1.03
No	6,860	190	1.03
<b>Receipt of any aid</b>			
Yes	7,260	190	1.03
No	3,070	120	1.04
<b>NPSAS response status</b>			
CADE only	720	90	1.03
CATI only	430	10	1.04
CADE and CATI	9,180	200	1.03
<b>Telephone numbers available</b>			
0 or 1 number	530	40	1.10
2 numbers	1,510	50	1.04
3 numbers	2,340	60	1.02
4 numbers	2,300	50	1.02
5 numbers	1,880	40	1.02
6 numbers	1,030	30	1.03
7 or more numbers	740	50	1.07

See notes at end of table.

**Table 6.11. Nonrefusal nonresponse sample sizes and mean nonrefusal weight adjustments at all levels of GEM predictor variables—Continued**

Variable description	Number respondents and nonrefusal nonrespondents	Number other nonrespondents	Mean weight adjustment
<b>Number of times answering machine was encountered</b>			
None	2,070	50	1.04
Once	1,430	30	1.02
More than once	6,830	220	1.03
<b>Student was in field cluster area</b>			
Yes	5,530	190	1.03
No	4,800	110	1.03
<b>Interaction segments</b>			
1= CADE only respondent, Zero or one phone numbers available	110	30	1.41
2= CADE only respondent, Two or more phone numbers available, US citizen	560	50	1.12
3= CADE only respondent, Two or more phone numbers available, resident alien or foreign/international student	50	10	1.39
4= CATI only or CADE&CATI respondent, US citizen or resident alien	9,480	190	1.02
5=CATI only or CADE&CATI respondent, Foreign/International student	130	20	1.23

# Rounds to zero.

NOTE: Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

Summary statistics for the poststratification adjustment step can be found in table 6.12. The table gives the poststratification categories together with their control totals from IPEDS and sample totals from the B&B:2000/01 nonresponse adjusted weights. The population level variables that had control totals obtained from IPEDS were institutional control, gender, and degree major. Sample totals were additionally poststratified for U.S. citizenship and receipt of any aid to preserve those weight totals. The mean of the poststratification weight adjustments  $a_{4i}$  within each category is also provided, and it shows substantially more adjustment than the later stages of the nonresponse adjustment.

**Table 6.12. GEM poststratification mean weight adjustments**

Variable description	Number of individuals	IPEDS control total	B&B sample total	Mean weight adjustment
<b>Institutional control</b>				
Public	6,460	814,846	844,959	1.00
Private not-for-profit	3,440	415,444	431,923	0.98
Private for-profit	120	20,227	17,336	1.26
<b>Gender</b>				
Male	3,850	533,057	545,113	1.01
Female	6,180	717,460	749,105	0.98
<b>Major</b>				
Humanities	1,400	205,832	174,280	1.24
Social/behavioral sciences	1,860	229,266	219,219	1.08
Life sciences	830	74,697	103,913	0.75
Physical sciences	170	21,104	19,301	1.12
Math	120	12,039	14,211	0.88
Computer/Information Science	350	36,805	53,241	0.74
Engineering	510	72,993	68,869	1.10
Education	1,370	110,759	129,697	0.88
Business/management	1,190	263,532	250,571	1.09
Health	1,100	99,155	123,493	0.83
Vocational/technical	230	29,408	24,243	1.23
Other Technical/professional	910	94,927	113,181	0.87
<b>Citizenship</b>				
U.S. Citizen	9,610	1,167,476	1,208,275	0.99
Noncitizen	420	83,041	85,943	1.07
<b>Receipt of any aid</b>				
Yes	7,080	839,736	869,081	0.98
No	2,950	410,782	425,137	1.02

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

## 6.5 Weighting Adjustment Performance

The performance of the weight adjustment process is examined in this section. Subsections include discussion of distributions of weights and adjustment factors, unequal weighting effects, nonresponse bias reduction, receiver operating characteristic (ROC) curves, abbreviated interview bias, and overall study response rates. An additional analysis of design effects is provided in appendix G.

### 6.5.1 Study Weight Distributions

Table 6.13 provides percentiles and extreme values, for the initial weights. In addition, the weights obtained after each step in the adjustment process are provided ending with the poststratification adjusted weight. The table shows that the greatest adjustment occurred after the first GEM adjustment, in which the maximum was greatly reduced, and the median weight shifted by about 10.

**Table 6.13. Percentiles and extremes of study weight distributions**

Weight	Min	Percentile									Max
		1%	5%	10%	25%	Median	75%	90%	95%	99%	
Initial	7	17	31	33	42	89	119	240	307	467	2,750
Location adjusted	8	19	33	36	47	101	133	275	347	435	855
Location and refusal adjusted	8	20	34	37	48	102	136	299	368	532	725
All nonresponse adjusted	8	20	34	37	49	103	139	308	386	569	852
Poststratification adjusted	8	19	30	34	49	99	148	287	373	441	593

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

The percentiles and extreme values of the adjustment distributions are provided in table 6.14. Again, this table illustrates that the first GEM produced the most adjustment, with many of the individual adjustments near unity. The later GEM nonresponse adjustments were not as large.

**Table 6.14. Percentiles and extremes of weight adjustment distributions**

Weight adjustment	Min	Percentile									Max
		1%	5%	10%	25%	Median	75%	90%	95%	99%	
Nonresponse	0.1	0.6	0.9	1.0	1.0	1.1	1.2	1.4	1.6	2.2	2.8
Nonrefusal	0.1	0.6	0.9	1.0	1.0	1.1	1.2	1.4	1.6	2.2	2.8
Refusal	0.6	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.2	1.6	2.0
Location	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.2	1.4	2.2
Poststratification	0.3	0.6	0.7	0.8	0.8	1.0	1.1	1.3	1.3	1.3	1.3

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

### 6.5.2 Unequal Weighting Effects

To assess the effect of the various weight adjustment steps on variance estimates, unequal weighting effects were computed at each stage of the weighting process. The unequal weighting effect  $UWE_j$  at step  $j$  is defined as follows:

$$UWE_j = n_j \frac{\sum_{i=1}^n w_{ji}^2}{\left(\sum_{i=1}^n w_{ji}\right)^2} \quad j=1, \dots, 5$$

where  $n_j$  is the number of individuals of nonzero weight at step  $j$ , and  $n$  is the total number of respondents. The larger the unequal weighting effect, the greater the variation among the weights and so the greater the potential for extreme weights to inflate variances.

Table 6.15 provides the unequal weighting effects (UWE) obtained at each stage of the adjustment process. From the table it can be seen that there was an initial decrease in the unequal weighting effect after location nonresponse adjustment, followed by a gradual increase in the unequal weighting effect up to the poststratification step, which again decreased the UWE.



**Table 6.15. Unequal weighting effects by stage of weight adjustment**

Weight	Number of individuals	Unequal weighting effect
Initial	11,620	1.88
Location adjusted	10,860	1.67
Location and refusal adjusted	10,330	1.74
All nonresponse adjusted	10,030	1.81
Poststratification adjusted	10,030	1.66

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

### 6.5.3 Assessing Bias Reduction

To evaluate the performance of GEM in adjusting for nonresponse bias, significance tests were performed on estimates of population means using both initial (pre-adjustment) and final weights. The final weights are zero for nonrespondents, so if the GEM has properly transferred the nonrespondent weights to the respondents, estimates based on the final weights should be close to estimates based on initial weights for variables known for both respondents and nonrespondents.

For each variable level tested in section 6.3.2, the test of weight adjustment performance was as follows:

$$H_0 : \mu_F - \mu_I = 0$$

$$H_1 : \mu_F - \mu_I \neq 0$$

where  $\mu_F$  is a group mean based on the final weights, and  $\mu_I$  is the group mean based on the initial weights. Mean  $\mu_F$  is estimated using the final weights, while  $\mu_I$  is estimated using the initial weights. These means are over all eligible B&B:2000/01 sample members, but the final weights are zero for nonrespondents.

If the GEM adjustments have successfully reduced the bias, then variable levels that previously showed significance in section 6.3.2 should not show significance. Table 6.16 gives the results of these significance tests for each of the variable levels. The table shows few significant findings, suggesting that much of the nonresponse bias has been successfully accounted for. The only predictor with remaining significant mean differences was citizenship, for which both levels of non-U.S. citizens were significant. This predictor was also the only variable with a significant chi-square test (not shown in tables).

Table 6.16. Comparison of before-adjustment and after-adjustment weighted means for selected NPSAS:2000 variables

Variable description	Unweighted respondents	Unweighted non-respondents	Before nonresponse adjustment			After weight adjustment	
			Respondent percentage, original weights	Nonrespondent percentage, original weights	Difference (respondent minus nonrespondent)	Percentage, final adjusted weights	Difference (original minus final) <sup>1</sup>
<b>Institutional sector</b>							
<b>Public 4-year</b>	6,460	1,030	65.0	65.5	-0.5	65.2	-0.1
Non-doctorate-granting	2,060	300	19.2	17.9	0.2	19.3	-0.4
Doctorate-granting	4,400	730	45.8	47.6	0.3	45.8	0.3
<b>Private not-for-profit 4-year</b>	3,450	540	33.7	33.2	0.5	33.2	0.4
Non-doctorate-granting	1,920	260	19.9	16.9	0.5	19.4	#
Doctorate-granting	1,530	280	13.8	16.3	0.4	13.8	0.4
<b>Private for-profit 4-year</b>	120	30	1.3	1.3	-0.1	1.6	-0.3
<b>Institutional control and enrollment category</b>							
<b>Public</b>							
Fewer than 1,000	10	0	#	#	#	#	#
1,000–2,499	120	10	0.8	0.6	0.3	0.8	#
2,500–4,999	360	60	3.6	3.2	0.4	3.6	-0.1
5,000–9,999	1,090	150	8.8	7.6	1.2	8.7	-0.1
10,000–19,999	1,780	260	17.9	17.4	0.4	17.9	-0.1
20,000 or more	3,110	560	34.0	36.7	-2.8	34.2	0.2
<b>Private not-for-profit</b>							
Fewer than 1,000	270	30	2.2	1.6	0.5	2.1	#
1,000–2,499	840	110	8.3	6.8	1.6	8.1	#
2,500–4,999	880	130	8.8	8.6	0.2	8.6	0.2
5,000–9,999	590	100	5.8	6.2	-0.3	5.7	0.2
10,000 or more	870	160	8.5	10.0	-1.5	8.9	-0.1
<b>Private for-profit</b>							
Fewer than 999	20	10	0.3	0.2	0.1	0.3	-0.1
1,000 or more	100	20	1.0	1.2	-0.2	1.3	-0.3
<b>Institution region</b>							
New England	610	130	6.6	8.6	-1.9	6.9	0.1
Mid East	1,860	280	17.9	17.1	0.8	17.8	-0.1
Great Lakes	1,670	250	16.2	15.6	0.6	16.1	#
Plains	860	130	8.9	7.8	1.1	8.5	0.2
South East	2,410	310	22.5	18.4	4.1*	21.8	-0.1
South West	990	180	9.8	11.7	-1.9	10.1	#
Rocky Mountains	400	50	3.7	2.9	0.8	3.6	#
Far West	1,130	250	13.1	16.9	-3.8*	13.9	-0.2
Outlying Area	110	20	1.4	1.2	0.2	1.3	#
<b>Gender</b>							
Male	3,850	710	41.2	46.4	-5.2*	42.6	-0.5
Female	6,180	890	58.8	53.6	5.2*	57.4	0.5
<b>Age</b>							
21 or younger	2,660	360	26.1	21.8	4.4*	25.5	-0.2
22	2,510	380	23.9	21.5	2.4	23.7	-0.2
23	1,340	230	13.4	13.6	-0.3	13.3	0.1
24 to 27	1,580	330	16.3	22.1	-5.8*	17.0	0.3
28 or older	1,950	310	20.3	21.0	-0.7	20.5	#
<b>Race</b>							
White	8,170	1,180	79.9	72.7	7.2*	78.5	0.1
Black or African American	790	140	8.4	9.3	-0.9	8.6	#
Asian	460	170	5.2	11.7	-6.6*	6.1	0.2
American Indian/Alaska Native	80	10	0.8	0.8	-0.1	0.8	#
Native Hawaiian/Other Pacific Islander	60	20	0.7	1.4	-0.7	0.8	#
Other	480	70	5.1	4.0	1.1	5.2	-0.3
<b>Hispanic</b>							
Yes	700	160	8.3	10.7	-2.4*	8.9	-0.2
No	9,330	1,440	91.7	89.3	2.4*	91.1	0.2
<b>Citizenship</b>							
U.S. citizen	9,610	1,400	95.0	85.6	9.4*	93.4	#
Resident alien	290	70	3.4	5.2	-1.8*	4.2	-0.5*
Foreign/international student	130	120	1.6	9.2	-7.6*	2.4	0.5*

See notes at end of table.

**Table 6.16. Comparison of before-adjustment and after-adjustment weighted means for selected NPSAS:2000 variables—Continued**

Variable description	Unweighted respondents	Unweighted non-respondents	Before nonresponse adjustment			After weight adjustment	
			Respondent percentage, original weights	Nonrespondent percentage, original weights	Difference (respondent minus nonrespondent)	Percentage, final adjusted weights	Difference (original minus final) <sup>1</sup>
<b>Attendance status</b>							
Full-time/full year, 1 institution	4,900	740	47.2	43.8	3.4	46.9	-0.3
Full-time/full year, more than 1 institution	380	40	3.0	2.1	0.9	3.0	-0.2
Full-time/part year	2,100	310	20.9	17.7	3.2	20.5	-0.2
Part-time/full year, 1 institution	1,150	210	12.8	14.7	-1.9	12.9	0.2
Part-time/full year, more than 1 institution	150	10	1.1	0.6	0.5	1.0	-0.1
Part-time/part year	1,360	280	15.1	21.1	-6.0*	15.6	0.5
<b>Parent's income (for dependent students)</b>							
Less than \$10,000	190	30	1.7	1.8	#	1.7	#
\$10,000–\$19,999	300	50	2.8	3.1	-0.3	3.0	-0.1
\$20,000–\$29,999	520	80	5.0	4.7	0.3	5.0	#
\$30,000–\$39,999	500	80	4.8	5.3	-0.5	4.7	0.2
\$40,000–\$49,999	590	90	5.6	5.2	0.3	5.6	-0.1
\$50,000–\$59,999	580	90	6.0	5.6	0.4	5.8	0.1
\$60,000–\$69,999	580	90	5.5	5.4	0.1	5.4	0.1
\$70,000–\$79,999	500	70	4.9	4.4	0.5	4.8	#
\$80,000–\$99,999	820	110	8.2	5.9	2.3	7.9	-0.1
\$100,000 or more	1,260	170	12.8	8.9	3.8*	12.5	-0.4
<b>Student's income (for independent students)</b>							
Less than \$5,000	680	130	6.3	7.8	-1.5	6.5	#
\$5,000–\$9,999	600	110	6.0	7.4	-1.4	6.0	0.2
\$10,000–\$19,999	840	140	8.6	8.9	-0.3	8.6	0.1
\$20,000–\$29,999	560	120	6.1	7.9	-1.8	6.1	0.3
\$30,000–\$49,999	740	130	7.3	9.5	-2.2	7.8	-0.2
\$50,000 or more	770	120	8.6	8.2	0.4	8.6	-0.1
<b>Applied for aid</b>							
Yes	5,930	810	57.4	49.7	7.7*	56.0	#
No	4,100	780	42.6	50.4	-7.7*	44.0	#
<b>Receipt of federal aid</b>							
Yes	5,220	710	51.2	43.2	8.0*	49.7	#
No	4,810	880	48.8	56.8	-8.0*	50.3	#
<b>Receipt of Pell grant</b>							
Yes	2,350	340	21.8	20.6	1.2	21.5	0.1
No	7,680	1,250	78.2	79.4	-1.2	78.5	-0.1
<b>Receipt of Stafford loan</b>							
Yes	4,510	620	44.5	38.0	6.5*	43.2	0.2
No	5,520	970	55.5	62.0	-6.5*	56.8	-0.2
<b>Receipt of state aid</b>							
Yes	1,950	260	17.1	15.1	2.0	16.7	0.1
No	8,080	1,340	82.9	84.9	-2.0	83.3	-0.1
<b>Receipt of institution aid</b>							
Yes	3,360	470	31.3	27.5	3.8*	30.4	0.2
No	6,670	1,120	68.7	72.5	-3.8*	69.6	-0.2
<b>Receipt of any aid</b>							
Yes	7,080	970	68.8	59.6	9.2*	67.2	#
No	2,950	620	31.2	40.4	-9.2*	32.9	#

# Rounds to zero. All zeros provided in this table are actual values.

\*Difference between respondents and nonrespondents is significant at the .05/(c-1) level, where c is the number of categories within the primary variable.

<sup>1</sup>“Original” is the weighted average of respondent percentage and nonrespondent percentage.

NOTE: Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

### 6.5.4 ROC Curve Analysis

The predictive performance of the GEM can be evaluated using an receiver operating characteristic curve (Hanley and McNeil, 1982).<sup>27</sup> The receiver operating curve (ROC) provides a measure of how well a model can correctly classify individuals of known response type.<sup>28</sup>

An ROC curve was used to evaluate how well the GEM models used for B&B:2000/01 nonresponse adjustments predict the B&B:2000/01 study response propensities. The ROC curve was developed in the following manner. For any specified probability,  $c$ , two proportions were calculated:

- the proportion of respondents with a predicted probability of response greater than  $c$ , and
- the proportion of nonrespondents with a predicted probability of response greater than  $c$ .

These predicted probabilities were obtained as the product of the predicted response probabilities obtained at each of the three GEM adjustment steps. For each GEM step, the predicted response probability was equal to the inverse of the estimated adjustment factor. Note that for the last two GEM steps, predicted probabilities were not directly available for students who had already been dropped from the model due to nonresponse in an earlier step. For these students, their predicted probability was set equal to the mean of the predicted probabilities of students still in the model.

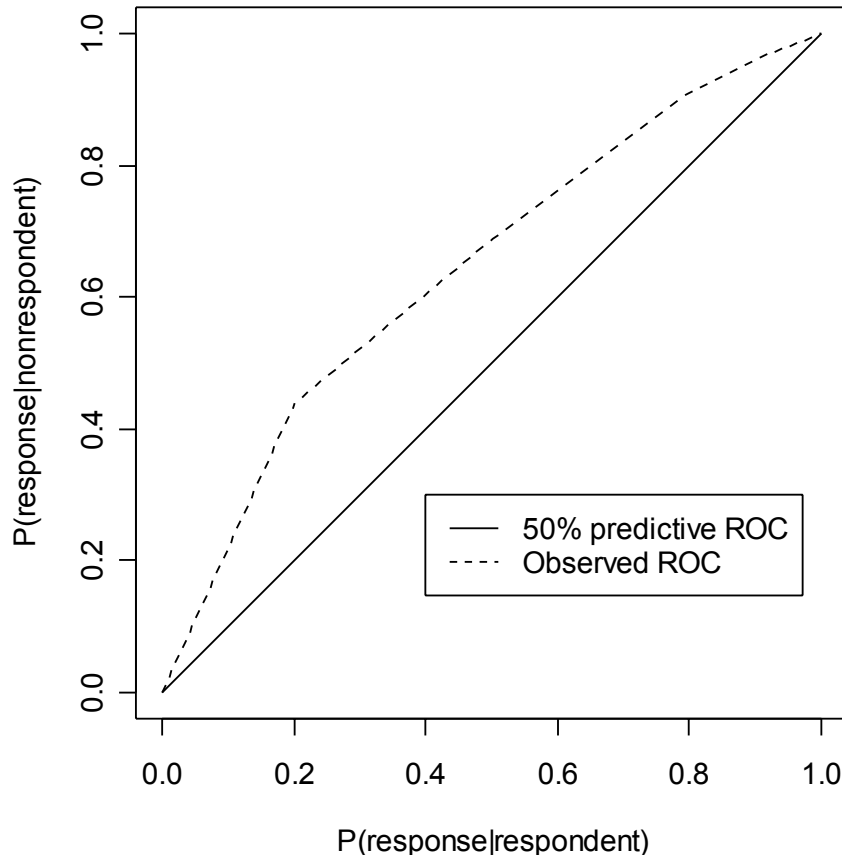
The plot of the first probability against the second, for  $c$  from 0 to 1, resulted in the ROC curve shown in figure 6.1. Numerical integration provided the area under the curve, and this area equals the probability that the fitted model will correctly classify two randomly chosen individuals—one of which is a true respondent and the other a true nonrespondent—where the individual with the higher predicted probability of response is classified as the respondent. An area of 0.5 under an ROC curve indicates that a correct classification is a 50:50 proposition, with the model providing no predictive benefit. An area of 1 indicates that the true respondent always has the higher predicted probability of response, and so the model always classifies the two individuals correctly. The area under the ROC curve of figure 6.3 is 0.65, and so 65 percent of the time (or for about two of every three pairings) the predicted probabilities give the correct classification. Predictive probabilities from ROC curves can also be interpreted in terms of the non-parametric Wilcoxon test statistic, where the ROC area of 0.65 equals the value of the Wilcoxon test statistic. Viewed in this way, the Wilcoxon test provides a highly significant rejection of the null hypothesis of no predictive ability.

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<sup>27</sup>Hanley, J.A. and McNeil, B.J. (1982). The meaning and use of the area under a receiver operating characteristic curve. *Diagnostic Radiology*, 143: 29–36.

<sup>28</sup> For a more detailed example of ROC curve use in nonresponse modeling see Iannacchione, V. (2003). Sequential weight adjustments for location and cooperation propensity for the 1995 national survey of family growth. *Journal of Official Statistics*, 16:31–43.

**Figure 6.1. ROC curve for overall response propensity**



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

### 6.5.5 Analysis of Abbreviated Respondent Bias

The B&B:2000/01 survey design allowed individuals who could not complete the full CATI interview the option of completing an abbreviated interview. Questions present on the abbreviated interview were those considered key items about the respondent’s post-baccalaureate enrollment and work experiences. Of the about 10,030 B&B:2000/01 study respondents, there were about 9,650 full interview respondents, about 370 abbreviated interview respondents, and about 10 partial interview respondents.<sup>29</sup>

Nonresponse bias can occur if abbreviated interview respondents and full interview respondents differ in their response distributions for questions only on the full interview. Nonresponse bias associated with questions only on the full interview can be tested as was done for respondents and nonrespondents in section 6.3.2.

Results of significance tests for abbreviated-interview response bias are given in table 6.17. These tests reveal significant bias associated with the levels of six variables:

<sup>29</sup>Partial respondents were individuals who only partially completed the full interview.

institution region, Hispanic origin, attendance status, receipt of Stafford loan, receipt of institution aid, and receipt of any aid. These biases were also supported by chi-squared tests.

The bias suggested by these tests could be adjusted for either by an additional weight adjustment, or by imputation. In the case of a weight adjustment, two final sets of analysis weights would be obtained: the current set of analysis weights for questions in both the full and abbreviated interview, and a new set of weights for questions only in the full interview. This additional weight adjustment was not implemented because the statistical gains in bias reduction would be more than offset by the additional complexity of having item-specific weights. Imputations would require specification of a statistical model for each outcome that is only in the full interview. They were not implemented because the B&B:2000/01 contract did not provide for imputations.

### **6.5.6 Overall Study Response Rates**

The overall weighted response rate is an estimate of the proportion of the study population that would have responded if a census had been conducted. Because the B&B:2000/01 study includes a subsample of NPSAS:2000 nonrespondents, the overall study response rate is the product of the NPSAS:2000 institution level response rate and the B&B:2000/01 student level response rate. Therefore, the overall B&B:2000/01 study response rates can be estimated directly only for domains defined by institutional characteristics.

Both weighted and unweighted overall study response rates are shown in table 6.18, along with their institution and student response rate components. The institution level response rates shown in this table are the percentages of institutions that provided sufficient data to select the NPSAS:2000 student level sample. Only the weighted response rates can be interpreted as estimates of the proportions of the B&B:2000/01 study population that are represented by the study respondents. Hence, this table shows that approximately 74 percent of the B&B:2000/01 study population is represented by the B&B:2000/01 respondents. Moreover, it shows that the rate of population coverage does not vary greatly by institutional control, although it is slightly higher for public institutions than for non-public institutions. Weighted rates are somewhat lower due to the undersampling of NPSAS:2000 nonrespondents within the B&B:2000/01 sample. This undersampling led to higher weights for NPSAS:2000 nonrespondents in the final B&B:2000/01 sample and subsequent lower overall response rates due to a tendency of NPSAS:2000 nonrespondents to remain nonrespondents in the B&B:2000/01 sample (see table 6.2).

Table 6.17. Full respondents versus abbreviated respondents: Distributions and bias tests for selected NPSAS:2000 variables

Variable description	Number of full respondents	Number of abbreviated respondents	Percent full respondent distribution	Percent abbreviated respondent distribution	Abbreviated response bias	Percent relative bias	P-value
<b>Institutional sector</b>							
<b>Public 4-year</b>	6,240	220	66	59	0.0033	0.5	0.05
Non-doctorate-granting	1,990	60	20	15	0.0020	1.0	0.10
Doctorate-granting	4,250	150	46	43	0.0013	0.3	0.42
<b>Private not-for-profit 4-year</b>	3,300	140	33	39	-0.0028	-0.8	0.10
Non-doctorate-granting	1,830	90	19	25	-0.0028	-0.1	0.07
Doctorate-granting	1,470	60	14	14	0.0001	0.1	0.94
<b>Private for-profit 4-year</b>	110	10	2	3	-0.0006	-3.8	0.34
<b>Institutional control and enrollment category</b>							
<b>Public</b>							
Fewer than 1,000	10	0	#	0	0.0000	0.0	0.16
1,000–2,499	120	#	1	#	0.0003	3.7	0.03
2,500 – 4,999	350	10	4	2	0.0008	2.2	0.08
5,000–9,999	1,050	40	9	8	0.0002	0.2	0.73
10,000–19,999	1,720	60	18	15	0.0015	0.8	0.27
20,000 or more	2,990	110	34	33	0.0004	0.1	0.77
<b>Private not-for-profit</b>							
Fewer than 1,000	260	10	2	1	0.0003	1.4	0.58
1,000–2,499	810	30	8	9	-0.0003	-0.4	0.84
2,500–4,999	850	40	9	9	-0.0004	-0.5	0.61
5,000–9,999	550	40	5	11	-0.0025	-4.6	0.09
10,000 or more	830	40	9	9	0.0001	0.1	0.91
<b>Private for-profit</b>							
Fewer than 999	20	0	#	0	0.0002	6.1	0.05
1,000 or more	90	10	1	3	-0.0007	-5.7	0.22
<b>Institution region</b>							
New England	590	30	7	8	-0.0006	-0.9	0.52
Mid East	1,740	110	17	28	-0.0049	-2.8	0.00*
Great Lakes	1,630	40	16	11	0.0028	1.7	0.01*
Plains	830	30	9	8	0.0003	0.4	0.68
South East	2,350	50	22	13	0.0044	2.0	0.00*
South West	960	30	10	9	0.0004	0.4	0.70
Rocky Mountains	390	10	4	1	0.0011	3.0	0.01
Far West	1,100	30	14	9	0.0027	1.9	0.01
Outlying Area	60	60	1	14	-0.0062	-88.6	0.00*
<b>Gender</b>							
Male	3,710	140	43	39	0.0018	0.4	0.24
Female	5,940	230	57	61	-0.0018	-0.3	0.24
<b>Age</b>							
21 or younger	2,560	90	25	27	-0.0009	-0.4	0.57
22	2,410	100	24	27	-0.0014	-0.6	0.31
23	1,280	50	13	12	0.0009	0.7	0.40
24 to 27	1,510	70	17	14	0.0015	0.9	0.15
28 or older	1,880	70	21	21	-0.0001	0.0	0.94
<b>Race</b>							
White	7,880	270	79	74	0.0021	0.3	0.14
Black or African American	760	30	9	8	0.0003	0.3	0.72
Asian	440	20	6	8	-0.0008	-1.3	0.36
American Indian/Alaska Native	70	#	1	1	-0.0002	-2.6	0.60
Native Hawaiian/Other Pacific Islander	60	#	1	#	0.0003	3.6	0.02
Other	440	40	5	9	-0.0017	-3.4	0.04
<b>Hispanic</b>							
Yes	620	80	8	20	-0.0053	-6.3	0.00*
No	9,030	290	92	81	0.0053	0.6	0.00*
<b>Citizenship</b>							
U.S. citizen	9,250	350	93	94	-0.0004	0.0	0.61
Resident alien	280	10	4	5	-0.0002	-0.5	0.82
Foreign/international student	120	#	3	1	0.0006	2.4	0.14

See notes at end of table.

**Table 6.17. Full respondents versus abbreviated respondents: Distributions and bias tests for selected NPSAS:2000 variables—Continued**

Variable description	Number of full respondents	Number of abbreviated respondents	Percent full respondent distribution	Percent abbreviated respondent distribution	Abbreviated response bias	Percent relative bias	P-value
<b>Attendance status</b>							
Full-time/full year, 1 institution	4,720	170	47	47	0.0000	0.0	0.99
Full-time/full year, more than 1 institution	370	#	3	1	0.0013	4.2	0.00*
Full-time/part year	2,020	80	21	18	0.0013	0.6	0.29
Part-time/full year, 1 institution	1,100	50	13	16	-0.0014	-1.1	0.25
Part-time/full year, more than 1 institution	150	0	1	0	0.0005	4.7	0.00*
Part-time/part year	1,290	60	16	19	-0.0016	-1.0	0.22
<b>Parents' income (for dependent students)</b>							
Less than \$10,000	180	10	2	2	-0.0002	-1.2	0.62
\$10,000-\$19,999	280	20	3	4	-0.0007	-2.4	0.26
\$20,000-\$29,999	500	20	5	4	0.0006	1.2	0.21
\$30,000-\$39,999	480	20	5	5	0.0000	0.0	0.93
\$40,000-\$49,999	570	20	6	5	0.0002	0.4	0.77
\$50,000-\$59,999	560	20	6	8	-0.0010	-1.8	0.28
\$60,000-\$69,999	570	20	6	5	0.0005	0.9	0.50
\$70,000-\$79,999	480	20	5	6	-0.0007	-1.5	0.45
\$80,000-\$99,999	800	20	8	6	0.0009	1.1	0.20
\$100,000 or more	1,210	50	13	13	-0.0001	-0.1	0.95
<b>Student's income (for independent students)</b>							
Less than \$5,000	640	30	7	8	-0.0006	-0.9	0.51
\$5,000-\$9,999	590	20	6	4	0.0009	1.5	0.17
\$10,000-\$19,999	800	40	9	10	-0.0005	-0.6	0.57
\$20,000-\$29,999	540	20	6	8	-0.0008	-1.3	0.35
\$30,000-\$49,999	720	20	8	6	0.0011	1.4	0.18
\$50,000 or more	740	30	9	8	0.0003	0.3	0.73
<b>Applied for aid</b>							
Yes	5,710	210	56	52	0.0021	0.4	0.20
No	3,940	160	44	48	-0.0021	-0.5	0.20
<b>Receipt of federal aid</b>							
Yes	5,020	190	50	47	0.0014	0.3	0.41
No	4,630	180	50	53	-0.0014	-0.3	0.41
<b>Receipt of Pell grant</b>							
Yes	2,240	110	21	24	-0.0012	-0.6	0.48
No	7,410	260	79	76	0.0012	0.2	0.48
<b>Receipt of Stafford loan</b>							
Yes	4,370	130	44	34	0.0046	1.1	0.00*
No	5,280	230	56	66	-0.0046	-0.8	0.00*
<b>Receipt of state aid</b>							
Yes	1,880	60	17	14	0.0012	0.7	0.32
No	7,770	300	83	86	-0.0012	-0.1	0.32
<b>Receipt of institution aid</b>							
Yes	3,250	100	31	24	0.0030	1.0	0.02*
No	6,400	260	69	76	-0.0030	-0.4	0.02*
<b>Receipt of any aid</b>							
Yes	6,830	240	68	59	0.0043	0.6	0.01*
No	2,820	130	32	42	-0.0043	-1.3	0.01*

# Rounds to zero. All zeros provided in this table are actual values.

\*Difference between respondents and nonrespondents is significant at the  $.05/(c-1)$  level, where c is the number of categories within the primary variable.

NOTE: Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).



**Table 6.18. Overall B&B:2000/01 study response rates**

Type of institution	Institutions <sup>1</sup>				Students				Overall response rate	
	Number eligible	Number respondents	Response rate unweighted	Response rate weighted	Number eligible	Number respondents	Response rate unweighted	Response rate weighted	Unweighted	Weighted
<b>All 4-year institutions</b>	710	660	93	90	11,620	10,030	86	82	80	74
<b>Public 4-year</b>	350	330	95	95	7,490	6,460	86	82	82	78
Non-doctorate-granting	130	120	97	94	2,360	2,060	87	83	80	78
Doctorate-granting	220	210	95	95	5,130	4,400	86	82	80	78
<b>Private not-for-profit 4-year</b>	340	310	91	87	3,990	3,450	87	83	79	72
Non-doctorate-granting	170	150	90	82	2,180	1,920	88	85	80	69
Doctorate-granting	170	160	93	97	1,810	1,530	85	80	80	77
<b>Private for-profit 4-year</b>	20	20	96	98	150	120	80	81	80	80

<sup>1</sup>Includes all eligible NPSAS:2000 4-year doctorate and non-doctorate granting institutions. Less than 4-year institutions do not provide baccalaureate degrees and have been excluded.

NOTE: Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

## 6.6 Variance Estimation

Since most survey statistics computed from weighted data are nonlinear, it is generally not possible to find closed form expressions for their variance estimators. For this reason, RTI provides the information needed for two alternative variance estimation methods: Taylor series and balanced repeated replication (BRR). This section provides background on how analysis strata and weights for each method were created.

### 6.6.1 Taylor Series

The standard method of the variance estimation for nonlinear statistics is Taylor series expansion (see, e.g., Wolter, 1985).<sup>30</sup> This method obtains a variance estimate for a statistic of interest by substituting its first order Taylor series expansion into the appropriate sampling design variance formula.

Since the B&B:2000/01 sample was obtained through a stratified multistage design, a file of analysis strata and analysis primary sampling units (PSUs) is needed for application of the appropriate sampling design variance formula with Taylor series methods. Starting with the NPSAS:2000 institution level sampling strata, institutions were assigned to analysis strata and analysis primary sampling units (PSUs) such that each analysis stratum contained at least 2 analysis PSUs, and each analysis PSU contained at least four B&B:2000/01 respondents. The partitioning was done according to the ordering of institutions on the sampling frame and preserves much of the implicit stratification induced by the serpentine frame ordering (see appendix G of the NPSAS:2000 methodology report). The final analysis file contains 389 analysis strata and 812 analysis PSUs.

Software that is currently available for Taylor series variance estimation (e.g., STATA, SUDAAN or the NCES DAS) does not accommodate estimating the additional variation due to use of sample-based weight adjustment factors because of the complexity of those estimates. However, the methodology has been developed<sup>31</sup> and may be accommodated by the next generation of survey analysis software.

Instructions for Taylor series variance estimation using the B&B:2000/01 weights are found in appendix I, which also specifies the names of the 66 B&B:2000/01 weight variables and the files in which they are located.

### 6.6.2 Balanced Repeated Replication

In addition to the Taylor series approximations noted above, another method of variance estimation is the balanced repeated replications (BRR) method (Wolter, 1985).<sup>32</sup> This approach is useful for estimating variances of survey quantile estimates (e.g., medians, quartiles, etc.), and works by computing the statistic of interest  $\bar{y}_j$  once for each of  $k$  replicate sets of BRR weights, and then estimating the variance of the full sample stratified estimate  $\bar{y}_{strat}$  as follows:

---

<sup>30</sup>Wolter, K.N. (1985). *Introduction to variance estimation*. New York: Springer-Verlag.

<sup>31</sup>Vaish, A.K., Gordek, H., and Singh, A.C. (2000). Variance estimation for weight calibration via the generalized exponential model with applications to the National Household Survey on Drug Abuse. *ASA Proceedings of the Section on Survey Research Methods*, 67–55.

<sup>32</sup>Wolter. Op cit.

$$\hat{Var}_{BRR}[\bar{y}_{strat}] = \sum_{j=1}^k \frac{(\bar{y}_j - \bar{y}_{strat})^2}{k}.$$

The BRR approach is based on the idea of partitioning the sample respondents into  $L$  analysis strata such that there are two analysis PSUs per stratum. A half-sample replicate is defined as a sample containing one analysis PSU selected from each analysis stratum. There are then  $2^L$  different half-sample replicates that can be drawn from the  $L$  analysis strata. If all  $2^L$  possible half-samples are considered, and if  $\bar{y}_j$  is the sample mean from the  $j^{\text{th}}$  half-sample, and  $\bar{y}_{strat}$  the stratified mean from the full sample, then it can be shown that  $\sum_{j=1}^{2^L} (\bar{y}_j - \bar{y}_{strat})^2 / 2^L$  is equal to the stratified variance estimator. The BRR approach provides a method to find  $k < 2^L$  “balanced” half-sample replicates where this same property holds.

Obtaining the  $k < 2^L$  BRR replicates is accomplished by finding a  $k$ -dimensional Hadamard matrix, which is a  $k \times k$  orthogonal matrix  $\mathbf{H}$  containing only  $-1$ s and  $+1$ s with the property that  $\mathbf{H}^T \mathbf{H} = k\mathbf{I}$ . These matrices have been verified to exist where  $k$  is a multiple of 4 up to  $k=428$ . In the B&B:2000/01 study, a  $k=64$  dimensional Hadamard matrix was used to define 64 BRR replicates.

To obtain the needed 64 BRR analysis strata, the 389 Taylor series analysis strata were collapsed. The first step was to reduce the number of strata to a multiple of 6 by collapsing 10 strata into 5 strata. The 10 strata of the 389 with the smallest NPSAS:2000 institutional weight were randomly paired to produce 5 strata, resulting in 384 ( $64 \times 6$ ) strata. The collapsing of the resulting 384 strata to 64 strata was accomplished by first sorting by stratum ID, labeling the sorted strata with repeated sequences of 1 to 6, and then defining the strata into six groups according to these labels. Each of the 64 BRR strata was created by merging one stratum selected at random without replacement from each of the 6 groups.

The collapsing of PSUs within strata to obtain the two analysis PSUs per BRR analysis stratum started with the 389 Taylor analysis strata. Any analysis stratum with 3 PSUs had 2 PSUs chosen at random to merge, and any analysis stratum with 4 PSUs was converted to 2 PSUs by random pairing. This led to all strata having 2 PSUs, as none of the Taylor analysis strata contained more than 4 PSUs. When the 389 Taylor analysis strata were collapsed to the final 64 BRR analysis strata, all first-replicate PSUs were merged to form the first-replicate PSU in each collapsed stratum, and all second-replicate PSUs were similarly merged to form the second-replicate PSU.

Given the 64 collapsed BRR analysis strata, the 64 BRR replicates are obtained by using the Hadamard matrix. The columns of the Hadamard matrix identify the replicates, while the rows identify the strata. If the element of column  $k$ , row  $j$  of  $\mathbf{H}$  was equal to  $-1$ , then for replicate  $k$ , stratum  $j$ , the weights of individuals in the first PSU were doubled and the weights of individuals in the second PSU were set to zero. If instead the element equaled  $+1$ , then the individual weights in the first PSU were set to zero, and the individual weights in the second PSU were doubled.

The weights used to produce the BRR replicates were the  $w_{4i}$ , the weights after nonresponse adjustment but before poststratification. Each BRR replicate was then poststratified to the IPEDS control totals, providing the final BRR replicate. In theory, all steps of the GEM adjustment should be repeated, although this was determined to not be a cost-effective approach.

Instructions for BRR variance estimation using the B&B:2000/01 weights are found in appendix I, which also specifies the names of the 66 B&B:2000/01 weight variables and the files in which they are located.

**Appendix A**  
**Technical Review Panel**

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**(B&B:2000/01)**  
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**Appendix B**  
**Revised B&B:2000/01 Data Elements**

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## Appendix B Revised B&B:2000/01 Data Elements (Full-scale survey)

### **B&B Eligibility Determination (for base year nonrespondents)**

- Receive a bachelor's degree between July 1, 1999, and June 30, 2000
- Date received bachelor's (month/year)
- Institution granting the degree (confirm NPSAS or add code online)

### **High School Education**

- Type of high school completion  
(regular diploma/GED/certificate of completion/foreign/none)
- Year of high school completion
- Type of high school  
(public/Catholic/other religious/non-religious private)

### **Undergraduate Enrollment**

1. Is this the first bachelor's degree ever received (yes/no)
  - If no: date first bachelor's degree received
2. First college, first year
  - a. First-year enrollment
    - Term and year first began undergraduate education
    - Name of first undergraduate college attended (online coding)
    - Beginning attendance status (full-time/part-time)
  - b. First-year family status
    - Marital status when began
    - Number of dependent children when began
  - c. First-year academic performance
    - Remedial or noncredit basic math or English courses required first year (yes/no)
    - Any advanced placement or other college credits accepted (yes/no)
  - d. First-year residence
    - Local residence first year (on campus/off campus/with parents)
  - e. First-year employment
    - Number of hours/week worked while enrolled first year
    - Worked on campus or off campus
  - f. First-year financial aid
    - Parents pay some or all of the tuition (yes/no)
    - Received grants, scholarships, or employer aid first year (yes/no)
3. Undergraduate enrollment history
  - a. All postsecondary institutions attended
    - Terms/years enrolled at first college
    - Names of other undergraduate colleges attended (online coding)
    - Terms/year attended other colleges
    - Number of transfer credits accepted at other colleges

- Number of undergraduate colleges attended
  - Ever co-enrolled at two institutions
  - Number of enrollment gaps
  - Received a certificate or associate's degree before bachelor's degree (yes/no)
  - If yes: type of degree and date received
  - b. Transfers
    - Reasons for beginning at 2-year college (financial/academic/personal/location)
    - Reasons for transfers (financial/academic/personal/location)
    - Reasons for co-enrollment (financial/academic/personal/location)
    - Reasons for enrollment gaps of 2+ years (financial/academic/personal/location)
4. Undergraduate academic history
- Ever withdraw from courses because of academic difficulties (yes/no)
  - Ever receive any incomplete grade (yes/no)
  - Ever repeat a course to obtain a higher grade (yes/no)
  - Receive any type of honors or distinction at graduation (yes/no)
  - Take any foreign language courses (yes/no)
  - Fluent in any foreign languages (yes/no)
5. Undergraduate student loan debt
- a. Amounts borrowed and owed
    - Total borrowed in undergraduate student loans
    - Amount currently owed on undergraduate student loans
    - Amount borrowed from family or friends
    - Amount still owed family or friends
  - b. Repayment
    - Participate in loan forgiveness program (yes/no)
    - If yes, type of program (teaching/nursing/other)
    - Amount of monthly payments
    - Parents helping to repay the loans (yes/no)

### **Post-BA Enrollment**

1. Currently enrolled in or completed since Bachelor's degree:
- Formal program in a college or university leading to graduate or professional degree/post-bachelor's certificate
  - Formal program leading to an additional undergraduate degree
  - Courses for credit at college or university, not in degree program
  - Noncredit courses at educational institution or some other program
  - a. Graduate or professional degree or post-bachelor's degree certificate program
    - Name of institution attending (online coding)
    - Degree program (online coding)
    - Field of study (online coding)
    - Full-time or part-time attendance
    - Type of financial aid
    - Fellowship/loan/assistantship/employer aid

- Number of hours worked per week while enrolled
  - Consider yourself primarily an employee or student
  - Reasons for enrolling
  - Year completed/expect to complete degree
- b. Courses in non-degree or undergraduate programs after bachelor's degree
- Reasons for taking these courses
  - Job skills/prepare for license or certificate/earn second bachelor's degree/prepare for graduate school
  - Type of institution/program offering the courses
  - Receiving tuition reimbursement from employer (yes/no)
- c. Future graduate school plans
- Applied to graduate school for next year (yes/no)
  - Expect to attend graduate school in next 5 years (yes/no)
  - Type of degree program applied/expected
  - Expect to attend full-time or part-time
  - Expect to receive employer tuition aid
  - Reasons for delaying graduate school enrollment
  - Reasons for not planning to pursue any higher degree
- d. Lifetime Learning tax credits
- Claimed Lifetime Learning tax credits (yes/no)
  - Use them in the next tax filing (yes/no)
  - Has their availability influenced your decision to continue education (yes/no)

### **Certification and Licensure**

1. Licenses and certificates held
- a. Hold or preparing for occupational certificate/license required by law (hold/preparing/neither)
- Type of certificate/license
  - Intensity of preparation (hours/days/weeks)
- b. Hold or preparing for professional certification (hold/preparing/neither)
- Type of certificates
  - Intensity of preparation (hours/days/weeks)
2. Who provides certification/licensure (state/industry/company/other)
- Required for career entry (yes/no)
  - Other reasons for certification exam

### **Employment at Time of Interview**

1. Employed status (full-time/part-time/looking for work/not looking)
- Employed as an elementary/secondary school teacher (yes/no)
- a. Characteristics of current job
- Starting date of current job (month/year)
  - Average number of hours per week worked
  - If part-time: prefer to have a full-time job (yes/no)
  - Working for a temporary agency (yes/no)

- Type of occupation (online coding)
  - Type of duties (specify)
  - Type of industry (online coding)
  - Type of firm (for-profit/non-profit/government/self-employed)
  - Size of the company (number of employees)
  - Related to undergraduate major (closely/somewhat/not at all)
  - Is this job start of a career in this occupation (yes/no)
  - If no, how current job is best characterized
  - Salary (indicate per time period)
  - Type of benefits received
  - Job satisfaction
  - Flexibility of work schedule
2. Job search activities
- Actively looking for another job (yes/no)
  - Most effective job search activity
  - Employment status in April 2001 (full-time/part-time/looking for work/not looking)
  - Received unemployment compensation (yes/no)

### **Job Training**

- Any job-related training in current job (yes/no)
- Required, encouraged or on your own?
- During working hours (yes/no)
- At place of work (yes/no)
- Tuition reimbursement to take courses (yes/no)
- Purpose of training (for current job/promotion/different job)
- Will training lead to certification (yes/no)

### **Current Demographics**

1. Current household demographics
- Who lives in your household
  - Marital status
  - Number and ages of dependent children
  - Spouse employed or full-time student
  - Spouse's salary
  - Spouse's level of education
2. Assets and debt
- Own or rent
  - Monthly mortgage/rent amount
  - Own any motor vehicles (yes/no)
  - Monthly auto payments
  - Credit card balance paid monthly or carried
  - Outstanding balance on last month's credit cards
  - Undergraduate student loan amount owed by spouse
  - Spouse monthly student loan payments



**Civic and Volunteer Activity**

1. Citizenship and residence
  - Citizenship status
  - State of legal residence
2. Voting
  - Registered to vote (yes/no)
  - Voted in last presidential election (yes/no)
3. Volunteer and community service
  - Perform any community service/volunteer work in last year (yes/no)
  - Type of community service
  - Volunteer hours per month
4. Veteran or serve in armed forces

**Current or Prospective Teachers**

1. Identify those in teacher pipeline:
  - New teachers—taught for first time after NPSAS year bachelor’s (excluding substitutes and aides)
  - Trainees who did not teach (took courses toward certification in last 2 years)
  - Currently considering teaching
- a. Position(s) held
  - Worked as K-12 teacher, aide, or substitute since bachelor’s degree (yes/no)
  - Type of positions held (first job/recent job):
    - Regular elementary/secondary school teacher
    - Substitute teacher
    - Teacher’s aide
    - Itinerant teacher
    - Support teacher
  - Worked as substitute 12 weeks or more (yes/no)
  - Substitute to get permanent job (yes/no)
  - Teacher’s aide to get permanent job (yes/no)
- b. Certification
  - Took courses toward teacher certification in last 2 years (yes/no)
  - Licensed or certified to teach in grades K-12 in any state (yes/no)
  - Date first certified (month year)
  - Highest type of certification (regular/probationary/temporary/emergency)
  - Taken state license/certification exams (yes/no/not required)
  - If yes, passed the exams (yes/no)
  - If no, planning to take exams (yes/no)
  - If no, taking courses toward certification (yes/no)
  - Any other (non-state) type of certification

2. Teaching experiences

- a. Number of teaching jobs held (excluding substitutes or aides)
- Name and location of school (first job/recent job) [Online coding links to public and private school databases]
  - Dates started (first job/recent job)
  - Dates ended (first job/recent job)
  - Characteristics of K-12 teaching jobs: (first job and most recent job)
  - Taught full-time or part-time
  - Highest and lowest grade levels taught
  - Subject areas taught
  - Certified in these subject area fields
  - College major in these fields (yes/no)
  - Number of periods or sections each day
  - Number of students
  - Classes team taught (yes/no)
- b. Experience in first teaching job
- Participated in formal induction program (yes/no)
  - Participated in teacher internship program (yes/no)
  - Comparable workload with other teachers in school (yes/no)
  - Schools effective in assisting with (yes/no):
    - Student discipline
    - Instructional methods
    - Curriculum
    - Adjusting to school environment
  - Effectiveness of preparation for teaching of: (very well/moderately well/not at all)
    - Student teaching or internship experience
    - Education courses in college
    - Academic courses in college
  - How well prepared do you feel to (very well/moderately well/not at all):
    - Teach the subjects assigned
    - Integrate educational technology into grade or subjects that you teach
    - Manage the classroom
  - Satisfaction with aspects of teaching (very/somewhat/not satisfied):
    - Student motivation
    - School learning environment
    - Student behavior
    - Class size
    - Support from parents
    - Society's perception of teaching
    - Support from school administration
- c. If no longer teaching
- Primary reason for leaving teaching
  - Plan to return to teaching (yes/no/not sure)

3. Non-teachers
  - a. Preparations
    - Currently considering K-12 teaching? (yes/no)
    - Types of preparation for teaching
  - b. Applications
    - Applied for teaching jobs since completing degree (yes/no)
    - Number of job applications
    - Number of offers
    - Number of offers accepted
    - Reasons for rejecting offers
    - Reasons did not apply for teaching position
  
4. Loan forgiveness
  - Aware of any student loan forgiveness programs for those entering teaching (yes/no)
  - If yes, did it serve as an incentive to prepare for teaching (yes/no)
  - Taking advantage of such a loan forgiveness program now (yes/no)



## **Appendix C**

### **CATI Facsimile**

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**YBAMM**

Month BA awarded from NPSAS 2000  
A preload variable that is the month the respondent completed a bachelor's degree from NPSAS school.

Applies to: *NPSAS 2000 respondents.*

Sources: NPSAS 2000 CATI

**YBAYY**

Year BA awarded from NPSAS 2000  
A preload variable that is the year the respondent completed a bachelor's degree from NPSAS school.

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

**YBANDX**

School index-bachelor's degree awarded  
A preload variable that represents the index of the school at which the respondent earned a bachelor's degree.

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

**YCPSMAT**

CPS match for financial aid  
A preload variable that indicates whether the respondent applied for federal financial aid (i.e., they completed the FASFAA)

Applies to: *All respondents.*

Sources: NPSAS 2000 CADE

**YFSTNDX**

Index of first postsec attended  
A preload variable that indicates the first postsecondary institution the respondent attended since high school graduation.

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

**YHSPRV**

Religious affiliation of high school  
A preload variable that indicates the religious affiliation of the private high school the respondent attended. The values are:

<1> Catholic

<2> Other religious

<3> No religious affiliation

Applies to: *Respondents that attended a private high school.*

Sources: NPSAS 2000 CATI

**YHSSTAT**

High school status  
Indicates what type of diploma or high school completion the respondent received. The values are:

<1> Received high school diploma

<2> Passed a GED test

<3> Received high school completion

<4> Did not complete high school

<5> Attended foreign high school

<6> Home schooling

Applies to: *All respondents.*

Sources: NPSAS 2000 CADE

**YHSTYP**

Type of high school  
Indicates whether the respondent attended a public, private, or foreign high school.

The values are:

<1> Public

<2> Private

<3> Attended foreign school

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

**YHSYY**

Year received high school diploma  
Indicates the year the respondent received his/her high school diploma.

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

**YMAJOR**

Major for NPSAS 2000.

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

**YNBDIPL**

Type of high school diploma  
Indicates what type of diploma the respondent received from high school. See YHSSTAT for values.

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

**YNBS1**

Date first attended first PSE  
Date the respondent first attended the first postsecondary institution.

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

**YNP2KR**

NPSAS 2000 interview completion status  
Indicates the status of the respondent's interview for NPSAS 2000.

The values are:

<0> NPSAS nonrespondent

<1> NPSAS abbreviated

<2> NPSAS partial

<3> NPSAS full

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

**YNPSCHL**

NPSAS 2000 school name

A preload variable that gives the name of the school the respondent attended.

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

**YNPSIPD**

NPSAS school IPEDS number

A preload variable that is the school identification number from the U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS). For schools that were uncodeable in the IPEDS

user exit, the values indicate which piece of information was missing:

<999996> Foreign school

<999997> School name unknown

<999998> School city unknown

<999999> State unknown

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

**YNPSNDX**

Index to identify NPSAS school

A preload variable that represents the index of the NPSAS school the respondent attended.

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

**YPARST**

Parent status

Indicates the status of the respondent's parents. The values are:

<1> Parents

<2> Guardians

<3> Neither

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

**YPREP1**

Teacher preparation activities

A preload variable indicating what types of things the respondent has done to prepare him/herself to teach.

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

**YSICITY**

First postsecondary city

A preloaded variable that is the city where the school is located.

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

**YS1CTRL**

First postsecondary control

A preload variable that refers to the ownership of the school. Values are:

<1> Public

<2> Private not-for-profit

<3> Private for-profit

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

**YS1IPDS**

First postsecondary IPEDS

A preload variable that is the school identification number from the U.S. Department of Education's IPEDS.

For schools that were uncodeable in the IPEDS user exit, the values indicate which piece of information was missing:

<999996> Foreign school

<999997> School name unknown

<999998> School city unknown

<999999> State unknown

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI



**YS1LEVEL**

First postsecondary level

A preloaded variable that indicates the length of time it takes to complete the highest level of program offered by the school. The values are:

<1> 4-year

<2> 2-year

<3> Less-than-2-year

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

**YS1NAME**

First postsecondary school name

A preload variable that gives the name of the first postsecondary school the respondent attended.

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

**YS1STAT**

First postsecondary state

A preload variable that is a numeric code for the state where the school is located.

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

**YS2CITY**

Second postsecondary city

A preload variable that is the city where the school is located.

Applies to: *Respondents with more than one preload school.*

Sources: NPSAS 2000 CATI

**YS2CTRL**

Second postsecondary control

A preload variable that refers to the ownership of the school. Values are:

<1> Public

<2> Private not-for-profit

<3> Private for-profit

Applies to: *Respondents with more than one preload school that have a valid level for preload school 2.*

Sources: NPSAS 2000 CATI

**YS2IPDS**

Second postsecondary IPEDS

A preload variable that is the school identification number from the U.S. Department of Education's IPEDS. For schools that were uncodeable in the IPEDS user exit, the values indicate which piece of information was missing:

<999996> Foreign school

<999997> School name unknown

<999998> School city unknown

<999999> State unknown

Applies to: *Respondents with more than one preload school.*

Sources: NPSAS 2000 CATI

**YS2LEVEL**

Second postsecondary level

A preloaded variable that indicates the length of time it takes to complete the highest level of program offered by the school. The values are:

<1> 4-year

<2> 2-year

<3> Less-than-2-year

Applies to: *Respondents with more than one preload school that have a valid level for preload school 2.*

Sources: NPSAS 2000 CATI

**YS2NAME**

Second postsecondary name

A preload variable that gives the name of the second postsecondary school the respondent attended.

Applies to: *Respondents with more than one preload school that have a valid name for preload school 2.*

Sources: NPSAS 2000 CATI

**YS2STAT**

Second postsecondary state

A preload variable that is a numeric code for the state where the school is located.

Applies to: *Respondents with more than one preload school that have a valid state for preload school 2.*

Sources: NPSAS 2000 CATI

**YS3CITY**

Third postsecondary city  
A preload variable that is the city where the school is located.

Applies to: *Respondents with more than two preload schools that have a valid city for preload school 3.*

Sources: NPSAS 2000 CATI

**YS3CTRL**

Third postsecondary control  
A preload variable that refers to the ownership of the school. Values are:

- <1> Public
- <2> Private not-for-profit
- <3> Private for-profit

Applies to: *Respondents with more than two preload schools that have a valid control for preload school 3.*

Sources: NPSAS 2000 CATI

**YS3IPDS**

Third postsecondary IPEDS  
A preload variable that is the school identification number from the U.S. Department of Education's IPEDS. For schools that were uncodeable in the IPEDS user exit, the values indicate which piece of information was missing:

- <999996> Foreign school
- <999997> School name unknown
- <999998> School city unknown
- <999999> State unknown

Applies to: *Respondents with more than two preload schools.*

Sources: NPSAS 2000 CATI

**YS3LEVL**

Third postsecondary level  
A preloaded variable that indicates the length of time it takes to complete the highest level of program offered by the school. The values are:

- <1> 4-year
- <2> 2-year
- <3> Less-than-2-year

Applies to: *Respondents with more than two preload schools that have a valid level for preload school 3.*

Sources: NPSAS 2000 CATI

**YS3NAME**

Third postsecondary name  
A preload variable that gives the name of the third postsecondary school the respondent attended.

Applies to: *Respondents with more than two preload schools that have a valid name for preload school 3.*

Sources: NPSAS 2000 CATI

**YS3STAT**

Third postsecondary state  
A preload variable that is a numeric code for the state where the school is located.

Applies to: *Respondents with more than two preload schools that have a valid state for preload school 3.*

Sources: NPSAS 2000 CATI

**YS4CITY**

Fourth postsecondary city  
A preload variable that is the city where the school is located.

Applies to: *Respondents with more than three preload schools that have a valid city for preload school 4.*

Sources: NPSAS 2000 CATI

**YS4CTRL**

Fourth postsecondary control  
A preload variable that refers to the ownership of the school. Values are:

- <1> Public
- <2> Private not-for-profit
- <3> Private for-profit

Applies to: *Respondents with more than three preload schools that have a valid control for preload school 4.*

Sources: NPSAS 2000 CATI

**YS4IPDS**

Fourth postsecondary IPEDS

A preload variable that is the school identification number from the U.S. Department of Education's IPEDS. For schools that were uncodeable in the IPEDS user exit, the values indicate which piece of information was missing:

<999996> Foreign school

<999997> School name unknown

<999998> School city unknown

<999999> State unknown

Applies to: *Respondents with more than three preload schools.*

Sources: NPSAS 2000 CATI

**YS4LEVL**

Fourth postsecondary level

A preloaded variable that indicates the length of time it takes to complete the highest level of program offered by the school. The values are:

<1> 4-year

<2> 2-year

<3> Less-than-2-year

Applies to: *Respondents with more than three preload schools that have a valid level for preload school 4.*

Sources: NPSAS 2000 CATI

**YS4NAME**

Fourth postsecondary name

A preload variable that gives the name of the fourth postsecondary school the respondent attended.

Applies to: *Respondents with more than three preload schools that have a valid name for preload school 4.*

Sources: NPSAS 2000 CATI

**YS4STAT**

Fourth postsecondary state

A preload variable that is a numeric code for the state where the school is located.

Applies to: *Respondents with more than three preload schools that have a valid state for preload school 4.*

Sources: NPSAS 2000 CATI

**YS5CITY**

Fifth postsecondary city

A preload variable that is the city where the school is located.

Applies to: *Respondents with more than four preload schools that have a valid city for preload school 5.*

Sources: NPSAS 2000 CATI

**YS5CTRL**

Fifth postsecondary control

A preload variable that refers to the ownership of the school. Values are:

<1> Public

<2> Private not-for-profit

<3> Private for-profit

Applies to: *Respondents with more than four preload schools that have a valid control for preload school 5.*

Sources: NPSAS 2000 CATI

**YS5IPDS**

Fifth postsecondary IPEDS

A preload variable that is the school identification number from the U.S. Department of Education's IPEDS. For schools that were uncodeable in the IPEDS userexit, the values indicate which piece of information was missing:

<999996> Foreign school

<999997> School name unknown

<999998> School city unknown

<999999> State unknown

Applies to: *Respondents with more than four preload schools.*

Sources: NPSAS 2000 CATI

**YS5LEVL**

Fifth postsecondary level

A preloaded variable that indicates the length of time it takes to complete the highest level of program offered by the school. The values are:

<1> 4-year

<2> 2-year

<3> Less-than-2-year

Applies to: *Respondents with more than four preload schools that have a valid level for preload school 5.*

Sources: NPSAS 2000 CATI

**YS5NAME**

Fifth postsecondary name

A preload variable that gives the name of the fifth postsecondary school the respondent attended.

Applies to: *Respondents with more than four preload schools that have a valid name for preload school 5.*

Sources: NPSAS 2000 CATI

**YS5STAT**

Fifth postsecondary state

A preload variable that is a numeric code for the state where the school is located.

Applies to: *Respondents with more than four preload schools that have a valid state for preload school 5.*

Sources: NPSAS 2000 CATI

**YUSCIT**

Citizenship status

A preload variable that indicated whether the respondent was a U.S. citizen, and, if not, the type of visa/resident. This variable is used to determine whether to ask about current citizenship. The values are:

<1> U.S. Citizen

<2> Resident alien

<3> Student visa

Applies to: *Respondents with citizenship information.*

Sources: NPSAS 2000 CATI

**YVOTE**

Registered to vote in U.S. elections

Applies to: *Respondents with U.S. citizenship.*

Sources: NPSAS 2000 CATI

**YVTPRS**

Vote in last presidential election

Applies to: *Respondents with U.S. citizenship.*

Sources: NPSAS 2000 CATI

**ZRID**

Case ID number

Applies to: *All respondents.*

Sources: NPSAS 2000 CATI

## **School Information**

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**NPSASSCH**

NPSAS school flag

A flag to identify the NPSAS institution. The NPSAS institution is the institution from which the student was originally sampled.

Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**FPSESCH**

First postsecondary school flag

A flag to identify the first postsecondary institution ever attended.

Note: A value of -7 is shown for respondents who completed the abbreviated interview (in which the item about the first postsecondary institution was not asked) and for whom there was no preloaded value for the first postsecondary institution.

Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**BASCH**

BA school flag

A flag to identify the institution from which the student received his/her bachelor's degree.

Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**NEWBB01**

New school during B and B 2001 flag

A flag to identify any new school that was collected in the follow-up interview (i.e., that was not preloaded from base-year data).

Sources: B&B:2000/01 CATI

**BADATE**

Bachelor's degree completion date

This is the date of degree completion at the institution that awarded the bachelor's degree.

Note: Date format is YYYYMM.

Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**ENRSPL01**

Undergraduate enrollment spell 1

An enrollment spell is defined as any period of enrollment at a single institution not separated by 4 or more months. ENRSPL01 through ENRSPL13 each contain a structured set of information (see below) describing each enrollment spell in which the student attended a given institution. For NPSAS respondents, the B&B interview collected enrollment data only up until 06/1999 since the NPSAS interview collected enrollment data for the 99/00 academic year (07/1999-06/2000). The 99/00 enrollment collected during NPSAS were then imputed into separate spells for delivery with the B&B data. For NPSAS nonrespondents, the B&B interview collected enrollment up until the date of bachelor's degree completion. There may be multiple spells per institution to account for breaks. In most cases, any break in enrollment exceeding 4 months required multiple spells. If the student was a respondent to the base year interview, the base year enrollment spells were not collected during the B&B followup interview. Therefore, the base year enrollment spell was derived from the base year data in order for the B&B data file to include a comprehensive record of enrollment. In such cases, a separate enrollment spell has been created, and there may be cases in which respondents were continuously enrolled but their enrollment is reflected in 2 spells. This will not be an issue for NPSAS nonrespondents since all enrollment data were collected during the B&B interview, and enrollment gaps were split into separate spells accordingly. This is a 16 character string that has the following structure:

Columns    Contents

Columns	Contents
1-2	School index (1-11)
3-4	Start month
5-8	Start year
9-10	End month
11-14	End year
15-16	Any summer enrollment during the spell (1=Yes 0=No)

Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**ENRSPL02**

Undergraduate enrollment spell 2  
See ENRSPL01 for description.  
Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**ENRSPL03**

Undergraduate enrollment spell 3  
See ENRSPL01 for description.  
Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**ENRSPL04**

Undergraduate enrollment spell 4  
See ENRSPL01 for description.  
Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**ENRSPL05**

Undergraduate enrollment spell 5  
See ENRSPL01 for description.  
Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**ENRSPL06**

Undergraduate enrollment spell 6  
See ENRSPL01 for description.  
Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**ENRSPL07**

Undergraduate enrollment spell 7  
See ENRSPL01 for description.  
Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**ENRSPL08**

Undergraduate enrollment spell 8  
See ENRSPL01 for description.  
Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**ENRSPL09**

Undergraduate enrollment spell 9  
See ENRSPL01 for description.  
Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**ENRSPL10**

Undergraduate enrollment spell 10  
See ENRSPL01 for description.  
Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**ENRSPL11**

Undergraduate enrollment spell 11  
See ENRSPL01 for description.  
Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**ENRSPL12**

Undergraduate enrollment spell 12  
See ENRSPL01 for description.  
Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**ENRSPL13**

Undergraduate enrollment spell 13  
See ENRSPL01 for description.  
Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**FUTRSCH**

Future school flag  
A flag to identify the institution where the student plans to enroll for post-baccalaureate education, or where the student has applied for enrollment in post-baccalaureate education for the 2000/2001 academic year.  
Sources: B&B:2000/01 CATI



**PBSPEL01**

Post-baccalaureate enrollment spell 1  
A derived variable to indicate overall enrollment at each post-baccalaureate institution attended. The B&B interview collected information about post-baccalaureate enrollment, from the date of bachelor's degree completion into the future. There may be multiple spells per institution to account for breaks. Any break in enrollment exceeding 4 months required multiple spells. This is a 16 character string that has the following structure:  
Columns   Contents

1-2	School index (1-13)
3-4	Start month
5-8	Start year
9-10	End month
11-14	End year
15-16	Any summer enrollment during the spell (1=Yes 0=No)

Sources: B&B:2000/01 CATI

**PBSPEL02**

Post-baccalaureate enrollment spell 2  
See PBSPEL01 for description.  
Sources: B&B:2000/01 CATI

**PBSPEL03**

Post-baccalaureate enrollment spell 3  
See PBSPEL01 for description.  
Sources: B&B:2000/01 CATI

**PBSPEL04**

Post-baccalaureate enrollment spell 4  
See PBSPEL01 for description.  
Sources: B&B:2000/01 CATI

**PBAENRL**

Post-baccalaureate enrollment 99/00-00/01  
A derived variable to indicate yearly enrollment since completion of the bachelor's degree. This variable is a 2 character string which contains the following values:  
0 = Not enrolled during the academic year  
1 = 1 to 6 months of enrollment during the academic year  
2 = 7 or more months of enrollment during the academic year  
Sources: B&B:2000/01 CATI

**POSTBA1**

Post-baccalaureate school 1 flag  
A flag to identify the first post-baccalaureate institution attended.  
Sources: B&B:2000/01 CATI

**POSTBA2**

Post-baccalaureate school 2 flag  
A flag to identify the second post-baccalaureate institution attended.  
Sources: B&B:2000/01 CATI

**SCHENRL**

Undergraduate enrollment (80/81-99/00)  
A derived variable to indicate yearly enrollment up until completion of the bachelor's degree. This is a 19 character string which contains the following values:  
0 = Not enrolled during the academic year  
1 = 1 to 6 months of enrollment during the academic year  
2 = 7 or more months of enrollment during the academic year  
Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**SCHINDEX**

School index  
An index to identify institutions. There are 14 possible values. Values are:  
1-5 Institutions collected during the base-year interview and preloaded into the follow-up interview  
6-11 Institutions collected in the undergraduate history section of the CATI interview in Section B. This includes all schools attended up until the point of bachelor's degree completion  
12-13 Up to 2 post-baccalaureate institutions were collected in Section D of the CATI interview  
14 The institution where the respondent is planning to enroll for post-baccalaureate education  
Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**SCHIPEDS**

School IPEDS ID

A derived variable that is the school identification number from the U.S. Department of Education's IPEDS. May be preloaded or provided from IPEDS when the school is coded in B&B:2000/01 CATI. For schools that are uncodeable in the IPEDS user exit, the values indicate which piece of information is missing:

<999996> Foreign school

<999997> School name unknown

<999998> School city unknown

<999999> State unknown

Sources: IPEDS-IC, NPSAS:2000 CATI,  
B&B:2000/01 CATI

**SCHLEVEL**

School level

A derived variable that indicates the length of time it takes to complete the highest level of program offered by the school. May be preloaded or provided from the IPEDS when the school is coded in B&B:2000/01 CATI. If the school was uncodeable in IPEDS, the school level was keyed in B&B:2000/01 CATI. Values are:

<1> 4-year school

<2> 2-year school

<3> Less-than-2-year school

Sources: IPEDS-IC, NPSAS:2000 CATI,  
B&B:2000/01 CATI

**SCHCITY**

School city

City where the school is located. This may be preloaded or provided from the IPEDS. If the city was not available from IPEDS, the city was keyed in B&B:2000/01 CATI.

Sources: IPEDS-IC, NPSAS:2000 CATI,  
B&B:2000/01 CATI

**SCHCTRL**

School control

A derived variable that refers to the ownership of the school. Values are:

<1> Public

<2> Private not-for-profit

<3> Private for-profit

May be preloaded or provided from the IPEDS when the school is coded in B&B:2000/01 CATI. If the school was uncodeable in IPEDS, the school level was keyed in B&B:2000/01 CATI.

Sources: IPEDS-IC, NPSAS:2000 CATI,  
B&B:2000/01 CATI

**SCHNAME**

School name

May be preloaded or provided from IPEDS database. If school name was not available from the IPEDS, the school name was keyed in B&B:2000/01 CATI.

Sources: IPEDS-IC, NPSAS:2000 CATI,  
B&B:2000/01 CATI

**SCHSTATE**

School state

Two-letter code for the state where the school is located. This may be preloaded or provided from IPEDS. If the state was not available from the IPEDS, the school state was keyed in B&B:2000/01 CATI.

Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**SCHSEQ**

School sequence number

A derived variable indicating the chronological order of enrollment at all institutions attended. Schools are ordered by the date of first attendance. If date of first attendance is the same for multiple schools, then schools are ordered alphabetically.

Sources: B&B:2000/01 CATI

**SCHUC**

School upcode flag

Indicates cases where the school was uncodeable in the IPEDS user-exit, but was later coded in the editing process. The values are:

<0> No

<1> Yes

Sources: B&B:2000/01 CATI

**ZRID**

Case ID number

Sources: B&B:2000/01 CATI

**FRSTDATE**

Date of first attendance at each school  
This is a derived variable, taken from the enrollment spell strings collected in the enrollment user exits for both undergraduate history and post-baccalaureate education.  
Note: Date format is YYYYMM. Values of '-3' are listed for future schools because no enrollment dates were collected.  
Sources: B&B:2000/01 CATI

**HBCU**

Historically black institution  
Sources: IPEDS:1998

**ASIAN1**

Asian/Pacific Islander enrollment, all levels  
Sources: IPEDS:1998

**ASIAN2**

Asian/Pacific Islander full-time equivalent enrollment, all levels  
Sources: IPEDS:1998

**ASIAN3**

Asian/Pacific Islander undergraduate enrollment  
Sources: IPEDS:1998

**ASIAN4**

Asian/Pacific Islander undergraduate full-time equivalent enrollment  
Sources: IPEDS:1998

**ASIAN1P**

Asian/Pacific Islander percentage, all levels  
Sources: IPEDS:1998

**ASIAN2P**

Asian/Pacific Islander full-time equivalent percentage, all levels  
Sources: IPEDS:1998

**ASIAN3P**

Asian/Pacific Islander undergraduate percentage  
Sources: IPEDS:1998

**ASIAN4P**

Asian/Pacific Islander undergraduate full-time equivalent percentage  
Sources: IPEDS:1998

**BLACK1**

Black non-Hispanic enrollment, all levels  
Sources: IPEDS:1998

**BLACK2**

Black non-Hispanic full-time equivalent enrollment, all levels  
Sources: IPEDS:1998

**BLACK3**

Black non-Hispanic undergraduate enrollment  
Sources: IPEDS:1998

**BLACK4**

Black non-Hispanic undergraduate full-time equivalent enrollment  
Sources: IPEDS:1998

**BLACK1P**

Black non-Hispanic percentage, all levels  
Sources: IPEDS:1998

**BLACK2P**

Black non-Hispanic full-time equivalent percentage, all levels  
Sources: IPEDS:1998

**BLACK3P**

Black non-Hispanic undergraduate percentage  
Sources: IPEDS:1998

**BLACK4P**

Black non-Hispanic undergraduate full-time equivalent percentage  
Sources: IPEDS:1998

**GRFTE**

Graduate/first professional full-time equivalent enrollment  
Sources: IPEDS:1998

**GRTOTAL**

Graduate/first professional total enrollment  
Sources: IPEDS:1998

**HISPAN1**

Hispanic enrollment, all levels  
Sources: IPEDS:1998

**HISPAN2**

Hispanic full-time equivalent enrollment, all levels  
Sources: IPEDS:1998

**HISPAN3**

Hispanic undergraduate enrollment  
Sources: IPEDS:1998

**HISPAN4**

Hispanic undergraduate full-time equivalent enrollment  
Sources: IPEDS:1998

**HSIPCT1**

Hispanic percentage, all levels  
Sources: IPEDS:1998

**HSIPCT2**

Hispanic full-time equivalent percentage, all levels  
Sources: IPEDS:1998

**HSIPCT3**

Hispanic undergraduate percentage  
Sources: IPEDS:1998

**HSIPCT4**

Hispanic undergraduate full-time equivalent percentage  
Sources: IPEDS:1998

**HSITOT1**

Hispanic-serving institution  
Sources: IPEDS:1998

**HSIUG1**

Hispanic-serving undergraduate institution  
Sources: IPEDS:1998

**INDIAN1**

American Indian enrollment, all levels  
Sources: IPEDS:1998

**INDIAN2**

American Indian full-time equivalent enrollment, all levels  
Sources: IPEDS:1998

**INDIAN3**

American Indian undergraduate enrollment  
Sources: IPEDS:1998

**INDIAN4**

American Indian undergraduate full-time equivalent enrollment  
Sources: IPEDS:1998

**INDIAN1P**

American Indian percentage, all levels  
Sources: IPEDS:1998

**INDIAN2P**

American Indian full-time equivalent percentage, all levels  
Sources: IPEDS:1998

**INDIAN3P**

American Indian undergraduate percentage  
Sources: IPEDS:1998

**INDIAN4P**

American Indian undergraduate full-time equivalent percentage  
Sources: IPEDS:1998

**TOTALL**

Total enrollment, all levels  
Sources: IPEDS:1998

**TOTFTALL**

Total full-time equivalent enrollment, all levels  
Sources: IPEDS:1998

**TOTFTUG**

Total undergraduate full-time equivalent enrollment  
Sources: IPEDS:1998

**TOTUG**

Total undergraduate enrollment  
Sources: IPEDS:1998

## **CATI Facsimile**

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**ZRID**

Case ID number  
 Applies to: *All respondents.*  
 Sources: B&B:2000/01 CATI

**CABANPMY**

According to your school records, you were expected to complete a bachelor's degree from [YNPSCHL] sometime between July 1, 1999 and June 30, 2000. When did you complete your degree?

F5=RESPONDENT NEVER COMPLETED BACHELOR'S DEGREE AT NPSAS SCHOOL MONTH (1-12):  
 YEAR (1999-2000):

Applies to: *All respondents.*  
 Note: Date format is YYYYMM. If no month was given, the month was documented as 00.  
 Imputation Note: This variable was imputed from the preloaded variables (YBAMM and YBAYY)  
 Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**CABELG**

A flag to indicate B&B eligibility. Eligibility was determined in the base year interview for base-year respondents. Base-year non-respondents are determined to be B&B eligible if they completed a bachelor's degree at any time between July 1, 1999 and June 30, 2000.

0 = Not B&B eligible  
 1 = B&B eligible  
 Applies to: *All respondents.*  
 Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**CANPELG**

A flag to indicate NPSAS eligibility. Base year non-respondents are determined to be NPSAS eligible if they completed a bachelor's degree at any time between July 1, 1999 and June 30, 2000.

1 = NPSAS eligible  
 2 = Not NPSAS eligible  
 Applies to: *All respondents.*  
 Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**CBDIPL**

Did you...  
 1 = Receive a high school diploma,  
 2 = Pass a GED (General Educational Development) test, or  
 3 = Receive a high school completion certificate?  
 4 = ATTENDED FOREIGN HIGH SCHOOL  
 5 = DID NOT COMPLETE HIGH SCHOOL OR HIGH SCHOOL EQUIVALENCY PROGRAM  
 6 = HOME SCHOOLING

Applies to: *All respondents.*  
 Imputation Note: This variable was imputed from the preload (YNBDIPL). If there was a conflict between the preload and the value entered during the interview, the value entered during the interview is what is represented in the data.  
 Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**CBHSYR**

When did you receive your high school diploma/certificate?  
 YEAR RANGE (1930-1999)  
 Applies to: *All respondents.*  
 Imputation Note: This variable was imputed from the preload (YHSYY). If there was a conflict between the preload and the value entered during the interview, the value entered during the interview is what is represented in the data.  
 Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**CBHSTYP**

Was your high school public or private?  
 1 = PUBLIC  
 2 = PRIVATE  
 3 = ATTENDED FOREIGN SCHOOL  
 Applies to: *All respondents except those who attended a foreign high school or were home schooled. However, the preloaded value was imputed for some cases (see imputation note below).*  
 CATI CODE description: CBDIPL not = 4,6.  
 Imputation Note: This variable was imputed from the preload (YHSTYP). If there was a conflict between the preload and the value entered during the interview, the value entered during the interview is what is represented in the data.  
 Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

### **CBHSPRV**

Was your high school a Catholic school, other religious, or some other type of private school?

- 1 = CATHOLIC
- 2 = OTHER RELIGIOUS
- 3 = NO RELIGIOUS AFFILIATION

Applies to: *Respondents who attended a private high school. However, the preloaded value was imputed for some cases (see imputation note below).*

CATI CODE description: If (CBHSTYP not = 1 or 3) or (YHSTYP not = 3)

Imputation Note: This variable was imputed from the preload (YHSPRV). If there was a conflict between the preload and the value entered during the interview, the value entered during the interview is what is represented in the data.

Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

### **CBFSTBA**

Now I'd like to ask you some questions about your postsecondary enrollment after high school. Was the bachelor's degree you received from [bachelor's degree school] the first bachelor's degree you've ever received?

- 1 = YES
- 2 = NO

Applies to: *All respondents.*

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CBSCH1YY**

In what year did you first enroll at [first postsecondary institution attended]?

YYYY (1930-1999):

Applies to: *All respondents.*

Imputation Note: This variable was imputed from the preload (YNBS1).

Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

### **CBFSTMY**

In what month and year did you receive your first bachelor's degree?

Month (1-12):

Year (1930-2000):

Applies to: *All respondents.*

Imputation Note: This variable was imputed from the bachelor's degree date at NPSAS

(CABANPMY) for cases where the NPSAS bachelor's degree was the first ever received.

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

### **CBSCH1ST**

During your first year at [first postsecondary institution attended] were you a full-time or part-time student?

- 1 = FULL-TIME ONLY
- 2 = PART-TIME ONLY
- 3 = MIXED FULL-TIME/PART-TIME

Applies to: *Respondents who just completed their first bachelor's degree and enrolled in school during or after 1996.*

CATI CODE description: If CBFSTBA = 1 and (CBSCH1YY >= 1996 or CBSCH1YY = -1,-6)

Sources: B&B:2000/01 CATI

### **CBREM1**

During your first year, did you take any basic or remedial English or math courses that did not earn credit hours toward your degree?

- 1 = YES
- 2 = NO

Applies to: *Respondents who just completed their first bachelor's degree and enrolled in school during or after 1996.*

CATI CODE description: If CBFSTBA = 1 and (CBSCH1YY >= 1996 or CBSCH1YY = -1,-6)

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI



### CBAP

When you first enrolled in college, did you have any advanced placement credits that were accepted by [first postsecondary institution attended]? (By that I mean courses that you did not have to take because you scored high enough on a placement test.)

- 1 = YES
- 2 = NO

Applies to: *Respondents who just completed their first bachelor's degree and enrolled in school during or after 1996.*

CATI CODE description: If CBFSTBA = 1 and (CBSCH1YY >= 1996 or CBSCH1YY = -1,-6).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CBCOLCRD

While you were still in high school, did you take any college-level courses that counted towards your bachelor's degree?

- 1 = YES
- 2 = NO

Applies to: *Respondents who just completed their first bachelor's degree and enrolled in school during or after 1996.*

CATI CODE description: If CBFSTBA = 1 and (CBSCH1YY >= 1996 or CBSCH1YY = -1,-6).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CBRES1

Again, during your first year at [first postsecondary institution attended], did you live on campus, with your parents, or some place else?

IF MORE THAN ONE RESIDENCE, GIVE THE PLACE LIVED THE LONGEST

- 1 = ON-CAMPUS
- 2 = WITH PARENTS
- 3 = SOME PLACE ELSE (OFF CAMPUS)
- F5 = PARENTS DECEASED

Applies to: *Respondents who just completed their first bachelor's degree and enrolled in school during or after 1996.*

CATI CODE description: If CBFSTBA = 1 and (CBSCH1YY >= 1996 or CBSCH1YY = -1,-6)

Sources: B&B:2000/01 CATI

### CBMARR1

During your first year, what was your marital status? Were you...

IF RESPONSE IS "SINGLE," PROBE TO DETERMINE IF RESPONDENT HAD EVER BEEN MARRIED

- 1 = Single, never married
- 2 = Married
- 3 = Separated
- 4 = Divorced
- 5 = Widowed

Applies to: *Respondents who just completed their first bachelor's degree and enrolled in school during or after 1996.*

CATI CODE description: If CBFSTBA = 1 and (CBSCH1YY >= 1996 or CBSCH1YY = -1,-6)

Sources: B&B:2000/01 CATI

### CBDEPS1

At that time, did you have any children that you and your spouse supported financially?

- 1 = YES
- 2 = NO

Applies to: *Respondents who just completed their first bachelor's degree and enrolled in school during or after 1996.*

CATI CODE description: If CBFSTBA = 1 and (CBSCH1YY >= 1996 or CBSCH1YY = -1,-6)

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CBNUMDP1

How many (children were you and your spouse supporting financially during your first year)?

RANGE (1-9):

Applies to: *Respondents who just completed their first bachelor's degree and enrolled in school during or after 1996.*

CATI CODE description: If CBFSTBA = 1 and (CBSCH1YY >= 1996 or CBSCH1YY = -1,-6)

Imputation Note: If CBDEPS1 = 0 then set CBNUMDP1 = 0.

Sources: B&B:2000/01 CATI

### **CBHOURS**

About how many hours did you typically work each week for pay during your first year of college?

RANGE (0-80):

Applies to: *Respondents who just completed their first bachelor's degree and enrolled in school during or after 1996.*

CATI CODE description: If CBFSTBA = 1 and (CBSCH1YY >= 1996 or CBSCH1YY = -1,-6)

Sources: B&B:2000/01 CATI

### **CBONOFF**

Was your job on- or off-campus?

1 = ON-CAMPUS

2 = OFF-CAMPUS

3 = BOTH ON- AND OFF-CAMPUS

Applies to: *Respondents who just completed their first bachelor's degree and enrolled in school during or after 1996, and who worked their first year of college.*

CATI CODE description: If CBFSTBA = 1 and (CBSCH1YY >= 1996 or CBSCH1YY = -1,-6) and CBHOURS > 0 or CBHOURS = -1,- 2.

Sources: B&B:2000/01 CATI

### **CBPARTUI**

Did your parents or relatives pay for any of your tuition or fees for your first year in college?

1 = YES

2 = NO

F5 = PARENTS DECEASED

Applies to: *Respondents who just completed their first bachelor's degree and enrolled in school during or after 1996.*

CATI CODE description: If CBFSTBA = 1 and (CBSCH1YY >= 1996 or CBSCH1YY = -1,-6)

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CBGRANT1**

To help pay for your tuition and other education expenses during your first year, did you receive...

ENTER 1 = YES 2 = NO.

Any grants or scholarships?

Applies to: *Respondents who just completed their first bachelor's degree and enrolled in school during or after 1996.*

CATI CODE description: If CBFSTBA = 1 and (CBSCH1YY >= 1996 or CBSCH1YY = -1,-6)

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CBEMP1**

To help pay for your tuition and other education expenses during your first year, did you receive...  
Enter 1 = Yes 2 = No

Any kind of employer aid or tuition reimbursement?

Applies to: *Respondents who just completed their first bachelor's degree and enrolled in school during or after 1996.*

CATI CODE description: If CBFSTBA = 1 and (CBSCH1YY >= 1996 or CBSCH1YY = -1,-6)

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CBCRTAA**

Had you earned a certificate or an associate's degree before you started working on your bachelor's degree?

0 = NO

1 = CERTIFICATE

3 = ASSOCIATE'S DEGREE.

Applies to: *All respondents.*

Sources: B&B:2000/01 CATI

### **CBCRTMY**

In what month and year was that degree awarded?

Month (1-12):

Year (1930-2000):

Applies to: *Respondents who completed a certificate or associate's degree before beginning work on a bachelor's degree.*

CATI CODE description: If CBCRTAA = -1,1,3.

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Sources: B&B:2000/01 CATI

### CBOTHSCH

Other than [bachelor's degree school], did you attend any other colleges or postsecondary schools between the time you graduated from high school and the time you graduated from [bachelor's degree school]? Please include summer enrollment and any other classes you may have taken for credit.

1 = YES

2 = NO

Applies to: *All respondents.*

Imputation Note: if CBFSTBA = 0 then

CBOTHSCH = 1;

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CBOTSC2

Have you enrolled anywhere else (between high school and the time you graduated)? Please include summer enrollment and any other classes you may have taken for credit.

1 = YES

2 = NO

Applies to: *Respondents who attended more than one institution between high school and receiving bachelor's degree.*

CATI CODE description: If CBOTHSCH = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CBOTSC3

Have you enrolled anywhere else (between high school and the time you graduated)? Please include summer enrollment and any other classes you may have taken for credit.

1 = YES

2 = NO

Applies to: *Respondents who attended more than two institutions between high school and receiving bachelor's degree.*

CATI CODE description: If CBOTHSCH = 1 and CBOTSC2 = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CBOTSC4

Have you enrolled anywhere else (between high school and the time you graduated)? Please include summer enrollment and any other classes you may have taken for credit.

1 = YES

2 = NO

Applies to: *Respondents who attended more than three institutions between high school and receiving bachelor's degree.*

CATI CODE description: If CBOTHSCH = 1 and CBOTSC2 = 1 and CBOTSC3 = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CBOTSC5

Have you enrolled anywhere else (between high school and the time you graduated)? Please include summer enrollment and any other classes you may have taken for credit.

1 = YES

2 = NO

Applies to: *Respondents who attended more than four institutions between high school and receiving bachelor's degree.*

CATI CODE description: If CBOTHSCH = 1 and CBOTSC2 = 1 and CBOTSC3 = 1 and CBOTSC4 = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CBOTSC6

Have you enrolled anywhere else (between high school and the time you graduated)? Please include summer enrollment and any other classes you may have taken for credit.

1 = YES

2 = NO

Applies to: *Respondents who attended more than five institutions between high school and receiving bachelor's degree.*

CATI CODE description: If CBOTHSCH = 1 and CBOTSC2 = 1 and CBOTSC3 = 1 and CBOTSC4 = 1 and CBOTSC5 = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CBNUMSCH**

Total number of postsecondary institutions attended for undergraduate study until completion of the bachelor's degree in the 1999/2000 school year. This number includes institutions that were collected in the follow-up interview as well as institutions that were preloaded from the base-year interview. This is the total number of postsecondary institutions reported.  
Applies to: *All respondents.*

Note: Respondents to the abbreviated interview were not asked about undergraduate enrollment other than at the bachelor's degree school, so the average value of CBNUMSCH may be lower for those who completed the abbreviated interview than for those who completed the full interview.

Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

**CBMULTPL**

Undergrad multiple enrollment indicator  
Indicator of overlapping enrollment, which is defined as co-enrollment for a period greater than one month within the regular academic year (September-April). This is calculated in the enrollment user exit.

0 = Did not attend more than one school at the same time

1 = Attended more than one school at the same time

Applies to: *All respondents.*

Note: CBMULTPL does not reflect data for the 1999/2000 academic year for NPSAS respondents. The multiple enrollment indicator for NPSAS respondents is NAMLTSCHE and can be found in the NPSAS:2000 CATI file.

Sources: B&B:2000/01 CATI

**CBGAPMON**

Gap in enrollment greater than 4 months

A flag set in the enrollment user exit if there is ever a gap in undergraduate enrollment exceeding a period of 4 months.

Applies to: *All respondents.*

Sources: B&B:2000/01 CATI

**CBGAP2YR**

Gap in enrollment greater than or equal to 24 months

A flag set in the enrollment user exit if there is ever a gap in undergraduate enrollment exceeding a period of 24 months.

Applies to: *All respondents.*

Sources: B&B:2000/01 CATI

**CBTRNSCH**

Since you started college, you've enrolled at more than one school. Did you..

1 = Transfer between schools or

2 = Enroll at the other school(s) to take additional classes

3 = ENROLLED FOR ADDITIONAL DEGREE

4 = BOTH TRANSFERRED BETWEEN SCHOOLS AND TOOK ADDITIONAL CLASSES

5 = NONE OF THE ABOVE

Applies to: *Respondents who attended multiple schools.*

CATI CODE description: CBNUMSCH > 1.

Sources: B&B:2000/01 CATI

**CBTRNSFR**

Did you attempt to transfer any credits between schools?

1 = YES

2 = NO

Applies to: *Respondents who transferred institutions or enrolled at another institution take additional classes.*

CATI CODE description: CBNUMSCH > 1 and CBTRNSCH = 1,2,4.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CBTRNCRD**

Were all, some, or none of those credits accepted?

- 0 = NONE
- 1 = SOME
- 2 = ALL

Applies to: *Respondents who attempted to transfer credits.*

CATI CODE description: CBNUMSCH > 1 and  
CBTRNSCH = 1,2,4 and  
CBTRNSFR = 1.

Sources: B&B:2000/01 CATI

**CBTRNR1**

Why did you decide to transfer to another school?

COLLECT UP TO 3 RESPONSES. ENTER 0 FOR  
NO MORE.

- 1 = OFFERED DESIRED  
PROGRAM/COURSEWORK
- 2 = REPUTATION OF  
PROGRAM/FACULTY/SCHOOL
- 3 = AFFORDABLE/OTHER FINANCIAL  
REASONS
- 4 = ACADEMIC PROBLEMS ELSEWHERE
- 5 = EARN DEGREE/CERTIFICATE
- 7 = RETURNING TO PRIOR SCHOOL
- 8 = PREFERRED LOCATION
- 9 = PERSONAL/FAMILY REASONS
- 10 = OTHER

CBTRNR1 (CBTRNR2) (CBTRNR3)

Applies to: *Respondents who transferred between institutions and respondents who did not transfer between institutions and took additional classes.*

CATI CODE description: CBNUMSCH > 1 and  
CBTRNSCH = 1 and CBTRNSFR not = 0.

Sources: B&B:2000/01 CATI

**CBTRNR2**

See CBTRNR1 for description.

Applies to: *Respondents who transferred between institutions and respondents who did not transfer between institutions and took additional classes.*

CATI CODE description: CBNUMSCH > 1 and  
CBTRNSCH = 1 and  
CBTRNSFR not = 0.

Sources: B&B:2000/01 CATI

**CBTRNR3**

See CBTRNR1 for description.

Applies to: *Respondents who transferred between institutions and respondents who did not transfer between institutions and took additional classes.*

CATI CODE description: CBNUMSCH > 1 and  
CBTRNSCH = 1 and  
CBTRNSFR not = 0.

Sources: B&B:2000/01 CATI

**CB2YRS1**

Why did you enroll at [CBNAM2YR]?

COLLECT UP TO 3 RESPONSES. ENTER 0 FOR  
NO MORE.

- 1 = LEARN JOB SKILLS
- 2 = EARN DEGREE OR CERTIFICATE
- 3 = OFFERED DESIRED  
PROGRAM/COURSEWORK
- 4 = PREPARE FOR TRANSFER TO ANOTHER  
SCHOOL
- 5 = PERSONAL ENRICHMENT
- 6 = CONVENIENT LOCATION/SCHEDULE
- 7 = FINANCIAL REASONS
- 8 = RECEIVED FINANCIAL AID
- 9 = OFFERED LESS EXPENSIVE CLASSES
- 10 = OTHER

CB2YRS1 (CB2YRS2) (CB2YRS3)

Applies to: *Respondents who attended 2-year or less-than-2-year institutions.*

CATI CODE description: CAS1LEVL = 2,3 or  
CAS2LEVL = 2,3 or  
CAS3LEVL = 2,3 or  
CAS4LEVL = 2,3 or  
CAS5LEVL = 2,3 or  
CBLEVF = 2,3 or  
CBLEV1 = 2,3 or  
CBLEV2 = 2,3 or  
CBLEV3 = 2,3 or  
CBLEV4 = 2,3 or  
CBLEV5 = 2,3. or  
CBLEV6 = 2,3.

Sources: B&B:2000/01 CATI

**CB2YRS2**

See CB2YRS1 for description.

Applies to: *Respondents who attended 2-year or less-than-2-year institutions.*

CATI CODE description:

CAS1LEVL = 2,3 or

CAS2LEVL = 2,3 or

CAS3LEVL = 2,3 or

CAS4LEVL = 2,3 or

CAS5LEVL = 2,3 or

CBLEVF = 2,3 or

CBLEV1 = 2,3 or

CBLEV2= 2,3 or

CBLEV3 = 2,3 or

CBLEV4 = 2,3 or

CBLEV5 = 2,3. or

CBLEV6 = 2,3

Sources: B&B:2000/01 CATI

**CB2YRS3**

See CB2YRS1 for description.

Applies to: *Respondents who attended 2-year or less-than-2-year institutions.*

CATI CODE description:

CAS1LEVL = 2,3 or

CAS2LEVL = 2,3 or

CAS3LEVL = 2,3 or

CAS4LEVL = 2,3 or

CAS5LEVL = 2,3 or

CBLEVF = 2,3 or

CBLEV1 = 2,3 or

CBLEV2= 2,3 or

CBLEV3 = 2,3 or

CBLEV4 = 2,3 or

CBLEV5 = 2,3. or

CBLEV6 = 2,3

Sources: B&B:2000/01 CATI

**CBMLTS1**

According to the information you just gave me, you've attended more than one school at the same time. Could you tell me why you decided to enroll at more than one school?

COLLECT UP TO 3 RESPONSES. ENTER 0 FOR NONE, OR NO MORE.

1 = GET DONE SOONER

2 = TAKE EASIER CLASSES/FULFILL REQUIREMENTS

3 = BETTER CLASS SCHEDULE AT OTHER SCHOOL

4 = PREPARING TO TRANSFER TO/TRYING OUT ANOTHER SCHOOL

5 = TRYING PROGRAM/MAJOR NOT AVAILABLE AT CURRENT SCHOOL

6 = PARTICIPATED IN CONSORTIUM/TOOK CLASSES AT BRANCH CAMPUS

7 = TAKING EXTRA CLASSES NOT RELATED TO MY PROGRAM (PERSONAL ENRICHMENT)

8 = FINANCIAL REASONS

9 = OTHER

CBMLTS1 (CBMLTS2) (CBMLTS3)

Applies to: *Respondents who attended 3 or more institutions at the same time for a period of at least 2 months, and respondents who attended 2 institutions at the same time for a period of at least 2 months who did not attend a 2-year or less-than 2-year institution, and who did not transfer between institutions.*

CATI CODE description: (If CBNUMSCH > 2 and CBMULTPL = 1) or

If ((CBNUMSCH =2 and CBMULTPL = 1 and CBTRNSCH > 1) and

(CAS1LEVL not = 2,3 or CAS2LEVL not = 2,3 or CAS3LEVL not

= 2,3 or CAS4LEVL not = 2,3 or CAS5LEVL not = 2,3 or CBLEVF not

= 2,3 or CBLEV1 not = 2,3 or CBLEV2 not = 2,3 or CBLEV3 not = 2,3

or CBLEV4 not = 2,3 or CBLEV5 not = 2,3 or CBLEV6 not = 2,3))

Note: Respondents who attended a 2-year school or less-than-2-year school who attended more than one school were not asked this question to decrease respondent burden. These respondents were instead asked why they attended a 2-year school or less-than-2-year school (CB2YRS1, CB2YRS2, CB2YRS3). Respondents who attended two schools only because they transferred between schools were also not asked this question; they were asked why they transferred (CBTRNR1, CBTRNR2, CBTRNR3).

Sources: B&B:2000/01 CATI

**CBMLTS2**

See CBMLTS1 for description.

Applies to: *Respondents who attended 3 or more institutions at the same time for a period of at least 2 months, and respondents who attended 2 institutions at the same time for a period of at least 2 months who did not attend a 2-year or less-than 2-year institution, and who did not transfer between institutions.*

CATI CODE description: (If CBNUMSCH > 2 and CBMULTPL = 1) or

If ((CBNUMSCH = 2 and CBMULTPL = 1 and CBTRNSCH > 1) and (CAS1LEVL not = 2,3 or CAS2LEVL not = 2,3 or CAS3LEVL not = 2,3 or CAS4LEVL not = 2,3 or CAS5LEVL not = 2,3 or CBLEVF not = 2,3 or CBLEV1 not = 2,3 or CBLEV2 not = 2,3 or CBLEV3 not = 2,3 or CBLEV4 not = 2,3 or CBLEV5 not = 2,3 or CBLEV6 not = 2,3))

Note: Respondents who attended a 2-year school or less-than-2-year school who attended more than one school were not asked this question to decrease respondent burden. These respondents were instead asked why they attended a 2-year school or less-than-2-year school (CB2YRS1, CB2YRS2, CB2YRS3). Respondents who attended two schools only because they transferred between schools were also not asked this question; they were asked why they transferred (CBTRNR1, CBTRNR2, CBTRNR3).

Sources: B&B:2000/01 CATI

**CBMLTS3**

See CBMLTS1 for description.

Applies to: *Respondents who attended 3 or more institutions at the same time for a period of at least 2 months, and respondents who attended 2 institutions at the same time for a period of at least 2 months who did not attend a 2-year or less-than 2-year institution, and who did not transfer between institutions.*

CATI CODE description: (If CBNUMSCH > 2 and CBMULTPL = 1) or

If ((CBNUMSCH = 2 and CBMULTPL = 1 and CBTRNSCH > 1) and (CAS1LEVL not = 2,3 or CAS2LEVL not = 2,3 or CAS3LEVL not = 2,3 or CAS4LEVL not = 2,3 or CAS5LEVL not = 2,3 or CBLEVF not = 2,3 or CBLEV1 not = 2,3 or CBLEV2 not = 2,3 or CBLEV3 not = 2,3 or CBLEV4 not = 2,3 or CBLEV5 not = 2,3 or CBLEV6 not = 2,3))

Note: Respondents who attended a 2-year school or less-than-2-year school who attended more than one school were not asked this question to decrease respondent burden. These respondents were instead asked why they attended a 2-year school or less-than-2-year school (CB2YRS1, CB2YRS2, CB2YRS3). Respondents who attended two schools only because they transferred between schools were also not asked this question; they were asked why they transferred (CBTRNR1, CBTRNR2, CBTRNR3).

Sources: B&B:2000/01 CATI

**CBSTPR1**

According to the information you've given me, you took at least 2 years off from school. Why did you decide to take a break from school?

COLLECT UP TO 3 RESPONSES. ENTER 0 FOR NONE, OR NO MORE.

- 1 = ACADEMIC PROBLEMS
- 2 = TAKING TIME OFF FROM STUDIES
- 3 = CONFLICTS WITH JOB/MILITARY
- 4 = NEEDED TO WORK
- 5 = OTHER FINANCIAL REASONS
- 6 = CHANGE IN FAMILY STATUS (MARRIAGE, BABY, DEATH IN FAMILY)
- 7 = UNSURE OF FUTURE PLANS
- 8 = OTHER

CBSTPR1 (CBSTPR2) (CBSTPR3)

Applies to: *Respondents who took at least 2 years off from school.*

CATI CODE description: If CBGAP2YR = 1.

Sources: B&B:2000/01 CATI

**CBSTPR2**

See CBSTPR1 for description.

Applies to: *Respondents who took at least 2 years off from school.*

CATI CODE description: If CBGAP2YR = 1.

Sources: B&B:2000/01 CATI

**CBSTPR3**

See CBSTPR1 for description.

Applies to: *Respondents who took at least 2 years off from school.*

CATI CODE description: If CBGAP2YR = 1.

Sources: B&B:2000/01 CATI

**CBFAIL**

While you were in college.

ENTER 1 = YES 2= NO.

Did you ever have to withdraw from a course because you were failing it?

Applies to: *All respondents.*

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CBINCOMP**

While you were in college.

ENTER 1 = YES 2= NO.

Did you ever receive an incomplete grade in a course?

Applies to: *All respondents.*

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CBREPEAT**

While you were in college.

ENTER 1 = YES 2= NO.

Did you ever repeat a course to earn a higher grade?

Applies to: *All respondents.*

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CBHONORS**

While you were in college.

ENTER 1 = YES 2= NO.

When you graduated from [bachelor's degree school], did you receive any type of academic honors?

Applies to: *All respondents.*

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CBFORGN**

As an undergraduate, how many years of instruction did you have in a single foreign language?

INTERVIEWERS: ROUND UP TO NEXT HIGHEST YEAR

RANGE (0-10):

Applies to: *All respondents.*

Sources: B&B:2000/01 CATI

**CBFLUENT**

Are you fluent in any foreign languages?

1 = YES

2 = NO

Applies to: *All respondents.*

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI



### **CBUGLN**

My next few questions are about how you paid for your college education. Other than any money you may have borrowed from family or friends, how much did you borrow in education loans for your undergraduate education?

RANGE (\$0 - \$150,000):

Applies to: *All respondents.*

Sources: B&B:2000/01 CATI

### **CBDUGL**

How much of that amount was in federal education loans?

RANGE (\$0 - \$150,000):

ENTER F5 FOR ALL OF IT

Applies to: *All respondents.*

Imputation Note: If CBUGLN = 0 then CBDUGL = 0.

Sources: B&B:2000/01 CATI

### **CBFEDUGO**

How much of that amount do you still owe?

RANGE (\$0 - \$150,000):

ENTER F5 FOR ALL OF IT

Applies to: *All respondents.*

Imputation Note: If CBUGLN = 0 then CBFEDUGO = 0.

Sources: B&B:2000/01 CATI

### **CBFAMLN**

How much money have you borrowed from family and friends to pay for your undergraduate education?

PLEASE EXCLUDE ANY MONEY BORROWED FOR EDUCATION SINCE COLLEGE GRADUATION.

RANGE (\$0 - 100,000):

Applies to: *All respondents.*

Sources: B&B:2000/01 CATI

### **CBFAMO**

How much of that amount do you still owe?

ENTER F5 FOR ALL OF IT

RANGE (\$0 - \$100,000):

Applies to: *All respondents.*

Imputation Note: If CBFAMLN = 0 then CBFAMO = 0.

Sources: B&B:2000/01 CATI

### **CBREPAY**

Are you currently repaying any education loans other than to family and friends?

1 = YES

2 = NO

Applies to: *All respondents.*

Imputation Note: If CBUGLN = 0 then CBREPAY = 0.

Sources: B&B:2000/01 CATI

### **CBRPYAMT**

How much do you pay each month on your education loans?

RANGE (\$25 - \$9,999):

Applies to: *All respondents.*

Imputation Note: If CBUGLN = 0 then CBRPYAMT = 0. If CBREPAY = 0 then CBRPYAMT = 0.

Sources: B&B:2000/01 CATI

### **CBRPYPAR**

Are your parents helping you to repay your education loans?

1 = YES

2 = NO

F5 = PARENTS ARE DECEASED

Applies to: *Respondents under 30 and those whose parents were not deceased at the time of the NPSAS interview. However, some values were imputed (see imputation note below)*

CATI code description: If respondent's age was less than 30 and YPARST ne 3.

Imputation Note: If CBUGLN = 0 then CBRPYPAR = 0. If CBREPAY = 0 then CBRPYPAR = 0. If CBRPYAMT = 0 then CBRPYPAR = 0.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CBFRGVLN**

Are you participating in any type of loan forgiveness program? (By that I mean a program in which a portion of your education loan is repaid on your behalf in return for a commitment to teach, practice law or medicine, or to perform volunteer work or military service.)

1 = YES

2 = NO

Applies to: *All respondents.*

Imputation Note: If CBUGLN = 0 then CBFRGVLN = 0.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CBFGVTYP**

What type (of loan forgiveness program)?

1 = TEACHING

2 = VOLUNTEER SERVICE (PEACE CORPS, AMERICORPS, VISTA)

3 = LAW

4 = MEDICINE

5 = MILITARY

6 = RESEARCH (NIH)

7 = TECHNICAL

8 = OTHER, SPECIFY

Applies to: *Respondents with student loans who are participating in a loan forgiveness program.*

CATI CODE description: (CBUGLN > 0 or CBFAMLN > 0) and

CBFRGVLN not = 0.

Sources: B&B:2000/01 CATI

**CCCITZN**

Are you a U.S. citizen?

1 = YES - U.S. CITIZEN OR U.S. NATIONAL

2 = NO - RESIDENT ALIEN- PERMANENT RESIDENT OR OTHER ELIGIBLE NON-CITIZEN TEMPORARY RESIDENT'S CARD

3 = NO - STUDENT VISA - IN THE COUNTRY ON AN F1 OR F2 VISA OR ON A J1 OR J2 EXCHANGE VISITOR VISA.

Applies to: *All respondents.*

Sources: B&B:2000/01 CATI

**CCRELOC**

Do you live more than 50 miles from there now (that is, your residence when you last attended high school)?

1 = YES

2 = NO

Applies to: *All respondents.*

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CCRELO1**

Why did you decide to move away from where you last attended high school to where you are now?

COLLECT UP TO 3 RESPONSES. ENTER 0 FOR NO MORE.

1 = GOT JOB HERE

2 = BETTER JOB OPPORTUNITIES

3 = ATTENDING SCHOOL BEYOND

BACHELOR'S

4 = BE CLOSE TO FAMILY/FRIENDS

5 = GET AWAY FROM FAMILY/FRIENDS

6 = OTHER FAMILY REASONS

7 = CHANGE CLIMATES

8 = PREFER LOCATION

9 = BETTER QUALITY OF LIFE

10 = OTHER, SPECIFY

CCRELO1 (CCRELO2) (CCRELO3)

Applies to: *Respondents who live more than 50 miles from the area they lived before they started college.*

CATI CODE description: If CCRELOC = 1.

Sources: B&B:2000/01 CATI

**CCRELO2**

See CCRELO1 for description.

Applies to: *Respondents who live more than 50 miles from the area they lived before they started college.*

CATI CODE description: If CCRELOC = 1.

Sources: B&B:2000/01 CATI

**CCRELO3**

See CCRELO1 for description.

Applies to: *Respondents who live more than 50 miles from the area they lived before they started college.*

CATI CODE description: If CCRELOC = 1.

Sources: B&B:2000/01 CATI

### CCMILIT

Are you a veteran of the U.S. Armed Forces or currently serving in the Armed Forces, either on active duty or in the reserves?

- 0 = NO
- 1 = VETERAN
- 3 = ACTIVE DUTY
- 4 = RESERVES

Applies to: *U.S. citizens.*

CATI CODE description: If CCCITZN = 1.

Sources: B&B:2000/01 CATI

### CCVOTE

Are you registered to vote in U.S. elections?

- 1 = YES
- 2 = NO

Applies to: U.S. citizens.

CATI CODE description: If CCCITZN = 1.

Imputation Note: This variable was imputed from the preload (YVOTE).

Note: "No" response recoded from 2 to 0.

Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

### CCVTPRS

Did you vote in the 2000 presidential election?

- 1 = YES
- 2 = NO

Applies to: *All U.S. citizens excluding residents of Puerto Rico.*

CATI CODE description: CCCITZN = 1 and CCCURST not = 52.

Imputation Note: This variable was imputed from the preload (YVTPRS).

If YVTPRS = 1 then CCVTPRS = 1.

If YVTPRS = 2 then CCVTPRS = 0.

Note: "No" response recoded from 2 to 0.

Sources: NPSAS:2000 CATI, B&B:2000/01 CATI

### CCCOMSRV

In the past year, have you participated in any community service or volunteer work? Please exclude any court-ordered service you may have done.

- 1 = YES
- 2 = NO

Applies to: *All respondents.*

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CCVLHRS

On average, how many hours per month did you volunteer?

F5 = ONE TIME EVENT

RANGE (1-160):

Applies to: *All respondents.*

Imputation Note: If CCOMSRV = 0 then CCVLHRS = 0;

Sources: B&B:2000/01 CATI

### CCVLTY1

What did you do? (What was the community service or volunteer work that you did?)

NOTE: DO NOT INCLUDE DONATIONS

(BLOOD, FOOD, CLOTHING, MONEY, ETC.)

COLLECT UP TO 3 RESPONSES. ENTER 0 FOR NO MORE.

- 1 = TUTORING, OTHER EDUCATION-RELATED WITH KIDS
- 2 = OTHER WORK WITH KIDS (COACHING, SPORTS, BIG BROTHER/ SISTER ETC.)
- 3 = FUNDRAISING (NOT POLITICAL)
- 4 = FUNDRAISING (POLITICAL)
- 5 = HOMELESS SHELTER/SOUP KITCHEN
- 6 = TELEPHONE CRISIS CENTER/RAPE CRISIS/INTERVENTION
- 7 = NEIGHBORHOOD IMPROVEMENT/CLEAN-UP/HABITAT FOR HUMANITY
- 8 = HEALTH SERVICES/HOSPITAL, NURSING HOME, GROUP HOME
- 9 = ADULT LITERACY PROJECT
- 10 = SERVICE TO THE CHURCH
- 11 = VOLUNTEER FIRE/EMT
- 12 = OTHER

CCVLTY1 (CCVLTY2) (CCVLTY3)

Applies to: *Respondents who volunteered.*

CATI CODE description: If CCOMSRV = 1.

Sources: B&B:2000/01 CATI

### CCVLTY2

See CCVLTY1 for description.

Applies to: *Respondents who volunteered.*

CATI CODE description: If CCOMSRV = 1.

Sources: B&B:2000/01 CATI

### CCVLTY3

See CCVLTY1 for description.

Applies to: *Respondents who volunteered.*

CATI CODE description: If CCOMSRV = 1.

Sources: B&B:2000/01 CATI

### **CCVLFULL**

As a volunteer, were you working full time for a religious organization, or some other type of organization such as the Peace Corps, VISTA, or AmeriCorps?

- 1 = YES - RELIGIOUS ORGANIZATION
- 2 = YES - VOLUNTEER ORGANIZATION
- 3 = NO - R WAS NOT VOLUNTEERING FULL-TIME

Applies to: *Respondents who volunteer more than 120 hours per month.*

CATI CODE description: If CCCOMSRV = 1 and CCVLHRS >= 120.

Sources: B&B:2000/01 CATI

### **CCMAR**

Are you currently...

IF RESPONSE IS "SINGLE," PROBE TO DETERMINE IF RESPONDENT WAS EVER MARRIED.

- 1 = Single, never married
- 2 = Married
- 3 = Separated
- 4 = Divorced or
- 5 = Widowed

Applies to: All respondents.

Sources: B&B:2000/01 CATI

### **CCMARMY**

In what month and year were you [fill CCMAR]?

MONTH (1-12):

YEAR (1930-2001):

Applies to: *Respondents who are or have been married.*

CATI CODE description: If CCMAR > 1.

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Sources: B&B:2000/01 CATI

### **CCPRTNER**

I'd like to know who currently lives in your household -- I do not need to know their names, just the number of people and their relationship to you.

1=YES 2=NO

First, do you live with a spouse or partner?

Applies to: *All respondents.*

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CCCHILD**

I'd like to know who currently lives in your household -- I do not need to know their names, just the number of people and their relationship to you.

1=YES 2=NO

How many children or stepchildren live with you?

RANGE: (0-9):

Applies to: *All respondents.*

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CCPARENT**

I'd like to know who currently lives in your household -- I do not need to know their names, just the number of people and their relationship to you.

1=YES 2=NO

(How many) Parents, in-laws, stepparents, or guardians? RANGE (0-9):

Applies to: *All respondents.*

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CCSIB**

I'd like to know who currently lives in your household -- I do not need to know their names, just the number of people and their relationship to you.

1=YES 2=NO

(How many) Brothers or sisters?

RANGE (0-9):

Applies to: *All respondents.*

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CCOTREL**

I'd like to know who currently lives in your household--I do not need to know their names, just the number of people and their relationship to you.

1=YES 2=NO

(How many) Grandparents or other relatives?

RANGE (0-9):

Applies to: *All respondents.*

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CCFRND**

I'd like to know who currently lives in your household -- I do not need to know their names, just the number of people and their relationship to you.

1=YES 2=NO

(How many) Friends or other nonrelatives?

RANGE (0-9):

Applies to: *All respondents.*

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CCDEPS**

How many children do you or your spouse support financially?

RANGE (0-9):

Applies to: *All respondents.*

Sources: B&B:2000/01 CATI

**CCAGE1**

How old is that child/are those children?

IF MORE THAN 6 CHILDREN, COLLECT THE 6 YOUNGEST AGES. COLLECT AGE IN YEARS. ROUND UP TO NEXT HIGHEST YEAR

CCAGE1 (CCAGE2) (CCAGE3) (CCAGE4) (CCAGE5) (CCAGE6)

Applies to: *Respondents with at least one dependent child.*

CATI CODE description: If CCDEPS > 0.

Sources: B&B:2000/01 CATI

**CCAGE2**

See CCAGE1 for description.

Applies to: *Respondents with more than one dependent child.*

CATI CODE description: If CCDEPS > 1.

Sources: B&B:2000/01 CATI

**CCAGE3**

See CCAGE1 for description.

Applies to: *Respondents with more than two dependent children.*

CATI CODE description: If CCDEPS > 2.

Sources: B&B:2000/01 CATI

**CCAGE4**

See CCAGE1 for description.

Applies to: *Respondents with more than three dependent children.*

CATI CODE description: If CCDEPS > 3.

Sources: B&B:2000/01 CATI

**CCAGE5**

See CCAGE1 for description.

Applies to: *Respondents with more than four dependent children.*

CATI CODE description: If CCDEPS > 4.

Sources: B&B:2000/01 CATI

**CCAGE6**

See CCAGE1 for description.

Applies to: *Respondents with more than five dependent children.*

CATI CODE description: If CCDEPS > 5.

Sources: B&B:2000/01 CATI

**CCSPSEMP**

Did your spouse work for pay in (calendar year) 2000?

1 = YES

2 = NO

Applies to: *All married respondents.*

CATI CODE description: If CCMAR = 2.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CCINCS00**

How much did your spouse earn from work in 2000?

RANGE (\$1 - \$3,000,000):

Applies to: *All married respondents.*

CATI CODE description: If CCMAR = 2.

Imputation Note: If CSPSEMP = 0 then

CCINCS00 = 0.

Sources: B&B:2000/01 CATI

**Appendix C**  
**Facsimile Instruments**  
**CATI Facsimile**

**CCSPSED**

What is the highest level of education your spouse has completed?

- 1 = DID NOT COMPLETE HIGH SCHOOL
- 2 = HIGH SCHOOL DIPLOMA OR EQUIVALENT
- 3 = VOCATIONAL/TECHNICAL TRAINING
- 4 = LESS THAN 2 YEARS OF COLLEGE
- 5 = TWO OR MORE YEARS OF COLLEGE/ASSOCIATE'S DEGREE
- 6 = BACHELOR'S DEGREE
- 7 = MASTER'S DEGREE OR EQUIVALENT
- 8 = MD, LLB, JD OR OTHER ADVANCED DEGREE
- 9 = PHD OR EQUIVALENT

Applies to: *All married respondents.*

CATI CODE description: If CCMAR = 2.

Sources: B&B:2000/01 CATI

**CCSPED**

Was your spouse enrolled in college or graduate school during the 2000-2001 school year?  
IF YES PROBE TO FIND OUT IF FULL-TIME OR PART-TIME.

- 0 = NO
- 1 = YES FULL-TIME
- 3 = YES PART-TIME
- 4 = YES MIXED ENROLLMENT

Applies to: *All married respondents.*

CATI CODE description: If CCMAR = 2.

Sources: B&B:2000/01 CATI

**CCSPAID**

Has your spouse ever taken out any student loans to help pay for his/her undergraduate education?

- 1 = YES
- 2 = NO

Applies to: *Married respondents whose spouse has had some postsecondary education.*

CATI CODE description: If CCMAR = 2 and CCSPSED > 2.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CCSPLO**

Excluding any money borrowed from family or friends, how much did he/she borrow in student loans for his/her undergraduate education?

RANGE (\$50 - \$150,000):

Applies to: *Married respondents whose spouse has had some postsecondary education.*

CATI CODE description: If CCMAR = 2 and CCSPSED > 2.

Imputation Note: If CCSPAID = 0 then

CCSPLO = 0.

Sources: B&B:2000/01 CATI

**CCSPOWE**

How much of that amount does your spouse still owe?

F5 = ALL OF IT

RANGE (\$0 - \$150,000):

Applies to: *Married respondents whose spouse has had some postsecondary education.*

CATI CODE description: If CCMAR = 2 and CCSPSED > 2.

Imputation Note: If CCSPAID = 0 then

CCSPOWE = 0.

Sources: B&B:2000/01 CATI

**CCSPRPY**

Is your spouse currently repaying his/her student loans?

- 1 = YES
- 2 = NO

Applies to: *Married respondents whose spouse has had some postsecondary education.*

CATI CODE description: If CCMAR = 2 and CCSPSED > 2.

Imputation Note: If CCSPAID = 0 then

CCSPRPY = 0. If CCSPOWE = 0 then

CCSPRPY = 0.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CCSPAMT

What is your spouse's monthly student loan payment?

RANGE (\$25 - \$600):

Applies to: *Married respondents whose spouse has had some postsecondary education.*

CATI CODE description: If CCMAR = 2 and CCSPSED > 2.

Imputation Note: If CCSPAID = 0 then

CCSPAMT = 0. If CCSPOWE = 0 then

CCSPAMT = 0. If CCSPRPY = 0 then

CCSPAMT = 0.

Sources: B&B:2000/01 CATI

### CCCAR

Do you or your spouse make loan or lease payments for a car, truck, motorcycle, or other vehicle?

1 = YES

2 = NO

Applies to: *All respondents.*

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CCCARPMT

How much do you or your spouse pay for your auto loan or lease each month?

IF R DOESN'T KNOW, ASK R TO TRY TO ESTIMATE A MONTHLY PAYMENT.

USE F3 ONLY IF R CANNOT MAKE AN ESTIMATE.

IF MORE THAN ONE CAR PAYMENT, REPORT TOTAL AMOUNT PAID FOR ALL CAR LOANS/LEASES.

RANGE (\$100 - \$4,999):

Applies to: *All respondents.*

Imputation Note: If CCCAR = 0 then CCARPMT = 0.

Sources: B&B:2000/01 CATI

### CCHOME

Do you own your home or are you paying rent?

0 = NEITHER OWNS HOME NOR PAYS RENT

1 = OWNS HOME

2 = PAYS RENT

Applies to: *All respondents.*

Sources: B&B:2000/01 CATI

### CCMTGAMT

How much is your monthly mortgage/rent payment?

RANGE (\$0 - \$9,999):

Applies to: *All respondents.*

Imputation Note: If CCHOME = 0 then

CCMTGAMT = 0.

Sources: B&B:2000/01 CATI

### CCHSTYP

What type of housing arrangement do you have?

1 = LIVES WITH PARENTS/OTHER

RELATIVES/FRIENDS

2 = MILITARY

3 = JOB INCLUDES HOUSING (NON-MILITARY)

4 = RELIGIOUS HOUSING

(SEMINARY/CONVENT ETC.)

5 = OTHER

Applies to: *Respondents who neither own a home nor pay rent.*

CATI CODE description: If CCHOME = 0.

Sources: B&B:2000/01 CATI

### CCNUMCRD

How many credit cards do you or your spouse have in your own name(s), that are billed to you?

NOTE: DETERMINE THE NUMBER OF CREDIT CARDS THE RESPONDENT AND HIS/HER SPOUSE ARE RESPONSIBLE FOR.

RANGE (0-20):

Applies to: *All respondents.*

Sources: B&B:2000/01 CATI

### CCPAYOFF

Do you usually pay off your credit card balances each month, or carry balances over from month to month?

1 = PAYOFF BALANCES

2 = CARRY BALANCES.

Applies to: *Respondents with credit cards.*

CATI CODE description: If CCNUMCRD > 0.

Sources: B&B:2000/01 CATI

**CCCRDBAL**

What was the total balance on all cards according to your last statement?

RANGE (\$10 - \$125,000):

Applies to: *All respondents.*

Imputation Note: If CCNUMCRD = 0 or

CCPAYOFF = 0 then CCCRDBAL = 0.

Sources: B&B:2000/01 CATI

**CDPSTGRD**

Now I'd like to ask you some questions about your education since earning your bachelor's degree from [bachelor's degree school]. Since completing your bachelor's degree, have you enrolled in, or recently completed, an undergraduate, graduate, or professional degree or certificate program?

IF R HAS JUST TAKEN CLASSES WITHOUT BEING ENROLLED, ANSWER "NO."

1 = YES

2 = NO

F5 = RESPONDENT HAS BEEN ACCEPTED TO A PROGRAM THAT HAS NOT STARTED YET

Applies to: *All respondents.*

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CDCUGR1**

Are you currently enrolled in an undergraduate, graduate, or professional degree or certificate program?

1 = YES

2 = NO

Applies to: *All respondents.*

Imputation Note: If CDPSTGRD = 0 then

CDCUGR1 = 0. If CDPSTGRD = -5

then CDCUGR1 = 0.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CDDEG1**

What degree or certificate are/were you working on there?

UNDERGRADUATE:

1 = CERTIFICATE

2 = ASSOCIATE's DEGREE (AS, AA)

3 = SECOND BACHELOR's DEGREE (BA, BS, BFA, etc.)

GRADUATE:

5 = POST-BACCALAUREATE CERTIFICATE

6 = MASTER's DEGREE (MA, MS, MBA, MFA, MDIV, etc.)

7 = DOCTORAL/PROFESSIONAL DEGREE (PHD, EDD, JD, MD, DDS, etc.)

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5.

Sources: B&B:2000/01 CATI

**CDMSTR1**

What type of master's degree are/were you working on?

1 = MBA-BUSINESS ADMINISTRATION

2 = MS - SCIENCE

3 = MA - ARTS

4 = M.ED - EDUCATION

5 = MPA - PUBLIC ADMINISTRATION

6 = MLS - LIBRARY SCIENCE

7 = MPH - PUBLIC HEALTH

8 = MFA - FINE ARTS

9 = MAA - APPLIED ARTS

10 = MAT - TEACHING

11 = M.DIV - DIVINITY

12 = MSW - SOCIAL WORK

13 = LANDSCAPE ARCHITECTURE

14 = PROFESSIONAL MANAGEMENT

15 = OTHER MASTER'S

Applies to: *Respondents who have enrolled in, been accepted to, or completed a master's degree program.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDDEG1 = 6.

Sources: B&B:2000/01 CATI



### CDPHD1

What doctoral or professional degree are/were you working on?

- 16 = PHD
- 17 = ED.D - EDUCATION
- 18 = THD - THEOLOGY
- 19 = DBA - BUSINESS ADMIN
- 20 = D.ENG - ENGINEERING
- 21 = DFA - FINE ARTS
- 22 = DPA - PUBLIC ADMIN
- 23 = DSC/SCD - SCIENCE
- 24 = PSYD - PSYCHOLOGY
- 25 = THEOLOGY (D.MIN)
- 26 = CHIROPRACTIC (DC, DCM)
- 27 = DENTISTRY (DDS, DMD)
- 28 = MEDICINE (MD)
- 29 = OPTOMETRY (OD)
- 30 = OSTEOPATHIC MEDICINE (DO)
- 31 = PHARMACY (PHARM.D)
- 32 = PODIATRY (DPM, POD. D)
- 33 = VETERINARY MEDICINE (DVM)
- 34 = LAW (LLB, JD)
- 35 = OTHER DOCTORAL DEGREE

Applies to: *Respondents who have enrolled in, been accepted to, or completed a doctoral or professional degree program.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDDEG1 = 7.

Sources: B&B:2000/01 CATI

### CDDBLM1

What will be your primary major or program of study?  
CDDBLM1

What will be your secondary major? (CDDBMS1)  
Applies to: *Respondents who have enrolled in, or recently completed an undergraduate, graduate, or professional degree or certificate program since earning a bachelor's degree, who indicated a double major.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDDBMJ1 = 1.

Note: CDDBMJ1 is an internal variable that indicates double major.

Sources: B&B:2000/01 CATI

### CDDBMS1

See CDDBLM1 for description.

Applies to: *Respondents who have enrolled in, or recently completed an undergraduate, graduate, or professional degree or certificate program since earning a bachelor's degree, who indicated a double major.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDDBMJ1 = 1.

Note: CDDBMJ1 is an internal variable that indicates double major.

Sources: B&B:2000/01 CATI

### CDMJCD1

Postbaccalaureate major code-degree 1.

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5.

Note: If CDFLD1 = undeclared then

CDMJCD1 = 900. All uncodeables were coded to -6.

Sources: B&B:2000/01 CATI

### CDMJSR1

Postbaccalaureate major 1-row string.

Applies to: *Respondents who have enrolled in, or recently completed an undergraduate, graduate, or professional degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5.

Sources: B&B:2000/01 CATI

### CDMJST1

Postbaccalaureate major 1-standard string.

Applies to: *Respondents who have enrolled in an undergraduate, graduate, or professional degree or certificate program since earning a bachelor's degree.*

Sources: B&B:2000/01 CATI

**CDENST1**

While working on your [CDDEG1] at [CDSCH1], have you been /were you enrolled mainly as a full-time or part-time student?

- 1 = MOSTLY FULL-TIME
- 2 = MOSTLY PART-TIME
- 3 = MIX OF FULL- AND PART-TIME

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: CDPSTGRD = 1,-5.  
Sources: B&B:2000/01 CATI

**CDRSN1A**

Why did you decide to pursue a [CDDEG1](at [CDSCH1]) after earning your bachelor's degree?

ENTER 0 FOR NO MORE.

- 1 = REQUIRED/RECOMMENDED FOR CAREER CHOICE
- 2 = REQUIRED/RECOMMENDED FOR CAREER ADVANCEMENT
- 3 = UNDECIDED ABOUT CAREER
- 4 = NO JOB PROSPECTS
- 5 = ACADEMIC/PERSONAL INTEREST
- 6 = AVAILABILITY OF AID
- 7 = URGED BY PARENTS/FACULTY/OTHERS
- 8 = MARKETABILITY/FINANCIAL GAIN (MONEY)
- 9 = OTHER

CDRSN1A (CDRSN1B) (CDRSN1C)

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5.  
Sources: B&B:2000/01 CATI

**CDRSN1B**

See CDRSN1A for description.

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5.  
Sources: B&B:2000/01 CATI

**CDRSN1C**

See CDRSN1A for description.

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDRSN1B > 0.

Sources: B&B:2000/01 CATI

**CDCMPL1**

Have you already completed your [CDDEG1]?

- 1 = YES
- 2 = NO

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1.

Note: "No" response recoded from 2 to 0.

Imputation Note: If CDCUGR1=1 then CDCMPL1=0. If CDPSTGRD = -5 then CDCUGR1 = 0.

Sources: B&B:2000/01 CATI

**CDEXPLMY**

In what month and year do you expect to complete your [CDDEG1]?

F5 = RESPONDENT DOES NOT EXPECT TO COMPLETE THIS DEGREE

Month (1-12):

Year (2001-2010):

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and (CDCUGR1 = 1,-1,-2 or (CDCUGR1 = 0 and CDCMPL1 = 0,-1,-3))

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Imputation Note: If CDSCH1 = -1,-2 and CDCUGR1 not = 1 then CDCMPL1 = -1. If CDRSN1A = -2,-1 and CDCUGR1 not = 1 then CDCMPL1 = -1.

If respondent indicated on this question he/she does not expect to complete his/her degree CDEXPLMY = -5.

Sources: B&B:2000/01 CATI

### CDDATLMY

In what month and year did you complete your [CDDEG1]?

Month (1-12):

Year (1999-2001):

Applies to: *Respondents who have completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1 and CDCUGR1 not = 1 and CDCMPL1 = 1.

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Sources: B&B:2000/01 CATI

### CDSTULNS

Have you received any of the following types of financial aid?

ENTER 1=YES 2=NO

1 = Student loans?

[endif]

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CDOTLNS

Have you received any of the following types of financial aid?

Other bank loans?

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CDGRTSC

Have you received any of the following types of financial aid?

Grants or scholarships?

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CDFELLOW

Have you received any of the following types of financial aid?

4 = Fellowships?

[if CDDEG1 ne <1> and CDDEG1 ne <2> and CDDEG1 ne <3>].

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CDTEACH

Have you received any of the following types of financial aid?

5 = A teaching assistantship?

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5.

Imputation Note: If CDDEG1 = 1,2,3 then CDTEACH = 0.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CDRESEAR

Have you received any of the following types of financial aid?

6 = A research assistantship?

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5.

Imputation Note: If CDDEG1 = 1,2,3 then CDRESEAR = 0.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CDOTASST**

Have you received any of the following types of financial aid?

Any other type of graduate assistantship?

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5.

Imputation Note: If CDDEG1 = 1,2,3 then CDOTASST = 0.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CDTUITRM**

Have you received any of the following types of financial aid?

Tuition reimbursement from your employer?

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CDGIFT**

Have you received any of the following types of financial aid?

A personal loan or gift from your family or other individual?

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CDOTAID**

Have you received any of the following types of financial aid?

10 = Any other financial aid?

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CDWRKH1**

About how many hours per week do/did you work for pay when you were last enrolled at [CDSCH1]

RANGE (0-90):

Applies to: *Respondents who have enrolled in or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1.

Sources: B&B:2000/01 CATI

**CDWRKS1**

While you are/were enrolled and working, would you say you are/were primarily...

1 = A student working to meet expenses or

2 = An employee who decided to enroll in school?

Applies to: *Respondents who have enrolled in, or recently completed an undergraduate, graduate, or professional degree or certificate program since earning a bachelor's degree, and who worked while enrolled.*

CATI CODE description: If CDPSTGRD = 1 and

CDWRKH1 > 0.

Sources: B&B:2000/01 CATI

**CDOTHGRD**

Since completing your bachelor's degree (at [bachelor's degree school]), have you enrolled in, or recently completed, any other undergraduate, graduate, or professional degree or certificate program?

IF R HAS JUST TAKEN CLASSES WITHOUT BEING ENROLLED, ANSWER "NO."

1 = YES

2 = NO

Applies to: *All respondents.*

Imputation Note: If CDPSTGRD = 0 then

CDOTHGRD = 0.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

## CDCUGR2

Are you currently enrolled in another undergraduate, graduate, or professional degree or certificate program?

- 1 = YES
- 2 = NO

Applies to: *All respondents.*

Imputation Note: If CDOTHGRD = 0 then CDCUGR2 = 0. If CDPSTGRD = 0 then CDCUGR2 = 0.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

## CDDEG2

What degree or certificate are/were you working on there?

UNDERGRADUATE:

- 1 = CERTIFICATE
- 2 = ASSOCIATE's DEGREE (AS, AA)
- 3 = SECOND BACHELOR's DEGREE (BA, BS, BFA, etc.)

GRADUATE:

- 5 = POST-BACCALAUREATE CERTIFICATE
- 6 = MASTER's DEGREE (MA, MS, MBA, MFA, MDIV, etc.)
- 7 = DOCTORAL/PROFESSIONAL DEGREE (PHD, EDD, JD, MD, DDS, etc.)

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1.

Sources: B&B:2000/01 CATI

## CDMSTR2

What type of master's degree are/were you working on?

- 1 = MBA - BUSINESS ADMINISTRATION
- 2 = MS - SCIENCE
- 3 = MA - ARTS
- 4 = M.ED - EDUCATION
- 5 = MPA - PUBLIC ADMINISTRATION
- 6 = MLS - LIBRARY SCIENCE
- 7 = MPH - PUBLIC HEALTH
- 8 = MFA - FINE ARTS
- 9 = MAA - APPLIED ARTS
- 10 = MAT - TEACHING
- 11 = M.DIV - DIVINITY
- 12 = MSW - SOCIAL WORK
- 13 = LANDSCAPE ARCHITECTURE
- 14 = PROFESSIONAL MANAGEMENT
- 15 = OTHER MASTER'S

Applies to: *Respondents who have enrolled in, been accepted to, or completed a master's degree program.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1 and CDDEG2 = 6.

Sources: B&B:2000/01 CATI

## CDPHD2

What doctoral or professional degree are/were you working on?

- 16 = PHD
- 17 = ED.D - EDUCATION
- 18 = THD - THEOLOGY
- 19 = DBA - BUSINESS ADMIN
- 20 = D.ENG - ENGINEERING
- 21 = DFA - FINE ARTS
- 22 = DPA - PUBLIC ADMIN
- 23 = DSC/SCD - SCIENCE
- 24 = PSYD - PSYCHOLOGY
- 25 = THEOLOGY (D.MIN)
- 26 = CHIROPRACTIC (DC, DCM)
- 27 = DENTISTRY (DDS, DMD)
- 28 = MEDICINE (MD)
- 29 = OPTOMETRY (OD)
- 30 = OSTEOPATHIC MEDICINE (DO)
- 31 = PHARMACY (PHARM.D)
- 32 = PODIATRY (DPM, POD. D)
- 33 = VETERINARY MEDICINE (DVM)
- 34 = LAW (LLB, JD)
- 35 = OTHER DOCTORAL DEGREE

Applies to: *Respondents who have enrolled in, been accepted to, or completed a doctoral or professional degree program.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1 and CDDEG2 = 7.

Sources: B&B:2000/01 CATI

**CDDBLM2**

What will be your primary major or program of study?

CDDBLM2

What will be your secondary major?

(CDDBMS2)

Applies to: *Respondents who have enrolled in a second undergraduate, graduate, or professional degree or certificate program since earning a bachelor's degree, who have a double major.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1 and (CDFLD2 = F5 (F5 = Doublemajor) and CDDBMJ2 = 1).

Note: CDDBMJ2 is an internal variable that indicates double major.

Sources: B&B:2000/01 CATI

**CDDBMS2**

See CDDBLM2 for description.

Applies to: *Respondents who have enrolled in a second undergraduate, graduate, or professional degree or certificate program since earning a bachelor's degree, who have a double major.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1 and CDDBMJ2 = 1).

Note: CDDBMJ2 is an internal variable that indicates double major.

Sources: B&B:2000/01 CATI

**CDMJCD2**

Postbaccalaurate major code-degree 2.

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1.

Sources: B&B:2000/01 CATI

**CDMJSR2**

Postbaccalaurate major 2-row string.

Applies to: *Respondents who have enrolled in second undergraduate, graduate, or professional degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1.

Sources: B&B:2000/01 CATI

**CDMJST2**

Postbaccalaurate major 2-std string.

Applies to: *Respondents who have enrolled in second undergraduate, graduate, or professional degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1.

Sources: B&B:2000/01 CATI

**CDENST2**

While working on your [CDDEG2] at [CDSCH2], have you been /were you enrolled mainly as a full-time or part-time student?

1 = MOSTLY FULL-TIME

2 = MOSTLY PART-TIME

3 = MIX OF FULL- AND PART-TIME

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1.

Sources: B&B:2000/01 CATI

**CDRSN2A**

Why did you decide to pursue a [CDDEG2] (at [CDSCH2]) after earning your bachelor's degree? ENTER 0 FOR NO MORE.

1 = REQUIRED/RECOMMENDED FOR CAREER CHOICE

2 = REQUIRED/RECOMMENDED FOR CAREER ADVANCEMENT

3 = UNDECIDED ABOUT CAREER

4 = NO JOB PROSPECTS

5 = ACADEMIC/PERSONAL INTEREST

6 = AVAILABILITY OF AID

7 = URGED BY PARENTS/FACULTY/OTHERS

8 = MARKETABILITY/FINANCIAL GAIN (MONEY)

9 = OTHER

CDRSN2A (CDRSN2B) (CDRSN2C)

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1.

Sources: B&B:2000/01 CATI

### CDRSN2B

See CDRSN2A for description.

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1.

Sources: B&B:2000/01 CATI

### CDRSN2C

See CDRSN2A for description.

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1 and CDRSN2B > 0.

Sources: B&B:2000/01 CATI

### CDCMPL2

Have you already completed your [CDDEG2]?

1 = YES

2 = NO

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1.

Note: "No" response recoded from 2 to 0.

Imputation Note: If CDCUGR2=1 then CDCMPL2=0.

Sources: B&B:2000/01 CATI

### CDEXP2MY

In what month and year do you expect to complete your [CDDEG2]?

F5 = RESPONDENT DOES NOT EXPECT TO COMPLETE THIS DEGREE

Month (1-12):

Year (2001-2010):

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1 and (CDCUGR2 = 1 or (CDCUGR2 = 0 and CDCMPL2 = 0,-1,-3)).

Imputation Note: If respondent indicated on this question he/she does not expect to complete his/her degree CDEXP2MY = -3.

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Sources: B&B:2000/01 CATI

### CDDAT2MY

In what month and year did you complete your [CDDEG2]?

Month (1-12):

Year (1999-2001):

Applies to: *Respondents who have completed their second degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1 and CDCUGR2 not = 1 and CDCMPL2 = 1.

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Imputation Note: If CDEXP2MY = -2,-1 then CDDAT2MY = -1.

Sources: B&B:2000/01 CATI

### CDSTUL2

Have you received any of the following types of financial aid?

ENTER 1=YES 2=NO.

1 = Student loans?

[if CDDEG2 ne <1> and CDDEG2 ne <2> and CDDEG2 ne <3>]

[endif]

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CDOTLN2

Have you received any of the following types of financial aid?

ENTER 1=YES 2=NO.

Other bank loans?

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**Appendix C**  
**Facsimile Instruments**  
**CATI Facsimile**

**CDGRTS2**

Have you received any of the following types of financial aid?

ENTER 1=YES 2=NO.

Grants or scholarships?

*Applies to: Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CDFELL2**

Have you received any of the following types of financial aid?

ENTER 1=YES 2=NO.

Fellowships?

*Applies to: Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CDTEAC2**

Have you received any of the following types of financial aid?

ENTER 1=YES 2=NO.

A teaching assistantship?

*Applies to: Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1.

Note: "No" response recoded from 2 to 0.

Imputation Note: If CDDEG2 = 1,2,3 then CDTEAC2 = 0.

Sources: B&B:2000/01 CATI

**CDRESE2**

Have you received any of the following types of financial aid?

ENTER 1=YES 2=NO.

A research assistantship?

*Applies to: Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1.

Imputation Note: If CDDEG2 = 1,2,3 then CDRESE2 = 0.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CDOTAS2**

Have you received any of the following types of financial aid?

ENTER 1=YES 2=NO.

Any other type of graduate assistantship?

*Applies to: Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1.

Imputation Note: If CDDEG2 = 1,2,3 then CDOTAS2 = 0.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CDTUIT2**

Have you received any of the following types of financial aid?

ENTER 1=YES 2=NO.

Tuition reimbursement from your employer?

*Applies to: Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI



### CDGIFT2

Have you received any of the following types of financial aid?

ENTER 1=YES 2=NO.

A personal loan or gift from your family or other individual?

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CDOTAI2

Have you received any of the following types of financial aid?

ENTER 1=YES 2=NO.

Any other financial aid?

Applies to: *Respondents who have enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CDWRKH2

About how many hours per week do/did you work for pay when you were last enrolled at [CDSCH2]?

NOTE: WHILE WORKING ON [CDDEG2]

RANGE (0-90):

Applies to: *Respondents who have enrolled in, been accepted to, or completed more than one degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1.

Sources: B&B:2000/01 CATI

### CDWRKS2

While you are/were enrolled and working, would you say you are/were primarily...

1 = A student working to meet expenses or

2 = An employee who decided to enroll in school

Applies to: *Respondents who have enrolled in, been accepted to, or completed more than one degree or certificate program since earning a bachelor's degree, and who worked while enrolled for the second such program.*

CATI CODE description: If CDPSTGRD = 1,-5 and CDOTHGRD = 1 and CDWRKH2 > 0.

Sources: B&B:2000/01 CATI

### CDMULTPL

Multiple enrollment indicator-postbacc

Indicator of overlapping enrollment, which is defined as co-enrollment for a period greater than one month within the regular academic year (September-April). This is calculated in the enrollment user exit.

The values are:

<0> Did not attend more than one school at the same time

<1> Attended more than one school at the same time.

Applies to: *All respondents excluding those that have been accepted to a program that has not started yet.*

CATI CODE description: CDPSTGRD not = -5.

Imputation Note: If CDPSTGRD = 0 then

CDMULTPL = 0.

Sources: B&B:2000/01 CATI

### CDGAPMON

Gap in postbacc enrollment greater than 4 months

A flag set in the enrollment user exit if there is ever a gap in post-baccalaureate enrollment exceeding a period of 4 months.

Applies to: *Respondents who enrolled in, or completed an degree or certificate program since earning a bachelor's degree, excluding respondents that have been accepted to a program that has not started yet.*

CATI CODE description: If CDPSTGRD = 1.

Sources: B&B:2000/01 CATI

### CDCOUR1

Since earning your bachelor's degree from (bachelor's degree school), have you taken any courses for credit which were not associated with a formal degree or certificate program?

1 = YES

2 = NO

Applies to: *All respondents.*

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CDSCT11**

From what type of school did you take your courses?  
Was it...  
COLLECT UP TO 3 RESPONSES. ENTER 0 FOR  
NO MORE.

- 1 = A four-year college or university
- 2 = A community or other 2-year college
- 3 = A vocational or technical school
- 4 = Or some other type of school

CDSCT11 (CDSCT12) (CDSCT13)

Applies to: *Respondents who have taken courses for credit which were not associated with a formal degree program.*

CATI CODE description: If CDCOUR1 = 1.  
Sources: B&B:2000/01 CATI

**CDSCT12**

See CDSCT11 for description.  
Applies to: *Respondents who have taken courses for credit which were not associated with a formal degree program.*  
CATI CODE description: If CDCOUR1 = 1.  
Sources: B&B:2000/01 CATI

**CDSCT13**

See CDSCT11 for description.  
Applies to: *Respondents who have taken courses for credit which were not associated with a formal degree program.*  
CATI CODE description: If CDCOUR1 = 1.  
Sources: B&B:2000/01 CATI

**CDRSC1A**

Why did you decide to take individual courses for credit?  
COLLECT UP TO 3 REASONS. ENTER 0 FOR NO MORE.  
1 = REQUIRED/RECOMMENDED FOR CAREER CHOICE  
2 = REQUIRED/RECOMMENDED FOR CAREER ADVANCEMENT  
3 = PREPARE FOR GRADUATE SCHOOL  
4 = PREPARE FOR LICENSING EXAM  
5 = EXPLORE CAREER OPTIONS  
6 = ACADEMIC INTEREST/PERSONAL ENRICHMENT  
7 = KEEP LICENSURE/CERTIFICATION CURRENT  
8 = MARKETABILITY/FINANCIAL GAIN (MONEY)  
9 = TO TRANSFER TO ANOTHER SCHOOL/PROGRAM  
10 = OTHER

CDRSC1A (CDRSC1B) (CDRSC1C)  
Applies to: *Respondents who have taken courses for credit which were not associated with a formal degree program.*  
CATI CODE description: If CDCOUR1 = 1.  
Sources: B&B:2000/01 CATI

**CDRSC1B**

See CDRSC1A for description.  
Applies to: *Respondents who have taken courses for credit which were not associated with a formal degree program.*  
CATI CODE description: If CDCOUR1 = 1.  
Sources: B&B:2000/01 CATI

**CDRSC1C**

See CDRSC1A for description.  
Applies to: *Respondents who have taken courses for credit which were not associated with a formal degree program.*  
CATI CODE description: If CDCOUR1 = 1 and CDRSC1B > 0.  
Sources: B&B:2000/01 CATI

**CDEMPR1**

Did you receive any type of employer aid, such as reimbursement, to help pay for your tuition?  
0 = NO TUITION CHARGES/NOT EMPLOYED  
1 = YES  
2 = NO  
3 = EMPLOYER REIMBURSED SOME BUT NOT ALL COURSES  
Applies to: *Respondents who have taken courses for credit which were not associated with a formal degree program.*  
CATI CODE description: If CDCOUR1 = 1.  
Sources: B&B:2000/01 CATI

**CDCOUR2**

Since earning your bachelor's degree from [bachelor's degree school], have you taken any noncredit courses that relate to your job or a new career?  
1 = YES  
2 = NO  
Applies to: *All respondents.*  
Note: "No" response recoded from 2 to 0.  
Sources: B&B:2000/01 CATI

**CDSCT21**

From what type of school did you take your courses?  
Was it...

COLLECT UP TO 3 RESPONSES. ENTER 0 FOR  
NO MORE.

- 1 = A four-year college or university
- 2 = A community or other 2-year college
- 3 = A vocational or technical school
- 4 = Business or industry
- 5 = Professional association
- 6 = Government agency
- 7 = Other

CDSCT21 (CDSCT22) (CDSCT23)

Applies to: *Respondents who have taken noncredit  
courses since earning their bachelor's degree.*

CATI CODE description: If CDCOUR2 = 1.

Sources: B&B:2000/01 CATI

**CDSCT22**

See CDSCT21 for description.

Applies to: *Respondents who have taken noncredit  
courses since earning their bachelor's degree.*

CATI CODE description: If CDCOUR2 = 1.

Sources: B&B:2000/01 CATI

**CDSCT23**

See CDSCT21 for description.

Applies to: *Respondents who have taken noncredit  
courses since earning their bachelor's degree.*

CATI CODE description: If CDCOUR2 = 1.

Sources: B&B:2000/01 CATI

**CDRSC2A**

Why did you decide to take noncredit courses?

COLLECT UP TO 3 REASONS. ENTER 0 FOR NO  
MORE.

- 1 = REQUIRED/RECOMMENDED FOR CAREER  
CHOICE
- 2 = REQUIRED/RECOMMENDED FOR CAREER  
ADVANCEMENT
- 3 = PREPARE FOR GRADUATE SCHOOL
- 4 = PREPARE FOR LICENSING EXAM
- 5 = EXPLORE CAREER OPTIONS
- 6 = ACADEMIC INTEREST/PERSONAL  
ENRICHMENT
- 7 = KEEP LICENSURE/CERTIFICATION  
CURRENT
- 8 = MARKETABILITY/FINANCIAL GAIN  
(MONEY)
- 9 = OTHER

CDRSC2A (CDRSC2B) (CDRSC2C)

Applies to: *Respondents who have taken noncredit  
courses since earning their bachelor's degree.*

CATI CODE description: If CDCOUR2 = 1.

Sources: B&B:2000/01 CATI

**CDRSC2B**

See CDRSC2A for description.

Applies to: *Respondents who have taken noncredit  
courses since earning their bachelor's degree.*

CATI CODE description: If CDCOUR2 = 1.

Sources: B&B:2000/01 CATI

**CDRSC2C**

See CDRSC2A for description.

Applies to: *Respondents who have taken noncredit  
courses since earning their bachelor's degree.*

CATI CODE description: If CDCOUR2 = 1 and

CDRSC2B > 0.

Sources: B&B:2000/01 CATI

**CDEMPR2**

Did you receive any type of employer aid, such as  
reimbursement, to help pay for your tuition?

0 = NO TUITION CHARGES/NOT EMPLOYED

1 = YES

2 = NO

3 = EMPLOYER REIMBURSED SOME BUT NOT  
ALL COURSES

Applies to: *Respondents who have taken noncredit  
courses since earning their bachelor's degree.*

CATI CODE description: If CDCOUR2 = 1.

Sources: B&B:2000/01 CATI

**CDAPPLY**

Have you applied to go back to school for the 2001-  
2002 school year?

1 = YES

2 = NO

Applies to: *Respondents who have not enrolled in, been  
accepted to, or completed a degree or certificate  
program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD not = 1, -5.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CDFUTENR**

Do you expect to enroll in a degree program at some point in the future?

1 = YES

2 = NO

Applies to: *Respondents who have not enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: CDPSTGRD not = 1, -5 and CDAPPLY not = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CDBEGGRD**

Do you expect to be enrolled...

1 = in 2 years (2002-2003 ACADEMIC YEAR)

2 = in 3 to 5 years (2003-2006) or

3 = in more than 5 years

Applies to: *Respondents who have not enrolled in, been accepted to, or completed a degree or certificate program since earning a bachelor's degree.*

CATI CODE description: If CDPSTGRD not = 1, -5 and CDAPPLY not = 1 and CDFUTENR = 1,-1.

Sources: B&B:2000/01 CATI

**CDFTRDEG**

What degree or certificate do you intend to pursue?

UNDERGRADUATE:

1 = CERTIFICATE

2 = ASSOCIATE's DEGREE (AS, AA)

3 = SECOND BACHELOR's DEGREE (BA, BS, BFA, etc.)

GRADUATE:

5 = POST-BACCALAUREATE CERTIFICATE

6 = MASTER's DEGREE (MA, MS, MBA, MFA, MDIV, etc.)

7 = DOCTORAL/PROFESSIONAL DEGREE (PHD, EDD, JD, MD, DDS, etc.).

Applies to: *Respondents who plan to enroll in a degree or certificate program in the future.*

CATI CODE description: If CDPSTGRD not = 1, -5 and (CDAPPLY = 1 or CDFUTENR = 1,-1)

Sources: B&B:2000/01 CATI

**CDDBLM**

What will be your primary major or program of study?

CDDBLM

What will be your secondary major?

CDDBLMS

Applies to: *Respondents who plan to enroll in an undergraduate, graduate, or professional degree/certificate program, who indicated a double major.*

CATI CODE description: If CDPSTGRD = 0 and (CDFUTENR = 1 or CAPPLY = 1) and CDDBLMJ = 1.

Note: CDDBLMJ is an internal variable that indicates Double Major.

Sources: B&B:2000/01 CATI

**CDDBLMS**

See CDDBLM for description.

Applies to: *Respondents who plan to enroll in an undergraduate, graduate, or professional degree/certificate program, who indicated a double major.*

CATI CODE description: If CDPSTGRD = 0 and (CDFUTENR = 1 or CAPPLY = 1) and CDDBLMJ = 1.

Note: CDDBLMJ is an internal variable that indicates Double Major.

Sources: B&B:2000/01 CATI

**CDFTRMST**

What master's degree do you wish to pursue?

1 = MBA - BUSINESS ADMINISTRATION

2 = MS - SCIENCE

3 = MA - ARTS

4 = M.ED - EDUCATION

5 = MPA - PUBLIC ADMINISTRATION

6 = MLS - LIBRARY SCIENCE

7 = MPH - PUBLIC HEALTH

8 = MFA - FINE ARTS

9 = MAA - APPLIED ARTS

10 = MAT - TEACHING

11 = M.DIV - DIVINITY

12 = MSW - SOCIAL WORK

13 = LANDSCAPE ARCHITECTURE

14 = PROFESSIONAL MANAGEMENT

15 = OTHER MASTERS.

Applies to: *Respondents who plan to enroll in a master's degree program in the future.*

CATI CODE description: If CDPSTGRD not = 1, -5 and (CDAPPLY=1 or

CDFUTENR = 1,-1) and CDFTRDEG = 6.

Sources: B&B:2000/01 CATI

### CDFTRPHD

What doctoral or professional degree do you wish to pursue?

- 16 = PHD
- 17 = ED.D - EDUCATION
- 18 = THD - THEOLOGY
- 19 = DBA - BUSINESS ADMIN
- 20 = D.ENG - ENGINEERING
- 21 = DFA - FINE ARTS
- 22 = DPA - PUBLIC ADMIN
- 23 = DSC/SCD - SCIENCE
- 24 = PSYD - PSYCHOLOGY
- 25 = THEOLOGY (D.MIN)
- 26 = CHIROPRACTIC (DC, DCM)
- 27 = DENTISTRY (DDS, DMD)
- 28 = MEDICINE (MD)
- 29 = OPTOMETRY (OD)
- 30 = OSTEOPATHIC MEDICINE (DO)
- 31 = PHARMACY (PHARM.D)
- 32 = PODIATRY (DPM, POD. D)
- 33 = VETERINARY MEDICINE (DVM)
- 34 = LAW (LLB, JD)
- 35 = OTHER DOCTORAL DEGREE

Applies to: *Respondents who plan to enroll in a doctoral or professional degree program in the future.*

CATI CODE description: If CDPSTGRD not = 1, -5 and (CDAPPLY= 1 or CDFUTENR = 1,-1) and CDFTRDEG = 7.

Sources: B&B:2000/01 CATI

### CDMJCOD

Intended post-baccalaureate major code.

Applies to: *Respondents who plan to enroll in degree or certificate program in the future.*

CATI CODE description: If CDPSTGRD = not 1, -5 and ((CDFUTENR = 1,-1) or (CDAPPLY =1)

Imputation Note: If CDDBLM = -1,-2 then CDMJCOD = -1. If CDFUTENR = -2 then CDMJCOD = -1. If CDFTRFLD = -1,-2 then CDMJCOD = -1.

Sources: B&B:2000/01 CATI

### CDMJSTR

Future major-raw string.

Applies to: *Respondents who plan to enroll in school (undergraduate, graduate, or professional degree/certificate program) within the next 5 years.*

CATI CODE description: If CDPSTGRD = 0,-1,-2 and ((CDFUTENR = 1,-2 or CDAPPLY =1) or (CDDBLM = -1,-2 or CDFTRFLD = -1,-2))

Imputation Note: If CDDBLM = -1,-2 then CDMJSTR = -1. If CDFUTENR = -2

then CDMJSTR = -1. If CDFTRFLD = -1,-2 then CDMJSTR = -1.

Sources: B&B:2000/01 CATI

### CDMJSTD

Future major-std string.

Applies to: *Respondents who plan to enroll in school (undergraduate, graduate, or professional degree/certificate program) within the next 5 years.*

CATI CODE description: If CDPSTGRD = 0,-1,-2 and ((CDFUTENR = 1,-2 or CDAPPLY =1) or (CDDBLM = -1,-2 or CDFTRFLD = -1,-2))

Imputation Note: If CDDBLM = -1,-2 then CDMJSTD = -1. If CDFUTENR = -2

then CDMJSTD = -1. If CDFTRFLD = -1,-2 then CDMJSTD = -1.

Sources: B&B:2000/01 CATI

### CDFTRFPT

When you go back to school, do you expect to be enrolled full-time or part-time?

1 = FULL-TIME

2 = PART-TIME.

Applies to: *Respondents who are planning to apply for a degree or certificate program for the 2001-2002 academic year.*

CATI CODE description: If CDPSTGRD not = 1 and CDAPPLY = 1.

Sources: B&B:2000/01 CATI

### **CDFTREMP**

When you go back to school, do you expect to receive tuition reimbursement or some other tuition assistance from either your current employer or a future employer?

- 1 = YES
- 2 = NO

Applies to: *Respondents who are planning to apply for school (undergraduate, graduate, or professional degree/certificate program) for the 2001-2002 academic year.*

CATI CODE description: If CDPSTGRD not = 1, -5 and CDAPPLY = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CDDELY1**

Why did you decide to postpone your continued education?

COLLECT UP TO 3 RESPONSES. ENTER 0 FOR NO MORE.

- 1 = UNDERGRADUATE DEBT
- 2 = COULDN'T GET FINANCIAL AID
- 3 = OTHER FINANCIAL REASONS
- 4 = RAISING CHILDREN
- 5 = OTHER FAMILY RESPONSIBILITIES/CONSTRAINTS
- 6 = FAILED TO MEET APPLICATION DEADLINE
- 7 = NOT ADMITTED TO SCHOOL OF CHOICE
- 8 = WANT A BREAK FROM SCHOOL
- 9 = HAD GOOD JOB OPPORTUNITY
- 10 = MILITARY COMMITMENT
- 11 = CAREER PLANS INDEFINITE
- 12 = WANT/NEED WORK EXPERIENCE
- 13 = MOVING / RELOCATING
- 14 = OTHER

CDDELY1 (CDDELY2) (CDDELY3)

Applies to: *Respondents who plan to enroll in degree or certificate program in the future.*

CATI CODE description: If CDPSTGRD not = 1, -5 and (CDAPPLY = 1 or CDFUTENR = 1,-1).

Sources: B&B:2000/01 CATI

### **CDDELY2**

See CDDELY1 for description.

Applies to: *Respondents who plan to enroll in a degree or certificate program in the future.*

CATI CODE description: If CDPSTGRD not = 1, -5 and (CDAPPLY = -2,-1,1 or CDFUTENR = 1,-1).

Sources: B&B:2000/01 CATI

### **CDDELY3**

See CDDELY1 for description.

Applies to: *Respondents who plan to enroll in a degree or certificate program in the future.*

CATI CODE description: If CDPSTGRD not = 1, -5 and (CDAPPLY = -2,-1,1 or CDFUTENR = 1,-1).

Sources: B&B:2000/01 CATI

### **CDNOGR1**

Why have you decided not to pursue a higher degree?

COLLECT UP TO 3 RESPONSES. ENTER 0 FOR NO MORE.

- 1 = FINANCIAL REASONS
- 2 = RAISING CHILDREN
- 3 = OTHER FAMILY/PERSONAL REASONS (NOT FINANCIAL)
- 4 = TIRED OF SCHOOL/DO NOT LIKE SCHOOL
- 5 = GRADES NOT HIGH ENOUGH
- 6 = NOT REQUIRED FOR CAREER GOALS
- 7 = NOT IN LABOR MARKET
- 8 = NO INTEREST
- 9 = OTHER

CDNOGR1 (CDNOGR2) (CDNOGR3)

Applies to: *Respondents who do not plan to enroll in a degree or certificate program in the future.*

CATI CODE description: If CDPSTGRD not = 1, -5 and CDAPPLY not = 1 and CDFUTENR not = 1.

Sources: B&B:2000/01 CATI

### **CDNOGR2**

See CDNOGR1 for description.

Applies to: *Respondents who do not plan to enroll in a degree or certificate program in the future.*

CATI CODE description: If CDPSTGRD not = 1, -5 and CDAPPLY not = 1 and CDFUTENR not = 1.

Sources: B&B:2000/01 CATI

### **CDNOGR3**

See CDNOGR1 for description.

Applies to: *Respondents who do not plan to enroll in a degree or certificate program in the future.*

CATI CODE description: If CDPSTGRD not = 1, -5 and CDAPPLY not = 1 and CDFUTENR not = 1.

Sources: B&B:2000/01 CATI

### CDLIFLNG

When you filed your 2000 taxes, did you claim the federal Lifetime Learning tax credit to help offset the cost of your tuition and fees as you continued your education?

- 0 = NEVER HEARD OF IT
- 1 = YES
- 2 = NO

Applies to: *Respondents who have been enrolled in some type of postsecondary education since completing their bachelor's degree.*

CATI CODE description: If CDPSTGRD = 1 or CDCOUR1 = 1 or CDCOUR2 = 1.

Sources: B&B:2000/01 CATI

### CDCREDIT

Will you claim it when you file your 2001 taxes next year?

- 0 = NOT PLANNING TO BE ENROLLED THIS CALENDAR YEAR (2001)
- 1 = YES
- 2 = NO

Applies to: *Respondents who claimed the Lifetime Learning tax credit and are currently enrolled, or indicated taking credit or noncredit courses, or are going to apply for the 2001-2002 academic year.*

CATI CODE description: If CDLIFLNG not = 1 or (CDCUGR1 = 1 or CDCUGR2 = 1 or CDCOUR1 = 1 or CDCOUR2 = 1 or CDAPPLY = 1)

Sources: B&B:2000/01 CATI

### CDCRED2

Did the availability of the tax credit help you make the decision to continue your education beyond your bachelor's degree?

- 1 = YES
- 2 = NO

Applies to: *Respondents who claimed the Lifetime Learning tax credit and will claim the credit when filing their 2001 taxes and are who are currently enrolled, or indicated taking credit or noncredit courses, or are going to apply for the 2001-2002 academic year.*

CATI CODE description: CDLIFLNG ne 0 or CDCREDIT ne 0 or (CDCREDIT ne 2 and CDLIFLNG ne 2) and (CDCUGR1 = 1 or CDCUGR2 = 1 or CDCOUR1 = 1 or CDCOUR2 = 1 or CDAPPLY = 1)

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CEEMPCUR

Now I'd like to ask you some questions about your employment. In your primary job, do you...

INTERVIEWER: PRIMARY JOB IS THE JOB HELD MOST OF THE YEAR.

- 1 = Work full-time
- 2 = Part-time
- 3 = Waiting to report to work/temporary layoff
- 4 = Not working
- 6 = Homemaker
- 7 = Disabled

Applies to: All respondents.

Sources: B&B:2000/01 CATI

### CELSTMY

When was the last time you worked for pay?

0 = NEVER WORKED FOR PAY

MONTH (1-12):

YEAR (1920-2001):

Applies to: *Respondents who are not currently working, who are waiting to report to work, who are homemakers, or who are disabled.*

CATI CODE description: CEEMPCUR >= 3 and CELSTMM > 0.

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Sources: B&B:2000/01 CATI

### CEUNEMPL

Have you received unemployment compensation at any time since [CELSTMY]?

- 1 = YES
- 2 = NO

Applies to: *Respondents who are not currently working (waiting to report to work, homemakers, or disabled).*

CATI CODE description: CEEMPCUR >= 3 and CELSTMM > 0.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CECURTCH**

Are you currently employed as a teacher, a teacher's aide, or a substitute teacher at the K-12 level?

INTERVIEWER: IF RESPONDENT IS A TEACHER, BUT IS OUT FOR SUMMER BREAK CODE AS YES.

1 = YES

2 = NO

Applies to: *All respondents.*

Imputation Note: If CEEMPCUR = 3,4,6,7 then CECURTCH = 0

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CEEMPMY**

When did you first start your current job?

MONTH (1-12):

YEAR (1920-2001):

Applies to: *Respondents who are currently working, excluding teachers.*

CATI CODE description: CEEMPCUR = 1,2,-1 and CECURTCH = 0,-1.

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Sources: B&B:2000/01 CATI

**CEEMPAPR**

As of April 1, 2001, were you...

1 = Working full-time

2 = Part-time

3 = Waiting to report to work/temporary layoff

4 = Not working

6 = Homemaker

7 = Disabled

Applies to: *Respondents who are currently working, excluding teachers.*

CATI CODE description: CEEMPCUR = 1,2 and CECURTCH = 0.

Imputation Note: If CEEMPMY <= 200104 and >= 0 then CEEMPCUR = CEEMPAPR.

Sources: B&B:2000/01 CATI

**CEPREFT**

You told me that your current job is part-time. Would you have preferred full-time work?

1 = YES

2 = NO

Applies to: *Respondents who work part-time, excluding teachers.*

CATI CODE description: CEEMPCUR = 2 and CECURTCH = 0.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CETEMP**

Are you working for a temporary agency in your current job?

1 = YES

2 = NO

Applies to: *All respondents who are currently working, excluding teachers.*

CATI CODE description: CEEMPCUR = 1,2 and CECURTCH = 0.

Imputation Note: If CEEMPCUR = 3,4,6,7 then CETEMP = 0.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CENUMJOB**

How many jobs for pay do you have right now?

RANGE (1-9):

COUNT ONLY UNIQUE JOBS. VERIFY NUMBER OF JOBS OVER 4.

Applies to: *All respondents who are currently working, excluding teachers.*

CATI CODE description: CEEMPCUR = 1, 2 and CECURTCH = C.

Imputation Note: If CEEMPCUR = 3,4,6,7 then CENUMJOB = 0.

Sources: B&B:2000/01 CATI

**CETITLE**

What is your job title?

Applies to: *All respondents who are currently working, excluding teachers.*

CATI code: If CEEMPCUR = 2,1,-1 and CECURTCH = 0,-1.

Sources: B&B:2000/01 CATI



### CEDUTY

What do you do?

Applies to: *All respondents who are currently working, excluding teachers.*

CATI code: If CEEMPCUR = 2,1,-1 and CECURTCH = 0,-1.

Sources: B&B:2000/01 CATI

### CEXOCCD

Current/previous occupation-code.

Applies to: *Respondents who are currently working, are homemakers, or are unemployed but currently searching for a job.*

CATI code: If (CEEMPCUR = 6,2,1,-1 or (CEEMPCUR = 4 and CESEARCH = 1)) and CECURTCH = 0,-1.

Imputation Note: If CECURTCH = 1 then CEXOCCD = 24. If CEEMPCUR = 6 then CEXOCCD = 41 (HOMEMAKER). If CEEMPCUR = 4 and CESEARCH = 1 then CEXOCCD = 42.

Sources: B&B:2000/01 CATI

### CEOCSTR

Current occupation-raw string.

Applies to: *Respondents who are currently working.*

CATI code: If CEEMPCUR = 2,1,-1.

Sources: B&B:2000/01 CATI

### CEOCSTD

Current occupation-std string.

Applies to: *Respondents who are currently working.*

CATI code: If CEEMPCUR = 2,1,-1.

Sources: B&B:2000/01 CATI

### CECURHRS

[if CECURTCH eq <1>]

In your job as a teacher, about how many hours do you work each week?

[else]

In your job as a/an [CEXOCCD], about how many hours do you work each week?

RANGE (1-80):

Applies to: *All respondents.*

Imputation Note: If CEEMPCUR= 3,4,6,7 then CECURHRS = 0.

Sources: B&B:2000/01 CATI

### CESCHEMP

Are you self-employed or are you working for someone else?

1 = SELF-EMPLOYED

2 = SOMEONE ELSE

Applies to: *Respondents who are currently working, excluding teachers.*

CATI CODE description: CEEMPCUR = 1,2,-1 and CECURTCH = 0,-1.

Sources: B&B:2000/01 CATI

### CEEMPTYP

Are you working for...

READ OPTIONS AS NEEDED.

1 = A private, for profit company

2 = A nonprofit or private, not-for-profit company

3 = A local government

4 = A state government

5 = The federal government (including civilian employees of the military)

6 = The military (including the national guard)

7 = other

Applies to: *Respondents who are not self-employed and currently working, excluding teachers.*

CATI CODE description: CEEMPCUR = 1,2,-1 and CECURTCH = 0,-1 and CESCHEMP = -2,-1,2.

Sources: B&B:2000/01 CATI

### CEXINDCD

Current/previous business/in-code.

Applies to: *Respondents who are currently working, excluding students with a teaching or research assistantship.*

CATI code: If CEEMPCUR = 2,1,-1 and (CDTEACH not = 1 and CDRESEAR not = 1 and CDTEAC2 not = 1 and CDRESE2 not = 1)

Imputation Note: If CECURTCH = 1 then CEXINDCD = 20. If CEEMPTYP=3

then CEXINDCD = 14. If CEEMPTYP=6 then

CEXINDCD = 21.

Sources: B&B:2000/01 CATI

### **CEINSTD**

Occupation/Industry-std string.

Applies to: *Respondents who are currently working, excluding students with a teaching or research assistantship.*

CATI code: If CEEMPCUR = 2,1,-1 and (CDTEACH not = 1 and CDRESEAR not = 1 and CDTEAC2 not = 1 and CDRESE2 not = 1)

Sources: B&B:2000/01 CATI

### **CECURL**

Would you consider your current job to be the start of your career in this occupation or industry?

1 = YES

2 = NO

Applies to: *All respondents who are currently working.*

CATI CODE description: CEEMPCUR = 1,2,-1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CECURJOB**

Since it isn't the start of your career, how would you describe it?

NOTE TO INTERVIEWER: READ OPTIONS ONLY AS NECESSARY

1 = WORKING WHILE DECIDING ON YOUR FUTURE EDUCATION OR CAREER?

2 = JUST PAYING THE BILLS?

3 = CONTINUING IN THE JOB YOU HELD BEFORE YOU LEFT SCHOOL?

4 = CONTINUING IN YOUR CAREER IN THIS OCCUPATION OR INDUSTRY?

5 = WORKING TO PREPARE FOR GRADUATE SCHOOL?

6 = DOING WHAT YOU WANT TO DO?

7 = EXPLORING CAREER OPTIONS?

8 = IS THE ONLY JOB AVAILABLE?

9 = OTHER

Applies to: *Respondents who are currently working and who don't feel that their current job is the start of their career in their occupation or industry.*

CATI CODE description: CEEMPCUR = 1,2,-1 and CECURL = 0,-1,-2.

Sources: B&B:2000/01 CATI

### **CERELMAJ**

INTERVIEWER: REPORTED UG MAJOR  
=[YMAJOR].

Would you say your job as a/an [CEXOCCCD] is....

1 = Closely related

2 = Somewhat related or

3 = Not related to your undergraduate major

Applies to: *All respondents who are currently working.*

CATI CODE description: CEEMPCUR = 1,2,-1.

Sources: B&B:2000/01 CATI

### **CECOSIZE**

How many employees would you estimate work for your company or organization?

INTERVIEWER: WE ARE REFERRING TO THE ENTIRE COMPANY-INCLUDING ALL LOCATIONS.

RANGE (2-100,000):

Applies to: *Non-self-employed respondents who are currently working for a private or not-for-profit company, excluding teachers.*

CATI CODE description: CEEMPCUR = 1,2,-1 and CECURTCH = 0,-1 and

CEEMPTYP = 1,2 and CESCHEMP = 2.

Sources: B&B:2000/01 CATI

### **CECURINC**

[if CECURTCH eq <1>]

What is your academic year base salary at your current job, not including extra pay for things like summer teaching, coaching, or extra-curricular activities?

[else]

For your current job, about how much do you earn annually, before taxes and other deductions?

RANGE (\$0 - \$999,999):

Applies to: *All respondents.*

Imputation Note: If CEEMPCUR = 3,4,5,6,7 then CECURINC = 0.

Sources: B&B:2000/01 CATI

**CEAMOUNT**

Can you tell me your hourly, weekly, or monthly wage?

NOTE: ENTER WHOLE NUMBERS. IF R PROVIDES A NUMBER WITH A DECIMAL, ROUND UP OR DOWN TO THE NEAREST DOLLAR.

RANGE (\$0 -\$999,999):

Applies to: *All respondents currently working who report earnings in unit other than annual salary.*

CATI CODE description: CEEMPCUR >= 1 and CECURINC = -1.

Imputation Note: If CEEMPCUR = 3,4,5,6,7 then CEAMOUNT = 0.

Sources: B&B:2000/01 CATI

**CETIME**

Can you tell me your hourly, weekly, or monthly wage?

- 1 = HOURLY
- 2 = WEEKLY
- 3 = TWICE MONTHLY/EVERY 2 WEEKS
- 4 = MONTHLY
- 5 = ANNUALLY

Applies to: *All respondents currently working who report earnings in unit other than annual salary.*

CATI CODE description: CEEMPCUR = 1,2 and CECURINC = -1.

Sources: B&B:2000/01 CATI

**CEANNERN**

**Applies to:** *All respondents*

Note: This variable is a direct copy of CECURINC unless CECURINC= -1, in which case it was calculated using CEAMOUNT and CETIME. The

following formula was used to calculate CEANNERN:

if CETIME=1 (hourly)  
CEANNERN=CEAMOUNT\*2000  
if CETIME=2 (weekly)  
CEANNERN=CEAMOUNT\*52  
if CETIME=3 (twice/mth)  
CEANNERN=CEAMOUNT\*26  
if CETIME=4 (monthly)  
CEANNERN=CEAMOUNT\*12  
if CETIME=5 (annually)  
CEANNERN=CECURINC

This formula assumes full-time work and does not take number of hours worked per week CECURHRS into consideration.

Imputation Note: If CEEMPCUR = 3,4,5,6,7 then CEANNERN = 0.

Sources: B&B:2000/01 CATI

**CEHEALTH**

Next, I'd like to ask you some questions about your benefits. Does your employer provide you with...

ENTER 1 = YES 2 = NO

Medical insurance

Applies to: *Non-self-employed respondents who are currently working.*

CATI CODE description: ((CEEMPCUR = 1,2 and CECURTCH= 1) or (CEEMPCUR = 1,2 and CESCHEMP = 2,-1,-2)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CEOTHMED**

Next, I'd like to ask you some questions about your benefits. Does your employer provide you with...

ENTER 1 = YES 2 = NO

Dental, optical, or other health insurance?

Applies to: *Non-self-employed respondents who are currently working.*

CATI CODE description: ((CEEMPCUR = 1,2 and CECURTCH= 1) or (CEEMPCUR = 1,2 and CESCHEMP = 2,-1,-2)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CELIFINS**

Next, I'd like to ask you some questions about your benefits. Does your employer provide you with...

ENTER 1 = YES 2 = NO

Life insurance?

Applies to: *Non-self-employed respondents who are currently working.*

CATI CODE description: ((CEEMPCUR = 1,2 and CECURTCH= 1) or (CEEMPCUR = 1,2 and CESCHEMP = 2,-1,-2)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CERETIRE**

Next, I'd like to ask you some questions about your benefits. Does your employer provide you with...

ENTER 1 = YES 2 = NO

Retirement or other financial benefits, such as a 401(k)/403(b) ?

*Applies to: Non-self-employed respondents who are currently working.*

CATI CODE description: ((CEEMPCUR = 1,2 and CECURTCH= 1) or (CEEMPCUR = 1,2 and CESCHEMP = 2,-1,-2)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CESTOCK**

Next, I'd like to ask you some questions about your benefits. Does your employer provide you with...

ENTER 1 = YES 2 = NO

Stock options?

*Applies to: Non-self-employed respondents who are currently working.*

CATI CODE description: ((CEEMPCUR = 1,2 and CECURTCH= 1) or (CEEMPCUR = 1,2 and CESCHEMP = 2,-1,-2)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CEFLEXSP**

Next, I'd like to ask you some questions about your benefits. Does your employer provide you with...

ENTER 1 = YES 2 = NO

Flexible spending accounts?

*Applies to: Non-self-employed respondents who are currently working.*

CATI CODE description: ((CEEMPCUR = 1,2 and CECURTCH= 1) or (CEEMPCUR = 1,2 and CESCHEMP = 2,-1,-2)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CEDISCNT**

Next, I'd like to ask you some questions about your benefits. Does your employer provide you with...

ENTER 1 = YES 2 = NO

Employee discount?

*Applies to: Non-self-employed respondents who are currently working.*

CATI CODE description: ((CEEMPCUR = 1,2 and CECURTCH= 1) or (CEEMPCUR = 1,2 and CESCHEMP = 2,-1,-2)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CECHCARE**

Next, I'd like to ask you some questions about your benefits. Does your employer provide you with...

ENTER 1 = YES 2 = NO

Childcare facility or subsidy?

*Applies to: Non-self-employed respondents who are currently working.*

CATI CODE description: ((CEEMPCUR = 1,2 and CECURTCH= 1) or (CEEMPCUR = 1,2 and CESCHEMP = 2,-1,-2)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CETRANST**

Next, I'd like to ask you some questions about your benefits. Does your employer provide you with...

ENTER 1 = YES 2 = NO

Transit subsidy?

*Applies to: Non-self-employed respondents who are currently working.*

CATI CODE description: ((CEEMPCUR = 1,2 and CECURTCH= 1) or (CEEMPCUR = 1,2 and CESCHEMP = 2,-1,-2)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CEFITNES

Next, I'd like to ask you some questions about your benefits. Does your employer provide you with...

ENTER 1 = YES 2 = NO

Fitness facility or subsidy?

Applies to: *Non-self-employed respondents who are currently working.*

CATI CODE description: ((CEEMPCUR = 1,2 and CECURTCH= 1) or (CEEMPCUR = 1,2 and CESCHEMP = 2,-1,-2)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CEEMPAST

Next, I'd like to ask you some questions about your benefits. Does your employer provide you with...

ENTER 1 = YES 2 = NO

Employee assistance (COUNSELING/LEGAL)?

Applies to: *Non-self-employed respondents who are currently working.*

CATI CODE description: ((CEEMPCUR = 1,2 and CECURTCH= 1) or (CEEMPCUR = 1,2 and CESCHEMP = 2,-1,-2)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CEPAY

Please tell me whether or not you are satisfied with each of the following in your current job:

1 = YES (satisfied) 2 = NO (not satisfied)

Your pay?

Applies to: *Non-self-employed respondents who are currently working.*

Note: "No" response recoded from 2 to 0.

CATI CODE description: ((CEEMPCUR = 1,2 and CECURTCH= 1) or (CEEMPCUR = 1,2 and CESCHEMP = 2,-1,-2)).

Sources: B&B:2000/01 CATI

### CEBEN

Please tell me whether or not you are satisfied with each of the following in your current job:

1 = YES (satisfied) 2 = NO (not satisfied)

Fringe benefits?

Applies to: *Non-self-employed respondents who are currently working.*

CATI CODE description: ((CEEMPCUR = 1,2 and CECURTCH= 1) or (CEEMPCUR = 1,2 and CESCHEMP = 2,-1,-2)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CECHALNG

Please tell me whether or not you are satisfied with each of the following in your current job:

1 = YES (satisfied) 2 = NO (not satisfied)

Importance and challenge of your work?

Applies to: *Non-self-employed respondents who are currently working.*

CATI CODE description: ((CEEMPCUR = 1,2 and CECURTCH= 1) or (CEEMPCUR = 1,2 and CESCHEMP = 2,-1,-2)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CEADVAN

Please tell me whether or not you are satisfied with each of the following in your current job:

1 = YES (satisfied) 2 = NO (not satisfied)

Opportunities for promotion and advancement?

Applies to: *Non-self-employed respondents who are currently working.*

CATI CODE description: ((CEEMPCUR = 1,2 and CECURTCH= 1) or (CEEMPCUR = 1,2 and CESCHEMP = 2,-1,-2)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CEUSEED

Please tell me whether or not you are satisfied with each of the following in your current job:

1 = YES (satisfied) 2 = NO (not satisfied)

Opportunities to use training and education?

Applies to: *Non-self-employed respondents who are currently working.*

CATI CODE description: ((CEEMPCUR = 1,2 and CECURTCH= 1) or (CEEMPCUR = 1,2 and CESCHEMP = 2,-1,-2)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CESECUR**

Please tell me whether or not you are satisfied with each of the following in your current job:

1 = YES (satisfied) 2 = NO (not satisfied)

Job security?

Applies to: *Non-self-employed respondents who are currently working.*

CATI CODE description: ((CEEMPCUR = 1,2 and CECURTCH= 1) or (CEEMPCUR = 1,2 and CESCHEMP = 2,-1,-2)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CEMORED**

Please tell me whether or not you are satisfied with each of the following in your current job:

1 = YES (satisfied) 2 = NO (not satisfied)

Opportunities for further training and education?

Applies to: *Non-self-employed respondents who are currently working.*

CATI CODE description: ((CEEMPCUR = 1,2 and CECURTCH= 1) or (CEEMPCUR = 1,2 and CESCHEMP = 2,-1,-2)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CEOVRAL**

Please tell me whether or not you are satisfied with each of the following in your current job:

1 = YES (satisfied) 2 = NO (not satisfied)

Overall, would you say you are satisfied with your job?

Applies to: *Non-self-employed respondents who are currently working.*

CATI CODE description: ((CEEMPCUR = 1,2 and CECURTCH= 1) or (CEEMPCUR = 1,2 and CESCHEMP = 2,-1,-2)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CESEARCH**

Are you looking for a job?

1 = YES

2 = NO

Applies to: *Respondents who are not currently working.*

CATI CODE description: CEEMPCUR = 4.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CENWSRCH**

Even though you're currently employed, are you actively looking for a different job?

1 = YES

2 = NO

Applies to: *Respondents who are currently working.*

CATI CODE description: CEEMPCUR = 1,2.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CESRCHI**

What are some of the things you're doing to look for a job?

CODE UP TO 3 RESPONSES -- ENTER 0 FOR NONE OR NO MORE

1 = USING SCHOOL'S PLACEMENT OFFICE (REFERRAL, POSTED JOB NOTICE)

2 = RESPONDING TO INTERNET/WWW JOB NOTICE - ANY SOURCE

3 = RESPONDING TO NEWSPAPER/OTHER ADVERTISEMENT

4 = SENDING OUT RESUME/CONTACTED EMPLOYERS DIRECTLY

5 = NETWORKING WITH FRIENDS, RELATIVES, OR ACQUAINTANCES

6 = TALKING TO FACULTY/STAFF

7 = ATTENDING RECRUITING FAIRS, PROFESSIONAL MEETINGS

8 = VISITING UNEMPLOYMENT OFFICE, EMPLOYMENT COMMISSION POSTING/REFERRAL

9 = CONTACTING EMPLOYMENT AGENCY/PROFESSIONAL RECRUITER

10 = VOLUNTEERING

11 = OTHER

CESRCH1 (CESRCH2) (CESRCH3).

Applies to: *Respondents who are looking for a job.*

CATI CODE description: CESEARCH = 1 or CENWSRCH = 1.

Sources: B&B:2000/01 CATI

**CESRCH2**

See CESRCH1 for description.  
Applies to: *Respondents who are looking for a job.*  
CATI CODE description: CESEARCH = 1 or CENWSRCH = 1.  
Sources: B&B:2000/01 CATI

**CESRCH3**

See CESRCH1 for description.  
Applies to: *Respondents who are looking for a job.*  
CATI CODE description: CESEARCH = 1 or CENWSRCH = 1.  
Sources: B&B:2000/01 CATI

**CEOSRC1**

What are some of the things you did to find your current job?  
CODE UP TO 3 RESPONSES -- ENTER 0 FOR NONE OR NO MORE

- 1 = USED SCHOOL'S PLACEMENT OFFICE (REFERRAL, POSTED JOB NOTICE)
- 2 = RESPONDED TO INTERNET/WWW JOB NOTICE - ANY SOURCE
- 3 = RESPONDED TO NEWSPAPER/OTHER ADVERTISEMENT
- 4 = SENT OUT RESUME/CONTACTED EMPLOYERS DIRECTLY
- 5 = NETWORKED WITH FRIENDS, RELATIVES, OR ACQUAINTANCES
- 6 = TALKED TO FACULTY/STAFF
- 7 = ATTENDED RECRUITING FAIRS, PROFESSIONAL MEETINGS
- 8 = VISITED UNEMPLOYMENT OFFICE, EMPLOYMENT COMMISSION POSTING/REFERRAL
- 9 = CONTACTED EMPLOYMENT AGENCY/PROFESSIONAL RECRUITER
- 10 = VOLUNTEERED
- 11 = OTHER

CEOSRC1 (CEOSRC2) (CEOSRC3).  
Applies to: *Non-self-employed respondents who are currently working who are not currently searching for a new job.*  
CATI CODE description: ((CEEMPCUR = 1,2 and CENWSRCH = 0 and CESCHEMP= 2) or (CEEMPCUR = 1,2 and CECURTCH = 1 and CENWSRCH = 0)).  
Sources: B&B:2000/01 CATI

**CEOSRC2**

See CEOSRC1 for description.  
Applies to: *Non-self-employed respondents who are currently working who are not currently searching for a new job.*  
CATI CODE description: ((CEEMPCUR = 1,2 and CENWSRCH = 0 and CESCHEMP= 2) or (CEEMPCUR = 1,2 and CECURTCH = 1 and CENWSRCH = 0)).  
Sources: B&B:2000/01 CATI

**CEOSRC3**

See CEOSRC1 for description.  
Applies to: *Non-self-employed respondents who are currently working who are not currently searching for a new job.*  
CATI CODE description: ((CEEMPCUR = 1,2 and CENWSRCH = 0 and CESCHEMP= 2) or (CEEMPCUR = 1,2 and CECURTCH = 1 and CENWSRCH = 0)).  
Sources: B&B:2000/01 CATI

**CEBSTSRH**

Which one job search activity led to your current job?

- 1 = USED SCHOOL'S PLACEMENT OFFICE (REFERRAL, POSTED JOB NOTICE)
- 2 = RESPONDED TO INTERNET/WWW JOB NOTICE - ANY SOURCE
- 3 = RESPONDED TO NEWSPAPER/OTHER ADVERTISEMENT
- 4 = SENT OUT RESUME/CONTACTED EMPLOYERS DIRECTLY
- 5 = NETWORKED WITH FRIENDS, RELATIVES, OR ACQUAINTANCES
- 6 = TALKED TO FACULTY/STAFF
- 7 = ATTENDED RECRUITING FAIRS, PROFESSIONAL MEETINGS
- 8 = VISITED UNEMPLOYMENT OFFICE, EMPLOYMENT COMMISSION POSTING/REFERRAL
- 9 = CONTACTED EMPLOYMENT AGENCY/PROFESSIONAL RECRUITER
- 10 = VOLUNTEERED
- 11 = OTHER

Note: Not all responses were displayed for this item. The responses for this question were displayed depending on what the respondent had previously reported. For example, if in CEOSRC1, the respondent reported that options 2, 3, and 4 were used in the search to find the current job, then 2, 3, and 4 were displayed in this item and the respondent was asked to choose the best of the three.

Applies to: *Non-self-employed respondents who are currently working who are not currently searching for a new job.*

CATI CODE description: ((CEEMPCUR = 1,2 and CENWSRCH = 0 and CESCHEMP = 2) or (CEEMPCUR = 1,2 and CECURTCH = 1 and CENWSRCH = 0)) and CEOSRC1 > 0 and CEOSRC2 > 0.  
Sources: B&B:2000/01 CATI

### **CEFLEX**

Would you say your work schedule is very flexible, somewhat flexible, or not flexible at all? (Sometimes personal circumstances require that your work schedule be flexible.

Some employers are responding to this need by allowing their employees greater flexibility in the hours that they work and by allowing employees to telecommute or work from home.)

- 1 = VERY FLEXIBLE
- 2 = SOMEWHAT FLEXIBLE
- 3 = NOT FLEXIBLE AT ALL

Applies to: *All respondents who are currently working, excluding teachers.*

CATI CODE description: CEEMPCUR = 1,2 and CECURTCH = 0.  
Sources: B&B:2000/01 CATI

### **CEFLXCUR**

Would you be able to work at this job if you did not have the scheduling flexibility you have?

- 1 = YES
- 2 = NO

Applies to: *Respondents who are currently working and who have flexible work schedules, excluding teachers.*

CATI CODE description: CEEMPCUR = 1,2 and CECURTCH = 0 and CEFLEX = 1,2.

Note: "No" response recoded from 2 to 0.  
Sources: B&B:2000/01 CATI

### **CETELCOM**

Does your employer allow you to telecommute; that is, work from a location other than the office?

F5 = TELECOMMUTING DOES NOT MAKE SENSE FOR R'S JOB

- 1 = YES
- 2 = NO

Applies to: *All respondents who are currently working, excluding teachers.*

CATI CODE description: CEEMPCUR = 1,2 and CECURTCH = 0.

Note: "No" response recoded from 2 to 0.  
Sources: B&B:2000/01 CATI

### **CETELOFN**

About how often do you work from home or a location other than the office? Is it...

- 1 = Often - (MORE THAN ONCE A MONTH),
- 2 = Sometimes - (UP TO ONCE A MONTH) or
- 3 = Rarely or never

Applies to: *Respondents who are currently working and who sometimes telecommute during a typical working month, excluding teachers.*

CATI CODE description: CEEMPCUR = 1,2 and CECURTCH = 0 and CETELCOM = 1.  
Sources: B&B:2000/01 CATI

### **CFLICE1**

Do you hold an occupational license that is required by the federal, state, or local government before you may practice in a profession?

- 1 = YES
- 2 = NO

Applies to: *All respondents.*

Note: "No" response recoded from 2 to 0.  
Sources: B&B:2000/01 CATI



**CFLIC1**

PLEASE CODE LICENSE: [CFLICS1]

- |                                     |  |
|-------------------------------------|--|
| 1=Agriculture/Forestry/Pest         | 13=Education/Library/Admin               |
| 2=Architecture                      | 14=Cosmetology/Beautician/<br>Barber     |
| 3=Construction/Repair               | 15=Personal Services (Massage, etc)      |
| 4=Engineer/Engr In Training         | 16=Social Work/Therapy/Counseling        |
| 5=Mechanic-Auto/Air                 | 17=Physician/Dentist/<br>Pharmacist      |
| 6=Transportation                    | 18=Chiroprac/Optometrlist/<br>Podiatrist |
| 7=Communications/Broadcast          | 19=Nursing/Midwife/Phys Asst             |
| 8=Real Estate                       | 20=Med/Dent Tech/Therapy                 |
| 9=Insurance/Underwriting            | 21=Emt/Paramedic                         |
| 10=Cpa/Auditor/Broker               | 22=Other Health                          |
| 11=Law/Mediation                    | 23=Veterinarian/Vet Tech                 |
| 12=Public Safety/Law<br>Enforcement | 24=Other                                 |

Applies to: *Respondents who hold an occupational license.*

CATI CODE description: CFLICE1 = 1.

Sources: B&B:2000/01 CATI

**CFLAMT1**

See CFL1TIM for description.

Applies to: *Respondents who hold an occupational license.*

CATI CODE description: CFLICE1 = 1.

Sources: B&B:2000/01 CATI

**CFLT1M1**

About how much time was required for you to prepare for your license?

INCLUDE ANY ADDITIONAL COURSE WORK, APPRENTICESHIP/INTERNSHIP, OR PREPARATION BEYOND THE FORMAL DEGREE PROGRAM TO OBTAIN THE CERTIFICATION. EXCLUDE CLASS TIME NOT DIRECTLY RELATED TO OBTAINING/ TESTING FOR THE CERTIFICATION.

ENTER AMOUNT:

RANGE (0-10,000):

(CFLT1M1)

RECORD THE TIME SCALE OF THE AMOUNT. (FOR EXAMPLE: 2 MONTHS)

1 = HOURS

2 = DAYS

3 = WEEKS

4 = MONTHS

5 = YEARS

(CFLAMT1)

Applies to: *Respondents who hold an occupational license and who indicated an amount of time to prepare for the license.*

CATI CODE description: CFLICE1 = 1 and CFLAMT1 > 0.

Sources: B&B:2000/01 CATI

**Appendix C**  
**Facsimile Instruments**  
**CATI Facsimile**

**CFL1TIM**

Total hours-preparation-license 1.  
 Applies to: *Respondents who hold an occupational license and who indicated an amount of time to prepare for the license.*

CATI CODE description: CFLICE1 = 1 and CFLAMT1 > 0 and CFLTIM1 > 0.

Note: All responses were converted to hours. The following formula

was used to calculate CFL1TIM  
 if CFLTIM1=1 (hours) CFL1TIM = CFLAMT1  
 if CFLTIM1=2 (days) CFL1TIM = CFLAMT1 \* 8  
 if CFLTIM1=3 (weeks) CFL1TIM = CFLAMT1 \* 40  
 if CFLTIM1=4 (months) CFL1TIM = CFLAMT1 \* 173.33  
 if CFLTIM1=5 (years) CFL1TIM = CFLAMT1 \* 2080

Decimal amount rounded to the nearest integer.  
 Sources: B&B:2000/01 CATI

**CFLICE2**

Do you hold any other occupational license that is required by the federal, state, or local government before you may practice in a profession?

1 = YES  
 2 = NO

Applies to: *Respondents who hold an occupational license.*

CATI CODE description: CFLICE1 = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CFLIC2**

PLEASE CODE LICENSE: [CFLICS2]

- |                                  |                                      |
|----------------------------------|--------------------------------------|
| 1=Agriculture/Forestry/Pest      | 13=Education/Library/Admin           |
| 2=Architecture                   | 14=Cosmetology/Beautician/Barber     |
| 3=Construction/Repair            | 15=Personal Services (Massage,Etc)   |
| 4=Engineer/Engr In Training      | 16=Social Work/Therapy/Counseling    |
| 5=Mechanic-Auto/Air              | 17=Physician/Dentist/Pharmacist      |
| 6=Transportation                 | 18=Chiroprac/Optometrists/Podiatrist |
| 7=Communications/Broadcast       | 19=Nursing/Midwife/Phys Asst         |
| 8=Real Estate                    | 20=Med/Dent Tech/Therapy             |
| 9=Insurance/Underwriting         | 21=Emt/Paramedic                     |
| 10=Cpa/Auditor/Broker            | 22=Other Health                      |
| 11=Law/Mediation                 | 23=Veterinarian/Vet Tech             |
| 12=Public Safety/Law Enforcement | 24=Other                             |

Applies to: *Respondents who hold a second occupational license.*

CATI CODE description: CFLICE1 = 1 and CFLICE2 = 1.

Sources: B&B:2000/01 CATI

**CFLAMT2**

See CFLTIM2 for description.

Applies to: *Respondents who hold a second occupational license.*

CATI CODE description: CFLICE1 = 1 and CFLICE2 = 1.

Sources: B&B:2000/01 CATI

**CFLTIM2**

About how much time was required for you to prepare for your license?

INCLUDE ANY ADDITIONAL COURSE WORK, APPRENTICESHIP/INTERNSHIP, OR PREPARATION BEYOND THE FORMAL DEGREE PROGRAM TO OBTAIN THE LICENSE. EXCLUDE CLASS TIME NOT DIRECTLY RELATED TO OBTAINING/ TESTING FOR THE LICENSE.

ENTER AMOUNT:

RANGE (0-10,000)

(CFLTIM2)

RECORD THE TIME SCALE OF THE AMOUNT.

(FOR EXAMPLE: 2 MONTHS)

- 1 = HOURS
- 2 = DAYS
- 3 = WEEKS
- 4 = MONTHS
- 5 = YEARS

(CFLAMT2)

Applies to: *Respondents who hold a second occupational license and who indicated an amount of time to prepare for the license.*

CATI CODE description: CFLICE1 = 1 and CFLICE2 = 1 and CFLAMT2 > 0.

Sources: B&B:2000/01 CATI

**CFL2TIM**

Total hours-preparation time-license 2.  
Applies to: *Respondents who hold a second occupational license and who indicated an amount of time to prepare for the license.*

CATI CODE description: CFLICE1 = 1 and CFLICE2 = 1 and CFLAMT2 > 0 and CFLTIM2 > 0.

Note: All responses were converted to hours. The following formula was used to calculate CFL2TIM:  
if CFLTIM2=1 (hours) CFL2TIM = CFLAMT2  
if CFLTIM2=2 (days) CFL2TIM = CFLAMT2 \* 8  
if CFLTIM2=3 (weeks) CFL2TIM = CFLAMT2 \* 40  
if CFLTIM2=4 (months) CFL2TIM = CFLAMT2 \* 173.33  
if CFLTIM2=5 (years) CFL2TIM = CFLAMT2 \* 2080

Decimal amount rounded to the nearest integer.

Sources: B&B:2000/01 CATI

**CFCRTF1**

Do you hold professional certification in an occupational area? (By professional certification, I mean certification that allows you to qualify or advance in an occupational area, but is not required by law before you can actually begin work.)

1 = YES

2 = NO

Applies to: *All respondents.*

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CFCERT1**

PLEASE CODE CERTIFICATION: [CFCRSP1]

- |                                 |                                     |
|---------------------------------|-------------------------------------|
| 1=Agriculture/Forestry/Wildlife | 13=Automotive/Mechanic Repair       |
| 2=Archit/Construction/Bldg      | 14=Electronics/Electronics Repair   |
| 3=Business/Purchasing/Mngmt     | 15=Engineering Technician           |
| 4=Human Rel/Benefits            | 16=Manufacturing                    |
| 5=Financial                     | 17=Welding/Stone/Bldg Craftsman     |
| 6=Insurance                     | 18=Jewelry/Watch/Lens Craftsman     |
| 7=Communications/Broadcast      | 19=Professional Arts/Photography    |
| 8=Real Estate                   | 20=Fitness/Personal Training/Sports |
| 9=Vendor-Specific Computer Tech | 21=Medical/Dental                   |
| 10=Other Health-Related         | 22=Other Health-Related             |
| 11=Law/Public Safety            | 23=Child Care/Teacher Aide          |
| 12=Food Services                | 24=Other                            |

Applies to: *Respondents who hold a professional certification.*

CATI CODE description: CFCRTF1 = 1.

Sources: B&B:2000/01 CATI

**CFCROR1**

Were you certified by an industry, a company, or some other organization?

1 = INDUSTRY

2 = COMPANY

3 = OTHER.

Applies to: *Respondents who hold a professional certification.*

CATI CODE description: CFCRTF1 = 1.

Sources: B&B:2000/01 CATI

**CFCAMT1**

See CFC1TIM for description.

Applies to: *Respondents who hold a professional certification.*

CATI CODE description: CFCRTF1 = 1.

Sources: B&B:2000/01 CATI

**CFCTIM1**

About how much time was required for you to prepare for your certification?

INCLUDE ANY ADDITIONAL COURSE WORK, APPRENTICESHIP/INTERNSHIP, OR PREPARATION BEYOND THE FORMAL DEGREE PROGRAM TO OBTAIN THE CERTIFICATION. EXCLUDE CLASS TIME NOT DIRECTLY RELATED TO OBTAINING/ TESTING FOR THE CERTIFICATION.

ENTER AMOUNT:

RANGE (0-10,000) (CFCTIM1)

RECORD THE TIME SCALE OF THE AMOUNT. (FOR EXAMPLE: 2 MONTHS)

1 = HOURS

2 = DAYS

3 = WEEKS

4 = MONTHS

5 = YEARS

(CFCAMT1)

Applies to: *Respondents who hold a professional certification and who indicated an amount of time to prepare for the certification.*

CATI CODE description: CFCRTF1 = 1 and CFCAM1 > 0.

Sources: B&B:2000/01 CATI

**CFC1TIM**

Total hours-preparation-certification 1.  
 Applies to: *Respondents who hold a professional certification and who indicated an amount of time to prepare for the certification.*  
 CATI CODE description: CFCRTF1 = 1 and CFCAM1 > 0 and CFCTIM1 > 0.  
 Note: All responses were converted to hours. The following formula was used to calculate CFC1TIM:  
 if CFCTIM1=1 (hours) CFC1TIM = CFCAMT1  
 if CFCTIM1=2 (days) CFC1TIM = CFCAMT1 \* 8  
 if CFCTIM1=3 (weeks) CFC1TIM = CFCAMT1 \* 40  
 if CFCTIM1=4 (months) CFC1TIM = CFCAMT1 \* 173.33  
 if CFCTIM1=5 (years) CFC1TIM = CFCAMT1 \* 2080  
 Decimal amount rounded to the nearest integer.  
 Sources: B&B:2000/01 CATI

**CFREQ1**

Was this certification required by your employer for entry into your job?  
 1 = YES  
 2 = NO  
 Applies to: *Respondents who hold a professional certification.*  
 CATI CODE description: CFCRTF1 = 1.  
 Note: "No" response recoded from 2 to 0.  
 Sources: B&B:2000/01 CATI

**CFCRNO1**

COLLECT UP TO 3 RESPONSES. ENTER 0 FOR NO MORE REASONS.  
 Why did you take the certification exam?  
 1 = BETTER OPPORTUNITIES/ADVANCEMENT IN JOB  
 2 = CHANGE CAREERS  
 3 = INCREASED INCOME  
 4 = PERSONAL INTEREST  
 5 = OTHER  
 CFCRNO1 (CFCRNO2) (CFCRNO3)  
 Applies to: *Respondents who hold a professional certification that was not required for his/her job.*  
 CATI CODE description: CFCRTF1 = 1 and CFREQ1 = 0,-1.  
 Sources: B&B:2000/01 CATI

**CFCRNO2**

See CFCRNO1 for description.  
 Applies to: *Respondents who hold a professional certification that was not required for his/her job.*  
 CATI CODE description: CFCRTF1 = 1 and CFREQ1 = 0,-1.  
 Sources: B&B:2000/01 CATI

**CFCRNO3**

See CFCRNO1 for description.  
 Applies to: *Respondents who hold a professional certification that was not required for his/her job.*  
 CATI CODE description: CFCRTF1 = 1 and CFREQ1 = 0,-1.  
 Sources: B&B:2000/01 CATI

**CFCRTF2**

Do you hold any other professional certification in an occupational area?  
 1 = YES  
 2 = NO  
 Applies to: *Respondents who hold a professional certification.*  
 CATI CODE description: CFCRTF1 = 1.  
 Note: "No" response recoded from 2 to 0.  
 Sources: B&B:2000/01 CATI

**CFCERT2**

In what area are you certified?  
 1=Agriculture/Forestry/Wildlife  
 2=Archit/Construction/Bldg  
 3=Business/Purchasing/Mngmt  
 4=Human Rel/Benefits  
 5=Financial  
 6=Insurance  
 7=Communications/Broadcast  
 8=Real Estate  
 9=Vendor-Specific Computer Tech  
 10=Other Health-Related  
 11=Law/Public Safety  
 12=Food Services  
 13=Automotive/Mechanic Repair  
 14=Electronics/Electronics Repair  
 15=Engineering Technician  
 16=Manufacturing  
 17=Welding/Stone/Bldg Craftsman  
 18=Jewelry/Watch/Lens Craftsman  
 19=Professional Arts/Photography  
 20=Fitness/Personal Training/Sports  
 21=Medical/Dental  
 22=Other Health-Related  
 23=Child Care/Teacher Aide  
 24=Other  
 Applies to: *Respondents who hold a second professional certification*  
 CATI CODE description: CFCRTF1 = 1 and CFCRTF2 = 1.  
 Sources: B&B:2000/01 CATI

**CFCROR2**

Were you certified by an industry, a company, or some other organization?

- 1 = INDUSTRY
- 2 = COMPANY
- 3 = OTHER

Applies to: *Respondents who hold a second professional certification.*

CATI CODE description: CFCRTF1 = 1 and CFCRTF2 = 1.

Sources: B&B:2000/01 CATI

**CFCAMT2**

See CFC2TIM for description.

Applies to: *Respondents who hold a second professional certification.*

CATI CODE description: CFCRTF1 = 1 and CFCRTF2 = 1.

Sources: B&B:2000/01 CATI

**CFCTIM2**

About how much time was required for you to prepare for your certification?

INCLUDE ANY ADDITIONAL COURSE WORK, APPRENTICESHIP/INTERNSHIP, OR PREPARATION BEYOND THE FORMAL DEGREE PROGRAM TO OBTAIN THE CERTIFICATION. EXCLUDE CLASS TIME NOT DIRECTLY RELATED TO OBTAINING/TESTING FOR THE CERTIFICATION.

ENTER AMOUNT:

RANGE (0-10,000) (CFCTIM2)

RECORD THE TIME SCALE OF THE AMOUNT. (FOR EXAMPLE: 2 MONTHS)

- 1 = HOURS
- 2 = DAYS
- 3 = WEEKS
- 4 = MONTHS
- 5 = YEARS

(CFCAMT2)

Applies to: *Respondents who hold a second professional certification and who indicated an amount of time to prepare for the certification.*

CATI CODE description: CFCRTF1 = 1 and CFCRTF2 = 1 and CFCAMT2 > 0.

Sources: B&B:2000/01 CATI

**CFC2TIM**

Total hours-preparation-certification 1.

Applies to: *Respondents who hold a second professional certification and who indicated an amount of time to prepare for the certification.*

CATI CODE description: CFCRTF1 = 1 and CFCRTF2 = 1 and CFCAMT2 > 0 and CFCTIM2 > 0.

Note: All responses were converted to hours. The following formula was used to calculate CFC2TIM:

if CFCTIM2=1 (hours) CFC2TIM = CFCAMT2

if CFCTIM2=2 (days) CFC2TIM = CFCAMT2

\* 8

if CFCTIM2=3 (weeks) CFC2TIM =

CFCAMT2 \* 40

if CFCTIM2=4 (months) CFC2TIM =

CFCAMT2 \*173.33

if CFCTIM2=5 (years) CFC2TIM = CFCAMT2

\* 2080

Decimal amount rounded to the nearest integer.

Sources: B&B:2000/01 CATI

**CFREQ2**

Was this certification required by your employer for entry into your job?

1 = YES

2 = NO

Applies to: *Respondents who hold a second professional certification.*

CATI CODE description: CFCRTF1 = 1 and CFCRTF2 = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CFCER21**

COLLECT UP TO 3 RESPONSES. ENTER 0 FOR NO MORE REASONS.

Why did you take the certification exam?

1 = BETTER

OPPORTUNITIES/ADVANCEMENT IN JOB

2 = CHANGE CAREERS

3 = INCREASED INCOME

4 = PERSONAL INTEREST

5 = OTHER

CFCER21 (CFCER22) (CFCER23)

Applies to: *Respondents who hold a second professional certification that was not required for his/her job.*

CATI CODE description: CFCRTF1 = 1 and CFCRTF2 = 1 and CFREQ2 = 0.

Sources: B&B:2000/01 CATI

### **CFCER22**

See CFCER21 for description.

Applies to: *Respondents who hold a second professional certification that was not required for his/her job.*

CATI CODE description: CFCRTF1 = 1 and CFCRTF2 = 1 and CFREQ2 = 0.

Sources: B&B:2000/01 CATI

### **CFCER23**

See CFCER21 for description.

Applies to: *Respondents who hold a second professional certification that was not required for his/her job.*

CATI CODE description: CFCRTF1 = 1 and CFCRTF2 = 1 and CFREQ2 = 0.

Sources: B&B:2000/01 CATI

### **CFTRNOFR**

Is job-related or professional development training available through your current job?

1 = YES

2 = NO

Applies to: *Non-self-employed respondents who are currently working.*

CATI CODE description: CEEMPCUR = 1,2 and (CESCHEMP = 2,-1,-2, or CECURTCH = 1).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CFTRAIN**

Have you participated in any job-related training provided by your current employer in the past 12 months?

1 = YES

2 = NO

Applies to: *Non-self-employed respondents who are currently working in a place where job-related training is available.*

CATI CODE description: CEEMPCUR = 1,2 and (CESCHEMP = 2,-1,-2 or CECURTCH = 1) and CFTRNOFR = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CFTRNREQ**

Thinking about your last job-related training, was the training...

1 = Required by your employer,

2 = Encouraged by your employer, or

3 = Taken at your own initiative

Applies to: *Non-self-employed respondents who are currently working, who have participated in training/development in the past year.*

CATI CODE description: CEEMPCUR = 1,2 and (CESCHEMP = 2,-1,-2

or CECURTCH = 1) and CFTRNOFR = 1 and

CFTRAIN = 1.

Sources: B&B:2000/01 CATI

### **CFTRNON**

ENTER 1 = YES 2 = NO

Does your employer...

Give you time off from work to attend training at your workplace?

Applies to: *Non-self-employed respondents who are currently working, who have participated in training/development in the past year.*

CATI CODE description: CEEMPCUR = 1,2 and (CESCHEMP = 2-1,-2 or CECURTCH = 1) and CFTRNOFR = 1 and CFTRAIN = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CFOFFTRN**

ENTER 1 = YES 2 = NO

Does your employer...

Give you time off from work to attend training away from your workplace?

Applies to: *Non-self-employed respondents who are currently working, who have participated in training/development in the past year.*

CATI CODE description: CEEMPCUR = 1,2 and (CESCHEMP = 2-1,-2 or CECURTCH = 1) and CFTRNOFR = 1 and CFTRAIN = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CFCOST**

ENTER 1 = YES 2 = NO

Does your employer...

Pay all or part of the cost of training, including tuition or books?

Applies to: *Non-self-employed respondents who are currently working, who have participated in training/development in the past year.*

CATI CODE description: CEEMPCUR = 1,2 and (CESCHEMP = 2-1,-2 or CECURTCH = 1) and CFTRNOFR = 1 and CFTRAIN = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CFTRNWHY**

What is the primary purpose of your job-related training?

- 1 = TO KEEP UP TO DATE ON CURRENT JOB
- 2 = TO IMPROVE OR ADVANCE IN CURRENT JOB
- 3 = TO TRAIN FOR A NEW JOB OR A NEW CAREER
- 4 = OTHER

Applies to: *Non-self-employed respondents who are currently working, who have participated in training/development in the past year.*

CATI CODE description: CEEMPCUR = 1,2 and (CESCHEMP = 2-1,-2 or CECURTCH = 1) and CFTRNOFR = 1 and CFTRAIN = 1.

Sources: B&B:2000/01 CATI

**CFTRNCRT**

Will this training lead to some type of occupational license or professional certification?

0 = NO

1 = OCCUPATIONAL LICENSE

3 = PROFESSIONAL CERTIFICATION

Applies to: *Non-self-employed respondents who are currently working, who have participated in training/development in the past year.*

CATI CODE description: CEEMPCUR = 1,2 and (CESCHEMP = 2-1,-2 or CECURTCH = 1) and CFTRNOFR = 1 and CFTRAIN = 1.

Sources: B&B:2000/01 CATI

**CFTRTTP1**

What type of license will you earn?

- |                                  |  |
|----------------------------------|--|
| 1=Agriculture/Forestry/Pest      | 13=Education/Library/Admin               |
| 2=Architecture                   | 14=Cosmetology/Beautician/<br>Barber     |
| 3=Construction/Repair            | 15=Personal Services (Massage,Etc)       |
| 4=Engineer/Engr In Training      | 16=Social Work/Therapy/Counseling        |
| 5=Mechanic-Auto/Air              | 17=Physician/Dentist/<br>Pharmacist      |
| 6=Transportation                 | 18=Chiroprac/Optometrlist/<br>Podiatrist |
| 7=Communications/Broadcast       | 19=Nursing/Midwife/Phys Asst             |
| 8=Real Estate                    | 20=Med/Dent Tech/Therapy                 |
| 9=Insurance/Underwriting         | 21=Emt/Paramedic                         |
| 10=Cpa/Auditor/Broker            | 22=Other Health                          |
| 11=Law/Mediation                 | 23=Veterinarian/Vet Tech                 |
| 12=Public Safety/Law Enforcement | 24=Other                                 |

Applies to: *Non-self-employed respondents who are currently working who have participated in training/development in the past year and whose training/development will lead to some form of licensure.*

CATI CODE description: CEEMPCUR = 1,2 and (CESCHEMP = 2-1,-2 or CECURTCH = 1) and CFTRNOFR = 1 and CFTRAIN = 1 and CFTRNCRT = 1.

Sources: B&B:2000/01 CATI

### **CFCRTPI**

What type of certificate will you earn?

- |                                    |                                     |
|------------------------------------|-------------------------------------|
| 1=Agriculture/Forestry/ Wildlife   | 13=Automotive/Mechanic Repair       |
| 2=Archit/Construction/Bldg         | 14=Electronics/Electronics Repair   |
| 3=Business/Purchasing/Mngmt        | 15=Engineering Technician           |
| 4=Human Rel/Benefits               | 16=Manufacturing                    |
| 5=Financial                        | 17=Welding/Stone/Bldg Craftsman     |
| 6=Insurance                        | 18=Jewelry/Watch/Lens Craftsman     |
| 7=Communications/Broadcast         | 19=Professional Arts/ Photography   |
| 8=Real Estate                      | 20=Fitness/Personal Training/Sports |
| 9=Vendor-Specific Computer<br>Tech | 21=Medical/Dental                   |
| 10=Other Health-Related            | 22=Other Health-Related             |
| 11=Law/Public Safety               | 23=Child Care/Teacher Aide          |
| 12=Food Services                   | 24=Other                            |

Applies to: *Non-self-employed respondents who are currently working who have participated in training/development in the past year and whose training/development will lead to some form of professional certificate.*

CATI CODE description: CEEMPCUR = 1,2 and (CESCHEMP = 2-1,-2 or CECURTCH = 1) and CFTRNOFR = 1 and CFTRAIN = 1 and CFTRNCRT = 3.

Sources: B&B:2000/01 CATI

### **CFPRVOPP**

ENTER 1 = YES 2 = NO.

Would you say that the job-related training you have received in the past year has ...

Provided you with opportunities for other jobs you could not have gotten without training?

Applies to: *Non-self-employed respondents who are currently working, who have participated in training/development in the past year.*

CATI CODE description: CEEMPCUR = 1,2 and (CESCHEMP = 2 or CECURTCH = 1) and CFTRNOFR = 1 and CFTRAIN = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CFSALARY**

ENTER 1 = YES 2 = NO.

Would you say that the job-related training you have received in the past year has ...

Allowed you to earn higher salaries?

Applies to: *Non-self-employed respondents who are currently working, who have participated in training/development in the past year.*

CATI CODE description: CEEMPCUR = 1,2 and (CESCHEMP = 2-1,-2 or CECURTCH = 1) and CFTRNOFR = 1 and CFTRAIN = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CFRESP**

ENTER 1 = YES 2 = NO.

Would you say that the job-related training you have received in the past year has ...

Enabled you to take on more responsibility on the job?

Applies to: *Non-self-employed respondents who are currently working, who have participated in training/development in the past year.*

CATI CODE description: CEEMPCUR = 1,2 and (CESCHEMP = 2-1,-2 or CECURTCH = 1) and CFTRNOFR = 1 and CFTRAIN = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CFPROMO**

ENTER 1 = YES 2 = NO.

Would you say that the job-related training you have received in the past year has ...

Resulted in more opportunities for promotion?

Applies to: *Non-self-employed respondents who are currently working, who have participated in training/development in the past year.*

CATI CODE description: CEEMPCUR = 1,2 and (CESCHEMP = 2-1,-2 or CECURTCH = 1) and CFTRNOFR = 1 and CFTRAIN = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CFIMPROV**

ENTER 1 = YES 2 = NO.

Would you say that the job-related training you have received in the past year has ...

Improved your performance at your job?

Applies to: *Non-self-employed respondents who are currently working, who have participated in training/development in the past year.*

CATI CODE description: CEEMPCUR = 1,2 and (CESCHEMP = 2-1,-2 or CECURTCH = 1) and CFTRNOFR = 1 and CFTRAIN = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI



**CGFSPUPR**

Was this school...

INTERVIEWER: PROBE FOR AFFILIATION IF PRIVATE SCHOOL

- 1 = A public school operated by a local school district (or county district)?
- 2 = A PRIVATE CATHOLIC SCHOOL
- 3 = PRIVATE - OTHER RELIGIOUSLY AFFILIATED
- 4 = PRIVATE - NOT RELIGIOUSLY AFFILIATED
- 5 = A PUBLIC SCHOOL OPERATED BY STATE OR FEDERAL AGENCY (e.g., BIA, DOD, PRISON SCHOOL)?
- 6 = OTHER (CHARTER SCHOOL, HOSPITAL SCHOOL)

CGFSPUPR

[if CGCRPUPR eq <1>]

What is the school district? CGFSDIST  
What county is the school in? CGFSCNT0Y.

*Applies to: Respondents who have taught or are currently teaching, who have had more than one teaching job, excluding those whose first position was a substitute teachers, teachers' aides, and support teachers.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM >

1 and CGCURPOS not = 2,3,5.

Sources: B&B:2000/01 CATI

**CGCRPUPR**

Is this school...

INTERVIEWER: PROBE FOR AFFILIATION IF PRIVATE SCHOOL.

- 1 = A public school operated by a local school district (or county district)?
- 2 = A PRIVATE CATHOLIC SCHOOL
- 3 = PRIVATE - OTHER RELIGIOUSLY AFFILIATED
- 4 = PRIVATE - NOT RELIGIOUSLY AFFILIATED
- 5 = A PUBLIC SCHOOL OPERATED BY STATE OR FEDERAL AGENCY (e.g., BIA, DOD, PRISON SCHOOL)?
- 6 = OTHER (CHARTER SCHOOL, HOSPITAL SCHOOL)

CGCRPUPR

[if CGCRPUPR eq <1>]

What is the school district? (CGCRDIST)

What county is the school in? (CGCRCNTY)

*Applies to: Respondents who have taught or are currently teaching, excluding substitute teachers, teachers' aides, and support teachers.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGCURPOS not = 2,3,5.

Sources: B&B:2000/01 CATI

**CGTCHPST**

I'd like to ask you some questions about any experiences you may have had as a teacher. Have you worked as a teacher, a teacher's aide, or a substitute teacher at the K-12 level since you graduated from [bachelor's degree school]?

1 = YES

2 = NO

Applies to: *All respondents.*

Imputation Note: If CECURTCH = 1 then CGTCHPST = 1. If CGTCHPST in (-3,-7) and CECURTCH = 1 then CGTCHPST = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CGPSTNUM**

[if CECURTCH eq <1>]

You told me earlier that you are currently working as a teacher. How many K-12 teaching jobs have you held since graduating from [bachelor's degree school]?

[else]

How many K-12 teaching jobs have you held since graduating from [bachelor's degree school]?

RANGE (1-5):

Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1.

Sources: B&B:2000/01 CATI

**CGCURPOS**

What position do you currently hold / did you hold in your last teaching job? Were you...

1 = An elementary or secondary school teacher

2 = A substitute teacher

3 = A teacher's aide

4 = An itinerant teacher or

5 = A support teacher

Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1.

Sources: B&B:2000/01 CATI

### **CGSUBL2**

Are/Were you in a long-term substitute teaching position that has lasted 12 weeks or more?

- 1 = YES
- 2 = NO

Applies to: *Respondents who are/were a substitute teacher.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGCURPOS = 2.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CGSUBREG**

Did you accept that teaching position as a way to gain entry into a permanent teaching position?

- 1 = YES
- 2 = NO

Applies to: *Respondents who are/were a substitute teacher.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGCURPOS = 2.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CGAIDREG**

Did you accept a teacher's aide position as way to gain entry into a permanent teaching position?

- 1 = YES
- 2 = NO

Applies to: *Respondents who are/were a teacher's aide.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGCURPOS = 3.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CGCURMY**

When did you begin your current teaching job?

INTERVIEWER: EXCLUDE STUDENT TEACHING. IF THIS JOB IS PART OF AN ITINERANT ASSIGNMENT, ENTER THE DATES THE RESPONDENT BEGAN WORKING AS AN ITINERANT TEACHER FOR THE DISTRICT, NOT THE SCHOOL.

MONTH (1-12):

YEAR (1980-2001):

Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1.

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Sources: B&B:2000/01 CATI

### **CGLSTMY**

When did that job end?

Month (1-12):

Year (1999-2001):

Applies to: *Respondents who are no longer teaching.*

CATI CODE description: CGTCHPST = 1 and CECURTCH = 0.

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Sources: B&B:2000/01 CATI

### **CGFTPT**

Do / Did you work full-time or part-time in your current / most recent teaching job?

1 = FULL-TIME

2 = PART-TIME

Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1.

Sources: B&B:2000/01 CATI

### **CGCRCODE**

CCD/PSS code-current school. A derived variable that is the elementary or secondary school's identification number from the U.S. Department of Education's Common Core of Data (CCD) or the Private School Survey (PSS). The code is collected when the school is coded in B&B:2000/01 full-scale CATI.

Applies to: *Respondents who have taught or are currently teaching, excluding substitute teachers, teacher's aides, support teachers, and itinerant teachers.*

CATI CODE description: ((CECURTCH = 1 or CGTCHPST = 1) and (CGCURPOS = 1,-1,-2).

Sources: B&B:2000/01 CATI, CCD:97-98, PSS:98

### **CGCRSTAT**

State-Elem/Secondary school 2.

Applies to: *Respondents who have taught or are currently teaching, excluding short term substitute teachers and itinerant teachers.*

CATI CODE description: ((CECURTCH = 1 or CGTCHPST = 1) and (CGCURPOS = 1,3,5 or (CGCURPOS = 2 and CGSUBL = 1))).

Sources: B&B:2000/01 CATI

**CGLOGRD**

What are the lowest and highest grade(s) you teach/you were teaching at your most recent school?

- 0 = KINDERGARTEN
- 1 = FIRST GRADE
- 2 = SECOND GRADE
- 3 = THIRD GRADE
- 4 = FOURTH GRADE
- 5 = FIFTH GRADE
- 6 = SIXTH GRADE
- 7 = SEVENTH GRADE
- 8 = EIGHTH GRADE
- 9 = NINTH GRADE
- 10 = TENTH GRADE
- 11 = ELEVENTH GRADE
- 12 = TWELFTH GRADE
- 13 = UNGRADED

LOWEST: CGLOGRD  
HIGHEST: CGHIGRD

Applies to: *Respondents who have taught or are currently teaching, excluding substitute teachers, teacher's aides, and support teachers.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1 and CGCURPOS not =2,3,5.

Sources: B&B:2000/01 CATI

**CGHIGRD**

See CGLOGRD for description.

Applies to: *Respondents who have taught or are currently teaching, excluding substitute teachers, teacher's aides, and support teachers.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1 and CGCURPOS not =2,3,5.

Sources: B&B:2000/01 CATI

**CGLOW2**

What are the lowest and highest grades taught at this school?

- 0 = KINDERGARTEN
- 1 = FIRST GRADE
- 2 = SECOND GRADE
- 3 = THIRD GRADE
- 4 = FOURTH GRADE
- 5 = FIFTH GRADE
- 6 = SIXTH GRADE
- 7 = SEVENTH GRADE
- 8 = EIGHTH GRADE
- 9 = NINTH GRADE
- 10 = TENTH GRADE
- 11 = ELEVENTH GRADE
- 12 = TWELFTH GRADE
- 13 = UNGRADED

LOWEST: CGLOW2

HIGHEST: CGHIGH2

Applies to: *Respondents who have taught or are currently teaching, excluding substitute teachers, teacher's aides, and support teachers.*

CATI CODE description: CECURTCH = 1 or . CGTCHPST = 1 and CGCURPOS not =2,3,5.

Note: NCES PSS/CCD data were merged with this question. There are some missing data in PSS/CCD.

Sources: B&B:2000/01 CATI

**CGHIGH2**

See CGLOW2 for description.

Applies to: *Respondents who have taught or are currently teaching, excluding substitute teachers, teacher's aides, and support teachers.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1 and CGCURPOS not =2,3,5.

Note: NCES PSS/CCD data were merged with this question. There are some missing data in PSS/CCD.

Sources: B&B:2000/01 CATI

**CGTCHS1**

What subject(s) do/did you teach at your most recent school?

COLLECT UP TO 3. ENTER 0 FOR NO MORE.

- 1 = ART/DRAMA/MUSIC
- 2 = BUSINESS
- 3 = ECONOMICS/POLITICAL SYSTEMS
- 4 = ELEMENTARY/EARLY CHILDHOOD EDUCATION
- 5 = ENGLISH/JOURNALISM/ READING/CREATIVE WRITING
- 6 = ESL/BILINGUAL
- 7 = FOREIGN LANGUAGES
- 8 = HEALTH/PHYSICAL EDUCATION
- 9 = MATH
- 10 = SCIENCE
- 11 = SECONDARY EDUCATION
- 12 = SPECIAL EDUCATION
- 13 = SOCIAL STUDIES/ HISTORY/CIVICS
- 14 = VOCATIONAL/OCCUPATIONAL
- 15 = OTHER

CGTCHS1 (CGTCHS2) (CGTCHS3)

Applies to: *Respondents who have taught or are currently teaching, excluding substitute teachers, teacher's aides, and support teachers.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1 and CGCURPOS not =2,3,5.

Sources: B&B:2000/01 CATI

### **CGTCHS2**

See CGTCHS1 for description.

Applies to: *Respondents who have taught or are currently teaching, excluding substitute teachers, teacher's aides, and support teachers.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1 and CGCURPOS not = 2,3,5.

Sources: B&B:2000/01 CATI

### **CGTCHS3**

See CGTCHS1 for description.

Applies to: *Respondents who have taught or are currently teaching, excluding substitute teachers, teacher's aides, and support teachers.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1 and CGCURPOS not = 2,3,5.

Sources: B&B:2000/01 CATI

### **CGSBCR1**

[if CGTCHPST eq <1>]

When you last taught, were you certified to teach [CGTCHS1]?

[else]

Are you certified to teach [CGTCHS1]?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching at least one subject, excluding substitute teachers, teacher's aides, and support teachers.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGTCHS1 > 0 and CGTCHS1 not = 15 and CGCURPOS not = 2,3,5.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CGSBCR2**

[if CGTCHPST eq <1>]

When you last taught, were you certified to teach [CGTCHS2]?

[else]

Are you certified to teach [CGTCHS2]?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching at least two subjects, excluding substitute teachers, teacher's aides, and support teachers.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGTCHS1 > 0

and CGTCHS2 > 0 and CGTCHS2 not = 15 and CGCURPOS not = 2,3,5.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CGSBCR3**

[if CGTCHPST eq <1>]

When you last taught, were you certified to teach [CGTCHS3]?

[else]

Are you certified to teach [CGTCHS3]?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching at least three subjects, excluding substitute teachers, teacher's aides, and support teachers.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGTCHS1 > 0 and CGTCHS2 > 0 and CGTCHS3 > 0 and CGTCHS3 not = 15 and CGCURPOS not = 2,3,5.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CGCRTF1**

In what other field(s) are/were you certified?

F5 = NOT CERTIFIED IN ANY AREA.

ENTER 0 FOR NO MORE. COLLECT UP TO 3.

1 = ART/DRAMA/MUSIC

2 = BUSINESS

3 = ECONOMICS/POLITICAL SYSTEMS

4 = ELEMENTARY/EARLY  
CHILDHOOD EDUCATION

5 = ENGLISH/JOURNALISM/  
READING/CREATIVE WRITING

6 = ESL/BILINGUAL

7 = FOREIGN LANGUAGES

8 = HEALTH/PHYSICAL EDUCATION

9 = MATH

10 = SCIENCE

11 = SECONDARY EDUCATION

12 = SPECIAL EDUCATION

13 = SOCIAL STUDIES/ HISTORY/CIVICS

14 = VOCATIONAL/OCCUPATIONAL

15 = OTHER

CGCRTF1 (CGCRTF2) (CGCRTF3)

Applies to: *Respondents who have taught or are currently teaching, excluding substitute teachers, teacher's aides, and support teachers.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1 and CGCURPOS not = 2,3,5.

Note: If CGCRTF1 = -5 respondent is not certified in any area. If CGCRTF1 = -5 then CGCRTF1 = 0.

Sources: B&B:2000/01 CATI

### CGCRTF2

See CGCRTF1 for description.

Applies to: *Respondents who have taught or are currently teaching and who are certified in other fields, excluding substitute teacher, teacher's aides, and support teachers.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1 and CGCRTF1 not = -5 and CGCURPOS not = 2,3,5.

Note: If CGCRTF1 = -5 respondent is not certified in any area. If

CGCRTF1 = -5 then CGCRTF1 = 0.

Sources: B&B:2000/01 CATI

### CGCRTF3

See CGCRTF1 for description.

Applies to: *Respondents who have taught or are currently teaching and who are certified in other fields, excluding substitute teachers, teacher's aides, and support teachers.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1 and CGCRTF1 not = -5 and CGCURPOS not = 2,3,5.

Note: If CGCRTF1 = -5 respondent is not certified in any area. If CGCRTF1 = -5 then CGCRTF1 = 0.

Sources: B&B:2000/01 CATI

### CGNUMCLS

(In your current teaching job,) / (In your last teaching job,) How many periods or sections do / did you teach per day?

RANGE (1-10):

F5 = SELF-CONTAINED CLASSROOM

NOTE: IF R IS AN ITINERANT TEACHER, ANSWER THE FOLLOWING QUESTIONS ABOUT HIS/HER STATUS AS A WHOLE - NOT AT INDIVIDUAL SCHOOLS

Applies to: *Respondents who have taught or are currently teaching, excluding substitute teachers, teacher's aides, and support teachers.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1 and CGCURPOS not = 2,3,5.

Sources: B&B:2000/01 CATI

### CGNUMSTU

What is/was the average size of your classes?

RANGE (1-240):

PER CLASS

Applies to: *Respondents who have taught or are currently teaching, excluding substitute teachers, teacher's aides, and support teachers.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1 and CGCURPOS not = 2,3,5.

Sources: B&B:2000/01 CATI

### CGNUMSP

What is/was the average size of your classes?

PER DAY

Applies to: *Respondents who have taught or are currently teaching, excluding substitute teachers, teacher's aides, and support teachers.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1 and CGCURPOS not = 2,3,5.

Sources: B&B:2000/01 CATI

### CGTEAM

In your job as a/an [CGCURPOS], do / did you teach your classes with another teacher?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CGFSTPOS

Now I have some questions about the school in which you first taught. What type of position did you hold in your first teaching job? Were you...

1 = An elementary or secondary school teacher

2 = A substitute teacher

3 = A teacher's aide

4 = An itinerant teacher or

5 = A support teacher

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM >1.

Sources: B&B:2000/01 CATI

**CGFSUBL2**

In your first teaching job, were you in a long-term substitute position that lasted 12 weeks or more?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job, who worked as a substitute in their first position.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM >

1 and CGFSTPOS = 2.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CGFSUBRG**

Did you accept that teaching position as a way to gain entry into a permanent teaching position?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job, who worked as a substitute in their first position.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM >1 and

CGFSTPOS = 2.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CGAFIDRG**

Did you accept a teacher's aide position as way to gain entry into a regular teaching position?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job, who worked as a teacher's aide their first position.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM >

1 and CGFSTPOS = 3.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CGFSTBMY**

When did you begin your first teaching job?

INTERVIEWER: EXCLUDE STUDENT TEACHING. IF THIS JOB WAS PART OF AN ITINERANT ASSIGNMENT, ENTER THE DATES THE RESPONDENT BEGAN WORKING AS AN ITINERANT TEACHER FOR THE DISTRICT, NOT THE SCHOOL.

MONTH (1-12):

YEAR (1980-2001):

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM >1.

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Sources: B&B:2000/01 CATI

**CGFSTEMY**

When did that job (your first job) end?

MONTH (1-12):

YEAR (1999-2001):

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM >1.

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Sources: B&B:2000/01 CATI

**CGFSTFPT**

Did you work full-time or part-time in your first teaching job?

1 = FULL-TIME

2 = PART-TIME

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM >1.

Sources: B&B:2000/01 CATI

**CGFSCODE**

CCD/PSS code-first school

A derived variable that is the elementary or secondary school's identification number from the U.S. Department of Education's Common Core of Data (CCD) or the Private School Survey (PSS). The code is collected when the school is coded in B&B:2000/01 full-scale CATI.

Applies to: *Respondents who have taught or are currently teaching, excluding substitute teachers, teacher's aides, support teachers and itinerant teachers, who have had more than one teaching job.*

CATI CODE description: ((CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM > 1 and (CGFSTPOS = 1,-1).

Sources: B&B:2000/01 CATI, CCD:97-98, PSS:98

**CGFSSTAT**

State-Elem/Secondary school 1.

Applies to: *Respondents who have taught or are currently teaching, excluding short-term substitute teachers and itinerant teachers, who have had more than one teaching job.*

CATI CODE description: ((CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM > 1 and (CGFSTPOS = 1,3,5,-1 or (CGFSTPOS = 2 and CGFSUBL2 = 1))).

Sources: B&B:2000/01 CATI

**CGLOW1**

What were the lowest and highest grades taught at your first school?

- 0 = KINDERGARTEN
- 1 = FIRST GRADE
- 2 = SECOND GRADE
- 3 = THIRD GRADE
- 4 = FOURTH GRADE
- 5 = FIFTH GRADE
- 6 = SIXTH GRADE
- 7 = SEVENTH GRADE
- 8 = EIGHTH GRADE
- 9 = NINTH GRADE
- 10 = TENTH GRADE
- 11 = ELEVENTH GRADE
- 12 = TWELFTH GRADE
- 13 = UNGRADED

LOWEST: CGLOW1

HIGHEST: CGHIGH1

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job, excluding those whose first position was a substitute, teachers's aides, or support position.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM > 1 and CGFSTPOS not = 2,3,5.  
Sources: B&B:2000/01 CATI

**CGHIGH1**

See CGLOW1 for description.

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job, excluding those whose first position was a substitute, teacher's aides, or support position.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM > 1 and CGFSTPOS not = 2,3,5.

Sources: B&B:2000/01 CATI

**CGLOGR1**

What were the lowest and highest grade(s) you taught at your first school?

- 0 = KINDERGARTEN
- 1 = FIRST GRADE
- 2 = SECOND GRADE
- 3 = THIRD GRADE
- 4 = FOURTH GRADE
- 5 = FIFTH GRADE
- 6 = SIXTH GRADE
- 7 = SEVENTH GRADE
- 8 = EIGHTH GRADE
- 9 = NINTH GRADE
- 10 = TENTH GRADE
- 11 = ELEVENTH GRADE
- 12 = TWELFTH GRADE
- 13 = UNGRADED

LOWEST: CGLOGR1

HIGHEST: CGHIGR1

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job, excluding those whose first position was a substitute, teacher's aides, or support position.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM > 1 and CGFSTPOS not = 2,3,5.

Sources: B&B:2000/01 CATI

**CGHIGR1**

See CGLOGR1 for description.

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job, excluding those whose first position was a substitute, teacher's aides, or support position.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM >1 and CGFSTPOS not = 2,3,5.

Sources: B&B:2000/01 CATI

**CGFSTS1**

What subject(s) did you teach at your first school?

COLLECT UP TO 3. ENTER 0 FOR NO MORE.

- 1 = ART/DRAMA/MUSIC
- 2 = BUSINESS
- 3 = ECONOMICS/POLITICAL SYSTEMS
- 4 = ELEMENTARY/EARLY CHILDHOOD EDUCATION
- 5 = ENGLISH/JOURNALISM/READING/ CREATIVE WRITING
- 6 = ESL/BILINGUAL
- 7 = FOREIGN LANGUAGES
- 8 = HEALTH/PHYSICAL EDUCATION
- 9 = MATH
- 10 = SCIENCE
- 11 = SECONDARY EDUCATION
- 12 = SPECIAL EDUCATION
- 13 = SOCIAL STUDIES/ HISTORY/CIVICS
- 14 = VOCATIONAL/OCCUPATIONAL
- 15 = OTHER

CGFSTS1 (CGFSTS2) (CGFSTS3)

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job, excluding those whose first position was a substitute, teacher's aides, or support position.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM > 1 and CGFSTPOS not = 2,3,5.

Sources: B&B:2000/01 CATI

**CGFSTS2**

See CGFSTS1 for description.

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job, excluding those whose first position was a substitute, teacher's aides, or support position.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM > 1 and CGFSTPOS not = 2,3,5.

Sources: B&B:2000/01 CATI

**CGFSTS3**

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job, excluding those whose first position was a substitute, teacher's aides, or support position.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM > 1 and CGFSTPOS not = 2,3,5.

Sources: B&B:2000/01 CATI

**CGSB1C1**

In your first teaching job, were you certified to teach [CGFSTS1]?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job, excluding those whose first position was a substitute, teacher's aides, or support position.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM > 1 and CGFSTS1 > 0 and CGFSTS1 not = 15 and CGCRTF1 not = -5 and CGFSTPOS not = 2,3,5.

Note: "No" response recoded from 2 to 0. If CGCRTF1 = -5 respondent is not certified in any area. If CGCRTF1 = -5 then CGSB1C1 = -3.

If CGCRTF1 = -5 then CGCRTF1 = 0.

Sources: B&B:2000/01 CATI



### CGSB1C2

In your first teaching job, were you certified to teach [CGFSTS2]?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job, excluding those whose first position was a substitute, teacher's aides, or support position.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM > 1 and CGFSTS1 > 0 and CGFSTS2 > 0 and CGFSTS2 not = 15 and CGCRTF1 not = -5 and CGFSTPOS not = 2,3,5.

Note: "No" response recoded from 2 to 0. If CGCRTF1 = -5 respondent is not certified in any area. If CGCRTF1 = -5 then CGSB1C2 = -3. If CGCRTF1 = -5 then CGCRTF1 = 0.

Sources: B&B:2000/01 CATI

### CGSB1C3

In your first teaching job, were you certified to teach [CGFSTS3]?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job, excluding those whose first position was a substitute, teacher's aides, or support position.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM > 1 and CGFSTS1 > 0 and CGFSTS2 > 0 and CGFSTS3 > 0 and CGFSTS3 not = 15 and CGCRTF1 not = -5 and CGFSTPOS not = 2,3,5.

Note: "No" response recoded from 2 to 0. If CGCRTF1 = -5 respondent is not certified in any area.

If CGCRTF1 = -5 then CGSB1C3 = -3.

If CGCRTF1 = -5 then CGCRTF1 = 0.

Sources: B&B:2000/01 CATI

### CGFSTCLS

In your first teaching job, how many periods or sections did you teach per day?

F5 = SELF-CONTAINED CLASSROOM

RANGE (1-10):

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job, excluding those whose first position was a substitute, teacher's aides, or support position.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM > 1 and CGFSTPOS not = 2,3,5.

Sources: B&B:2000/01 CATI

### CGFSTSTU

(In your first teaching job,) What was the average size of your classes?

RANGE (1-240):

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job, excluding those whose first position was a substitute, teacher's aides, or support position.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM > 1 and CGFSTPOS not = 2,3,5.

Sources: B&B:2000/01 CATI

### CGFSTSP

(In your first teaching job,) What was the average size of your classes?

1 = PER CLASS

2 = PER DAY

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job, excluding those whose first position was a substitute, teacher's aides, or support position.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM > 1 and CGFSTPOS not = 2,3,5.

Sources: B&B:2000/01 CATI

**CGFSTTEM**

(In your first teaching job,) Did you teach your classes with another teacher?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching, who have had more than one teaching job.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPSTNUM > 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CGPRGCMP**

Before you started teaching, did you complete a teacher education program?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching, who are not currently certified to teach.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and (CGSBCR1 not = 1 and CGSBCR2 not = 1 and CGSBCR3 not = 1 and CGSB1C1 not = 1 and CGSB1C2 not = 1 and CGSB1C3 not = 1).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CGCRTMY**

In what month and year were you first certified to teach?

MONTH (1-12):

YEAR (1999-2001):

Applies to: *Respondents who have taught or are currently teaching, who are currently licensed or certified to teach grades K-12.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and ((CGSBCR1 = 1 or CGSBCR2 = 1 or CGSBCR3 = 1 or CGSB1C1 = 1 or CGSB1C2 = 1 or CGSB1C3 = 1) and CGPRGCMP not = 1).

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Sources: B&B:2000/01 CATI

**CGCRTTYP**

What is the highest certificate you hold?

1 = REGULAR/STANDARD STATE CERTIFICATE

2 = PROBATIONARY CERTIFICATE

3 = TEMPORARY CERTIFICATE

4 = EMERGENCY CERTIFICATE

5 = OTHER.

Applies to: *Respondents who have taught or are currently teaching, who are currently licensed or certified to teach grades K-12.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and ((CGSBCR1 = 1 or CGSBCR2 = 1 or CGSBCR3 = 1 or CGSB1C1 = 1 or CGSB1C2 = 1 or

CGSB1C3 = 1) and CGPRGCMP not = 1.

Sources: B&B:2000/01 CATI

**CGEXAM**

Have you already taken the national or a state-level teacher certification exam?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching, who have not completed a teacher education program and are not currently certified to teach or who currently hold an emergency certificate.*

CATI CODE description: ((CECURTCH = 1 or CGTCHPST = 1) and CGPRGCMP not = 1 and ((CGSBCR1 not = 1 and CGSBCR2 not = 1 and CGSBCR3 not = 1 and CGSB1C1 not = 1 and CGSB1C2 not = 1 and CGSB1C3 not = 1) or ((CGSBCR1 = 1 or CGSBCR2 = 1 or CGSBCR3 = 1 or CGSB1C1 = 1 or CGSB1C2 = 1 or CGSB1C3 = 1) and CGCRTTYP = 4))).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CGPASS

Did you pass the exam?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching, who have not completed a teacher education program and are not currently certified to teach or who currently hold an emergency certificate and who have taken the national or state-level teacher certification exam.*

CATI CODE description: (((CECURTCH = 1 or CGTCHPST = 1) and CGPRGCMP not = 1 and ((CGSBCR1 not = 1 and CGSBCR2 not = 1 and CGSBCR3 not =

1 and CGSB1C1 not = 1 and CGSB1C2 not = 1 and CGSB1C3 not = 1) or

((CGSBCR1 = 1 or CGSBCR2 = 1 or CGSBCR3 = 1 or CGSB1C1 = 1 or CGSB1C2 = 1 or CGSB1C3 = 1) and CGCRTTYP = 4))) and CGEXAM = 1).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CGPLAN

Are you planning to take either exam?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching, who have not completed a teacher education program and are not currently certified to teach or who currently hold an emergency certificate and who have not taken the national or state-level teacher certification exam.*

CATI CODE description: (((CECURTCH = 1 or CGTCHPST = 1) and CGPRGCMP not = 1 and ((CGSBCR1 not = 1 and CGSBCR2 not = 1 and CGSBCR3 not =

1 and CGSB1C1 not = 1 and CGSB1C2 not = 1 and CGSB1C3 not = 1) or

((CGSBCR1 = 1 or CGSBCR2 = 1 or CGSBCR3 = 1 or CGSB1C1 = 1 or CGSB1C2 = 1 or CGSB1C3 = 1) and CGCRTTYP = 4))) and CGEXAM = 0).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CGCRTCRS

In the past 2 years, have you taken any courses that would prepare you to be certified as a teacher?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching, who have not completed a teacher education program and not taken any exams.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPRGCMP not = 1 and

CGEXAM = 0.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CGSTDTCH

(Before you started teaching), Did you complete your student teaching?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching, who have not completed a teacher education program, have not taken the national or state-level teacher certification exams, have not taken any courses that would prepare them for certification, and who currently hold an emergency certificate.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and CGPRGCMP not = 1 and CGEXAM = 0 and CGCRTTYP not = 1,2,3,5 and CGCRTCRSnot = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CGOTHCRT

Do you have certification from any other accrediting organizations?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CGINTRN

Now I'd like to ask you about your experiences as a teacher. In your first teaching job, did you participate in a teacher internship program?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching, excluding respondents who have only been a substitute teacher, a teacher's aide, or a support teacher in their first and current positions.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1 and ((CGCURPOS not = 2,3,5 and CGFSTPOS not = 2,3,5) or (CGPSTNUM > 1 and CGCURPOS not = 2,3,5)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CGINDUCT**

(In your first teaching job), Did you participate in a formal teacher induction program that assigns new teachers to master or mentor teachers for their first year?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching, excluding respondents who have only been a substitute teacher, a teacher's aide, or a support teacher in their first and current positions.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1 and ((CGCURPOS not = 2,3,5 and CGFSTPOS not = 2,3,5) or (CGPSTNUM > 1 and CGCURPOS not = 2,3,5)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CGDISPLN**

1 = AGREE 2 = DISAGREE

Do you agree or disagree that your school is effective in helping new teachers...

With student discipline?

Applies to: *Respondents who have taught or are currently teaching, excluding respondents who have only been a substitute teacher, a teacher's aide, or a support teacher in their first and current positions.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1 and ((CGCURPOS not = 2,3,5 and CGFSTPOS not = 2,3,5) or (CGPSTNUM > 1 and CGCURPOS not = 2,3,5)).

Sources: B&B:2000/01 CATI

### **CGINSTRC**

1 = AGREE 2 = DISAGREE

Do you agree or disagree that your school is effective in helping new teachers...

With instructional methods?

Applies to: *Respondents who have taught or are currently teaching, excluding respondents who have only been a substitute teacher, a teacher's aide, or a support teacher in their first and current positions.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1 and ((CGCURPOS not = 2,3,5 and CGFSTPOS not = 2,3,5) or (CGPSTNUM > 1 and CGCURPOS not = 2,3,5)).

Sources: B&B:2000/01 CATI

### **CGCURRCL**

1 = AGREE 2 = DISAGREE

Do you agree or disagree that your school is effective in helping new teachers...

With the curriculum?

Applies to: *Respondents who have taught or are currently teaching, excluding respondents who have only been a substitute teacher, a teacher's aide, or a support teacher in their first and current positions.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1 and ((CGCURPOS not = 2,3,5 and CGFSTPOS not = 2,3,5) or (CGPSTNUM > 1 and CGCURPOS not = 2,3,5)).

Sources: B&B:2000/01 CATI

### **CGADJUST**

1 = AGREE 2 = DISAGREE

Do you agree or disagree that your school is effective in helping new teachers...

Adjust to school environment?

Applies to: *Respondents who have taught or are currently teaching, excluding respondents who have only been a substitute teacher, a teacher's aide, or a support teacher in their first and current positions.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1 and ((CGCURPOS not = 2,3,5 and CGFSTPOS not = 2,3,5) or (CGPSTNUM > 1 and CGCURPOS not = 2,3,5)).

Sources: B&B:2000/01 CATI

### **CGMAJSAM**

Earlier, you gave me a list of subjects you've taught since graduating from [bachelor's degree school]. In college, did you major in any of these subjects?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching who have taught one or more subjects and for whom there is no preloaded major, excluding substitute teachers, teacher's aides, and support teachers.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1 and YMAJOR = -9 and (CGTCHS1 > 0 or CGTCHS2 > 0 or CGTCHS3 > 0 or CGFSTS1 > 0 or CGFSTS2 > 0 or CGFSTS3 > 0) and ((CGCURPOS not = 2,3,5 and CGFSTPOS not = 2,3,5) or (CGPSTNUM > 1 and CGCURPOS not = 2,3,5)).

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CGSBM1

What did you major in?

COLLECT UP TO 3. ENTER 0 WHEN DONE.

- 1 = ART/DRAMA/MUSIC
- 2 = BUSINESS
- 3 = ECONOMICS/POLITICAL SYSTEMS
- 4 = ELEMENTARY/EARLY CHILDHOOD EDUCATION
- 5 = ENGLISH/JOURNALISM/READING/ CREATIVE WRITING
- 6 = ESL/BILINGUAL
- 7 = FOREIGN LANGUAGES
- 8 = HEALTH/PHYSICAL EDUCATION
- 9 = MATH
- 10 = SCIENCE
- 11 = SECONDARY EDUCATION
- 12 = SPECIAL EDUCATION
- 13 = SOCIAL STUDIES/ HISTORY/CIVICS
- 14 = VOCATIONAL/OCCUPATIONAL
- 15 = OTHER

CGSBM1 (CGSBM2) (CGSBM3)

Applies to: *Respondents who have taught or are currently teaching who have taught one or more subjects and for whom there is no preloaded major, excluding substitute teachers, teacher's aides, and support teachers.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and YMAJOR = -9 and (CGTCHS1 > 0 or CGTCHS2 > 0 or CGTCHS3 > 0 or CGFSTS1 > 0 or CGFSTS2 > 0 or CGFSTS3 > 0) and ((CGCURPOS not = 2,3,5 and CGFSTPOS not = 2,3,5) or (CGPSTNUM > 1 and CGCURPOS not = 2,3,5)).

Sources: B&B:2000/01 CATI

### CGSBM2

See CGSBM1 for description.

Applies to: *Respondents who have taught or are currently teaching who have taught one or more subjects and for whom there is no preloaded major, excluding substitute teachers, teacher's aides, and support teachers.*

CATI CODE description: (CECURTCH = 1 or CGTCHPST = 1) and YMAJOR = -9 and (CGTCHS1 > 0 or CGTCHS2 > 0 or CGTCHS3 > 0 or CGFSTS1 > 0 or CGFSTS2 > 0 or CGFSTS3 > 0) and ((CGCURPOS not = 2,3,5 and CGFSTPOS not = 2,3,5) or (CGPSTNUM > 1 and CGCURPOS not = 2,3,5)).

Note: If CGTCHS2 = -1,-2 then CGSBM2 = -1.

Sources: B&B:2000/01 CATI

### CGSTTCH

ENTER 1=VERY WELL 2=MODERATELY WELL 3=NOT AT ALL.

How well did each of the following prepare you for teaching?

Would you say very well, moderately well, or not at all?

Your student teaching or internship experience?  
Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description:

CECURTCH = 1 or CGTCHPST = 1.

Sources: B&B:2000/01 CATI

### CGEDCRS

ENTER 1=VERY WELL 2=MODERATELY WELL 3=NOT AT ALL.

How well did each of the following prepare you for teaching?

Would you say very well, moderately well, or not at all?

Your education courses/TEACHING METHODS?  
Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1.

Sources: B&B:2000/01 CATI

### CGACDMC

ENTER 1=VERY WELL 2=MODERATELY WELL 3=NOT AT ALL.

How well did each of the following prepare you for teaching?

Would you say very well, moderately well, or not at all?

Your academic courses in college/SUBJECT MATTER?

Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1.

Sources: B&B:2000/01 CATI

**CGSUBJCT**

ENTER 1=VERY WELL 2=MODERATELY WELL 3=NOT AT ALL.

How well prepared do/did you feel to..

Teach the subjects that you teach/taught?

Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1.

Sources: B&B:2000/01 CATI

**CGTECH**

ENTER 1=VERY WELL 2=MODERATELY WELL 3=NOT AT ALL.

How well prepared do/did you feel to...

Integrate educational technology into the grade or subjects that you teach/taught?

Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1.

Sources: B&B:2000/01 CATI

**CGMANAGE**

ENTER 1=VERY WELL 2=MODERATELY WELL 3=NOT AT ALL.

How well prepared do/did you feel to...

Manage classroom discipline?

Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1.

Sources: B&B:2000/01 CATI

**CGMTVTN**

ENTER 1=VERY SATISFIED 2=SOMEWHAT SATISFIED 3=NOT SATISFIED.

In your most recent teaching job, are/were you very satisfied, somewhat satisfied, or not satisfied with each of the following aspects of teaching?

Student motivation to learn?

Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1.

Sources: B&B:2000/01 CATI

**CGENVMNT**

ENTER 1=VERY SATISFIED 2=SOMEWHAT SATISFIED 3=NOT SATISFIED.

In your most recent teaching job, are/were you very satisfied, somewhat satisfied, or not satisfied with each of the following aspects of teaching?

School learning environment?

Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1.

Sources: B&B:2000/01 CATI

**CGBEHAVE**

ENTER 1=VERY SATISFIED 2=SOMEWHAT SATISFIED 3=NOT SATISFIED.

In your most recent teaching job, are/were you very satisfied, somewhat satisfied, or not satisfied with each of the following aspects of teaching?

Student discipline and behavior?

Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1.

Sources: B&B:2000/01 CATI

**CGCLSIZE**

ENTER 1=VERY SATISFIED 2=SOMEWHAT SATISFIED 3=NOT SATISFIED.

In your most recent teaching job, are/were you very satisfied, somewhat satisfied, or not satisfied with each of the following aspects of teaching?

Class size?

Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1.

Sources: B&B:2000/01 CATI

### CGPARSUP

ENTER 1=VERY SATISFIED 2=SOMEWHAT SATISFIED 3=NOT SATISFIED.

In your most recent teaching job, are/were you very satisfied, somewhat satisfied, or not satisfied with each of the following aspects of teaching?

Support from parents?

Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1.

Sources: B&B:2000/01 CATI

### CGESTEEM

ENTER 1=VERY SATISFIED 2=SOMEWHAT SATISFIED 3=NOT SATISFIED.

In your most recent teaching job, are/were you very satisfied, somewhat satisfied, or not satisfied with each of the following aspects of teaching?

How society feels about the teaching profession?

Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1.

Sources: B&B:2000/01 CATI

### CGADMSUP

ENTER 1=VERY SATISFIED 2=SOMEWHAT SATISFIED 3=NOT SATISFIED.

In your most recent teaching job, are/were you very satisfied, somewhat satisfied, or not satisfied with each of the following aspects of teaching?

Support from the school administration?

Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1.

Sources: B&B:2000/01 CATI

### CGLFTTCH

What is the primary reason you decided to leave teaching?

1 = WORKLOAD/HOURS REQUIRED

OUTSIDE CLASSROOM

2 = LOW PAY

3 = LAID OFF/WORK FORCE REDUCTION

4 = DISSATISFIED WITH TEACHING

5 = CHANGE JOBS OUT OF EDUCATION

6 = CHANGE JOBS WITHIN EDUCATION

7 = TAKE CLASSES FOR OTHER ED CAREER

8 = TAKE CLASSES FOR NEW CAREER

9 = RELOCATED

10 = RAISE FAMILY/OTHER FAMILY DEMANDS

11 = HEALTH REASONS

12 = OTHER

Applies to: *Respondents who are no longer teaching.*

CATI CODE description: CECURTCH not = 1 and CGTCHPST = 1.

Sources: B&B:2000/01 CATI

### CGTCHFTR

[if CECURTCH ne <1>]

Do you plan to return to classroom teaching?

[else]

Do you plan to continue classroom teaching?

1 = YES

2 = NO

Applies to: *Respondents who have taught or are currently teaching.*

CATI CODE description: CECURTCH = 1 or CGTCHPST = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### CGCONSDR

Have you ever considered doing so?

1 = YES

2 = NO

Applies to: *Respondents who have never taught.*

CATI CODE description: CECURTCH not = 1 and CGTCHPST not = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CGMAJ1**

What was your major in college?

COLLECT UP TO 3. ENTER 0 WHEN DONE.

- 1 = ART/DRAMA/MUSIC
- 2 = BUSINESS
- 3 = ECONOMICS/POLITICAL SYSTEMS
- 4 = ELEMENTARY/EARLY CHILDHOOD EDUCATION
- 5 = ENGLISH/JOURNALISM/READING/ CREATIVE WRITING
- 6 = ESL/BILINGUAL
- 7 = FOREIGN LANGUAGES
- 8 = HEALTH/PHYSICAL EDUCATION
- 9 = MATH
- 10 = SCIENCE
- 11 = SECONDARY EDUCATION
- 12 = SPECIAL EDUCATION
- 13 = SOCIAL STUDIES/ HISTORY/CIVICS
- 14 = VOCATIONAL/OCCUPATIONAL
- 15 = OTHER

CGMAJ1 (CGMAJ2) (CGMAJ3)

Applies to: *NPSAS:2000 nonrespondents who have never taught, but have considered doing so.*

CATI CODE description: CECURTCH not = 1 and CTCHPST not = 1 and YNP2KR = 0 and CGCONSDR = 1,-1.

Sources: B&B:2000/01 CATI

### **CGMAJ2**

See CGMAJ1 for description.

Applies to: *NPSAS 2000 nonrespondents who have never taught, but have considered doing so.*

CATI CODE description: CECURTCH not = 1 and CTCHPST not = 1 and YNP2KR = 0 and CGCONSDR = 1,-1

Sources: B&B:2000/01 CATI

### **CGOTPREP**

Have you done anything to prepare yourself to teach?

- 1 = YES
- 2 = NO

Applies to: *Respondents who have never taught, but are considering teaching.*

CATI CODE description: CECURTCH not = 1 and CTCHPST not = 1 and CGCONSDR = 1,-1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CGEDPGM**

Have you completed a teacher education program?

- 1 = YES
- 2 = NO

Applies to: *Respondents who have never taught, but are considering teaching and who have indicated they have prepared themselves to teach.*

CATI CODE description: CECURTCH not = 1 and CTCHPST not = 1 and

CGCONSDR = 1,-1 and CGOTPREP = 1,-1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CGTCHEXM**

Have you taken the national or a state-level teacher certification exam?

- 1 = YES
- 2 = NO

Applies to: *Respondents who have never taught, but are considering teaching and who have indicated they have prepared themselves to teach and who have not completed a teacher education program.*

CATI CODE description: CECURTCH not = 1 and CTCHPST not = 1 and

CGCONSDR = 1,-1 and CGOTPREP = 1,-1 and

CGEDPGM not = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

### **CGPASS2**

Did you pass the exam?

- 1 = YES
- 2 = NO

Applies to: *Respondents who have never taught, but are considering teaching and who have indicated they have prepared themselves to teach and who have not completed a teacher education program and who have taken the national or state-level teacher certification exams.*

CATI CODE description: CECURTCH not = 1 and CTCHPST not = 1 and

CGCONSDR = 1,-1 and CGOTPREP = 1,-1 and

CGEDPGM not = 1 and CGTCHEXM = 1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI



**CGPLAN2**

Are you planning to take either exam?

1 = YES

2 = NO

Applies to: *Respondents who have never taught, but are considering teaching and who have indicated they have prepared themselves to teach and who have not completed a teacher education program and who have not taken the national or state-level teacher certification exams.*

CATI CODE description: CECURTCH not = 1 and CTCHPST not = 1 and

CGCONSDR = 1,-1 and CGOTPREP = 1,-1 and CGEDPGM not = 1 and CGTCHEXM = 0.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CGPRPCRS**

Have you taken any courses to prepare for certification in the past 2 years?

1 = YES

2 = NO

Applies to: *Respondents who have never taught, but are considering teaching and who have indicated they have prepared themselves to teach and who have not completed a teacher education program and who have not taken the national or state-level teacher certification exams.*

CATI CODE description: CECURTCH not = 1 and CTCHPST not = 1 and

CGCONSDR = 1,-1 and CGOTPREP = 1,-1 and CGEDPGM not = 1 and CGTCHEXM = 0.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CGSTTC2**

Have you already completed your student teaching?

1 = YES

2 = NO

Applies to: *Respondents who have never taught, but are considering teaching and who have indicated they have prepared themselves to teach and who have not completed a teacher education program and who have not taken the national or state-level teacher certification exams and have not taken courses to prepare for certification.*

CATI CODE description: CECURTCH not = 1 and CTCHPST not = 1 and

CGCONSDR = 1,-1 and CGOTPREP = 1,-1 and CGEDPGM not = 1 and CGTCHEXM = 0 and CGPRPCRS = 0,-1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CGTCHAPP**

[if CGCURPOS eq <2> or CGCURPOS eq <3>]

Have you applied for a permanent teaching position since completing your degree?

[else]

Have you applied for a teaching position since completing your degree?

1 = YES

2 = NO

Applies to: *Respondents who have never taught, but are considering teaching.*

CATI CODE description: CECURTCH not = 1 and CGTCHPST not = 1 and

CGCONSDR = 1,-1.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CGNUMAPP**

How many applications have you submitted?

RANGE (1-25):

Applies to: *Respondents who have never taught, but are considering teaching.*

CATI CODE description: CECURTCH not = 1 and CGTCHPST not = 1 and

CGCONSDR = 1,-1 and CGTCHAPP = 1,0.

Imputation Note: If CGTCHAPP = 0 then

CGNUMAPP = 0.

Sources: B&B:2000/01 CATI

**CGOFRNUM**

How many offers for teaching positions have you received?

RANGE (0-10):

Applies to: *Respondents who have never taught, but are considering teaching and who have applied for a teaching position since completing their degree.*

CATI CODE description: CECURTCH not = 1 and CGTCHPST not = 1 and

CGCONSDR = 1,-1 and CGTCHAPP = 1 and (CGNUMAPP > 0 or CGNUMAPP = -1)

Sources: B&B:2000/01 CATI

**CGOFRACC**

Did you accept that offer/any of those offers?

1 = YES

2 = NO

Applies to: *Respondents who have never taught, but are considering teaching and who have applied for a teaching position since completing their degree and who have been offered at least one teaching position.*

CATI CODE description: CECURTCH not = 1 and CGTCHPST not = 1 and

CGCONSDR = 1,-1 and CGTCHAPP = 1 and (CGNUMAPP > 0 or CGNUMAPP = -1)

and CGOFRNUM > 0.

Note: "No" response recoded from 2 to 0.

Sources: B&B:2000/01 CATI

**CGNACW1**

Why didn't you accept a teaching position?

COLLECT UP TO 3. ENTER 0 FOR NONE OR NO MORE.

1 = LOW SALARY/BENEFITS OFFERED

2 = ALREADY ACCEPTED OTHER JOB

3 = OTHER JOB OFFERED BETTER

SALARY/BENEFITS

4 = OTHER JOB MORE

INTERESTING/CHALLENGING

5 = TOO FAR FROM HOME

6 = DANGEROUS/DIFFICULT SCHOOL OR

DISTRICT

7 = NOT QUALIFIED TO TEACH CLASSES

OFFERED

8 = OTHER

CGNACW1 (CGNACW2) (CGNACW3)

Applies to: *Respondents who have never taught, but are considering teaching and who have applied for a teaching position since completing their degree and who have been offered at least one teaching position, but did not accept that job.*

CATI CODE description: CECURTCH not = 1 and CGTCHPST not = 1 and

CGCONSDR = 1,-1 and CGTCHAPP = 1 and (CGNUMAPP > 0 or CGNUMAPP = -1)

and CGOFRNUM > 0 and CGOFRACC = 0.

Sources: B&B:2000/01 CATI

**CGNACW2**

See CGNACW1 for description.

Applies to: *Respondents who have never taught, but are considering teaching and who have applied for a teaching position since completing their degree and who have been offered at least one teaching position, but did not accept that job.*

CATI CODE description: CECURTCH not = 1 and CGTCHPST not = 1 and

CGCONSDR = 1,-1 and CGTCHAPP = 1 and (CGNUMAPP > 0 or CGNUMAPP = -1)

and CGOFRNUM > 0 and CGOFRACC = 0.

Sources: B&B:2000/01 CATI

**CGNACW3**

See CGNACW1 for description.

Applies to: *Respondents who have never taught, but are considering teaching and who have applied for a teaching position since completing their degree and who have been offered at least one teaching position, but did not accept that job.*

CATI CODE description: CECURTCH not = 1 and CGTCHPST not = 1 and

CGCONSDR = 1,-1 and CGTCHAPP = 1 and (CGNUMAPP > 0 or CGNUMAPP = -1)

and CGOFRNUM > 0 and CGOFRACC = 0.

Sources: B&B:2000/01 CATI

### CGNAPW1

What are the reasons you did not apply for a teaching position?

COLLECT UP TO 3. ENTER 0 FOR NONE OR NO MORE.

- 1 = NOT INTERESTED IN TEACHING
- 2 = POOR TEACHING CONDITIONS
- 3 = WANT HIGHER SALARY
- 4 = ALREADY IN TEACHING JOB
- 5 = ALREADY IN OTHER JOB
- 6 = RECEIVED BETTER JOB OFFER
- 7 = UNABLE TO PASS TESTS
- 8 = HAVEN'T TAKEN REQUIRED TESTS
- 9 = NOT YET CERTIFIED
- 10 = OTHER

CGNAPW1 (CGNAPW2) (CGNAPW3)

Applies to: *Respondents who have never taught, but are considering teaching and who have not applied for a teaching position since completing their degree.*

CATI CODE description: CECURTCH not = 1 and CGTCHPST not = 1 and CGCONSDR = 1,-1 and CGTCHAPP = 0.  
Note: If CGOFRACC = -1 then CGNAPW1 = -1.  
Sources: B&B:2000/01 CATI

### CGNAPW2

See CGNAPW1 for description.

Applies to: *Respondents who have never taught, but are considering teaching and who have not applied for a teaching position since completing their degree.*

CATI CODE description: CECURTCH not = 1 and CGTCHPST not = 1 and CGCONSDR = 1,-1 and CGTCHAPP = 0.  
Note: If CGOFRACC = -1 then CGNAPW1 = -1.  
Sources: B&B:2000/01 CATI

### CGNAPW3

See CGNAPW1 for description.

Applies to: *Respondents who have never taught, but are considering teaching and who have not applied for a teaching position since completing their degree.*

CATI CODE description: CECURTCH not = 1 and CGTCHPST not = 1 and CGCONSDR = 1,-1 and CGTCHAPP = 0.  
Note: If CGOFRACC = -1 then CGNAPW1 = -1.  
Sources: B&B:2000/01 CATI

### CGLNFRGV

In some areas, programs are available to cancel all or part of a student's education loans in return for service to the community through teaching, medicine, and other professions. Are you aware of any sort of loan forgiveness program?

- 1 = YES
- 2 = NO

Applies to: *Respondents who have taught since graduating, excluding anyone who previously mentioned participating in a loan forgiveness program.*

CATI CODE description: CECURTCH = 1.  
Imputation Note: If CBFVGTYP = -3, -7 then CGLNFRGV = 1.  
Note: "No" response recoded from 2 to 0.  
Sources: B&B:2000/01 CATI

### CGLNDSCN

[if CBFVGTYP eq <1>]

Earlier, you told me that you are participating in a student loan forgiveness program for teachers.

[else]

Did the availability of loan forgiveness programs help you make the decision to prepare for teaching?

- 1 = YES
- 2 = NO

Applies to: *Respondents who have taught since graduating and mentioned participating or being aware of a loan forgiveness program for teachers.*

CATI CODE description: CECURTCH = 1 and CGLNFRGV = 1)  
Note: "No" response recoded from 2 to 0.  
Sources: B&B:2000/01 CATI

### CGLNFNOW

Are you taking advantage of a student loan forgiveness program now?

- 1 = YES
- 2 = NO

Applies to: *Respondents who have taught since graduating and mentioned participating or being aware of a loan forgiveness program for teachers.*

CATI CODE description: CECURTCH = 1 and CBFVGTYP not = 1 and CGLNFRGV = 1.  
Note: "No" response recoded from 2 to 0.  
Sources: B&B:2000/01 CATI

**CBFGTPUC**

Upcode flag for CBFVGTYP

Indicates cases where the respondent entered an uncodeable string in the other/specify, but was later coded in the editing process.

Sources: B&B:2000/01 CATI

**CCREL1UC**

Upcode flag for CCRELOC1

Indicates cases where the entered string was uncodeable in the user-exit, but was later coded in the editing process.

Sources: B&B:2000/01 CATI

**CCREL2UC**

Upcode flag for CCRELOC2

Indicates cases where the entered string was uncodeable in the user-exit, but was later coded in the editing process.

Sources: B&B:2000/01 CATI

**CCREL3UC**

Upcode flag for CCRELOC3

Indicates cases where the entered string was uncodeable in the user-exit, but was later coded in the editing process.

Sources: B&B:2000/01 CATI

**CDMJ1UC**

Upcode flag for CDMJCD1

Indicates cases where the entered string was uncodeable in the user-exit, but was later coded in the editing process.

Sources: B&B:2000/01 CATI

**CDMJ2UC**

Upcode flag for CDMJCD2

Indicates cases where the entered string was uncodeable in the user-exit, but was later coded in the editing process.

Sources: B&B:2000/01 CATI

**CDMJUC**

Upcode flag for CDMJCOD

Indicates cases where the entered string was uncodeable in the user-exit, but was later coded in the editing process.

Sources: B&B:2000/01 CATI

**CEINDUC**

Upcode flag for CEXINDCD

Indicates cases where the entered string was uncodeable in the user-exit, but was later coded in the editing process.

Sources: B&B:2000/01 CATI

**CEOCCUC**

Upcode flag for CEXOCCCD

Indicates cases where the entered string was uncodeable in the user-exit, but was later coded in the editing process.

Sources: B&B:2000/01 CATI

**CFCT1UC**

Upcode flag for CFCERT1

Indicates cases where the respondent entered an uncodeable string in the other/specify, but was later coded in the editing process.

Sources: B&B:2000/01 CATI

**CFCT2UC**

Upcode flag for CFCERT2

Indicates cases where the respondent entered an uncodeable string in the other/specify, but was later coded in the editing process.

Sources: B&B:2000/01 CATI

**CFLC1UC**

Upcode flag for CFLIC1

Indicates cases where the respondent entered an uncodeable string in the other/specify, but was later coded in the editing process.

Sources: B&B:2000/01 CATI

**CFLC2UC**

Upcode flag for CFLIC2

Indicates cases where the respondent entered an uncodeable string in the other/specify, but was later coded in the editing process.

Sources: B&B:2000/01 CATI

**CDMJ1RC**

Recode flag for CDMJCD1

Indicates cases that were recoded as part of an evaluation that examines the accuracy of the on-line coding system.

Applies to: *All respondents.*

Sources: B&B:2000/01 CATI

**CDMJ2RC**

Recode flag for CDMJCD2

Indicates cases that were recoded as part of an evaluation that examines the accuracy of the on-line coding system.

Applies to: *All respondents.*

Sources: B&B:2000/01 CATI

**CDMJRC**

Recode flag for CDMJCOD

Indicates cases that were recoded as part of an evaluation that examines the accuracy of the on-line coding system.

Applies to: *All respondents.*

Sources: B&B:2000/01 CATI

**CEINDRC**

Recode flag for CEXINDCD

Indicates cases that were recoded as part of an evaluation that examines the accuracy of the on-line coding system.

Applies to: *All respondents.*

Sources: B&B:2000/01 CATI

**CEOCCRC**

Recode flag for CEXOCCCD

Indicates cases that were recoded as part of an evaluation that examines the accuracy of the on-line coding system.

Applies to: *All respondents.*

Sources: B&B:2000/01 CATI



## **Abbreviated Interview**

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>CSABANPS<

According to your school records, you were expected to complete a bachelor's degree from [fill csynpschl] some time between July 1, 1999 and June 30, 2000.

When did you complete your degree?

F5 = RESPONDENT NEVER COMPLETED  
BACHELOR'S DEGREE AT NPSAS SCHOOL

MONTH (1-12):

YEAR (1999-2000):

>CSABAOTH<

Were you awarded a bachelor's degree by any other school at anytime between July 1, 1999 and June 30, 2000?

1 = YES

2 = NO

>CSASCHUX<

Where did you earn your bachelor's degree?

1 = RE-ENTER USEREXIT

2 = SKIP OVER USEREXIT

>CSADGO<

When did you complete your degree?

MONTH (1-12):

YEAR (1999-2000):

Applies to: *Bachelor's recipients.*

>CSAELCRD<

At [fill csynpschl], were you enrolled in a course for credit that could be transferred to another school?

1 = YES

2 = NO

If 1, got to CSBENROLL; Else go to CSABYE.

>CSABYE<

Based on the information you've given me, it seems you may not be eligible for this survey. After checking with my supervisor, I may need to call you back.

Thank you for your time.

>CSBENROLL<

When we spoke with you last year, we collected your enrollment dates for the 99/00 school year. Now I need to collect the dates of your enrollment **up until that time** at the schools you've told me about...

[else]

Now I need to ask you some questions about the dates of your enrollment at the schools you've told me about...

INTERVIEWER: PLEASE ENTER THE  
RESPONSES IN THE USER EXIT.

1 = RE-ENTER THE USEREXIT

2 = SKIP OVER THE USEREXIT

>CSCINTRO<

Now I'd like to ask you some questions about your background and current status.

>CSCCURZIP<

What is the zip code for your current legal residence?

F5 = LIVING OUTSIDE UNITED STATES

If F3, go to CSSCURST. Else go to CSCCITZN

>CSCCURST<

What is your state of legal residence?

>CSCCITZN<

Are you a U.S. citizen?

1 = YES - U.S. CITIZEN OR U.S. NATIONAL

2 = NO - RESIDENT ALIEN PERMANENT  
RESIDENT OR OTHER ELIGIBLE NON-  
CITIZEN TEMPORARY RESIDENT'S  
CARD

3 = NO - STUDENT VISA - IN THE COUNTRY  
ON AN F1 OR F2 VISA OR ON AJ1 J2  
EXCHANGE VISITOR VISA

Does not equal 1 go to CSCMAR.

Applies to: *Respondents with no preloaded value.*

**Appendix C**  
**Facsimile Instruments**  
**Abbreviated Interview**

---

**>CSCMAR<**

Are you currently...

IF RESPONSE IS "SINGLE," PROBE TO DETERMINE IF RESPONDENT WAS EVER MARRIED.

- 1 = Single, never married
- 2 = Married
- 3 = Separated
- 4 = Divorced or
- 5 = Widowed

Applies to: *All respondents.*

**>CSCHOME<**

Do you own your home or are you paying rent?

- 0 = NEITHER OWNS HOME NOR PAYS RENT
- 1 = OWNS HOME
- 2 = PAYS RENT

If 0, go to CSCHSTYP, Else go to CSCPSTGRD.

Applies to: *All respondents.*

**>CSCHSTYP<**

What type of housing arrangement do you have?

- 1 = LIVES WITH PARENTS/OTHER RELATIVES/FRIENDS
- 2 = MILITARY
- 3 = JOB INCLUDES HOUSING (NON-MILITARY)
- 4 = RELIGIOUS HOUSING (SEMINARY/CONVENT, ETC.)
- 5 = OTHER

**>CSDPSTGRD<**

Now I'd like to ask you some questions about your education **since** earning your bachelor's degree from [fill CSSBANAM].

Since completing your bachelor's degree, have you enrolled in, or recently completed, an undergraduate, graduate, or professional degree or certificate program?

IF R HAS JUST TAKEN CLASSES WITHOUT BEING ENROLLED, ANSWER "NO."

- 1 = YES
- 2 = NO
- F5 = RESPONDENT HAS BEEN ACCEPTED TO A PROGRAM THAT HAS NOT STARTED YET

If 1 go to CSDCURGR1; else go to CSDAPPLY

**>CSDCURGR1<**

Are you currently enrolled in an undergraduate, graduate, or professional degree or certificate program?

- 1 = YES
- 2 = NO

**>CSDAPPLY<**

Have you applied to go back to school for the 2001-2002 school year?

- 1 = YES
- 2 = NO

If 1 go to CSDSCH1; else go to CSDFTREN.

**>CSDFTREN<**

Do you expect to enroll in a degree program at some point in the future?

- 1 = YES
- 2 = NO

If 1 go to CSDBEGGRD; else go to CSDEMPCUR.

**>CSDBEGGRD<**

Do you expect to be enrolled...

- 1 = in 2 years (2002-2003 ACADEMIC YEAR)
- 2 = in 3 to 5 years (2003-2006) or
- 3 = in more than 5 years

**>CSDSCH1<**

(If currently enrolled) Where are you enrolled?

(If not currently enrolled) Where were you enrolled?

(If planning to enroll) Where do you plan to enroll?

SCHOOLS WE KNOW ABOUT SO FAR ARE:

- 99 = NEW SCHOOL

**>CSDDEG1<**

(If currently enrolled or S\_PSTGRD@pstgrd=5) What degree or certificate are you working on there?

(If not currently enrolled) What degree or certificate were you working on there?

**UNDERGRADUATE:**

- 1 = CERTIFICATE
- 2 = ASSOCIATE'S DEGREE (AS, AA)
- 3 = SECOND BACHELOR'S DEGREE (BA, BS, BFA, etc.)

**GRADUATE:**

- 5 = POST-BACCALAUREATE CERTIFICATE
- 6 = MASTER'S DEGREE (MA, MS, MBA, MFA, MDIV, etc.)
- 7 = DOCTORAL/PROFESSIONAL DEGREE (PHD, EDD, JD, MD, DDS, etc.)

If 6 go to CSDMASTR1; If 7 go to CSDPHD1; Else go to CSDFIELD1.

**>CSDMASTR1<**

(If currently enrolled or PSTGRD=5) What type of master's degree are you working on?

(If not currently enrolled) What type of master's degree were you working on there?

- 1 = MBA- BUSINESS ADMINISTRATION
- 2 = MS- SCIENCE
- 3 = MA- ARTS
- 4 = M.ED- EDUCATION
- 5 = MPA- PUBLIC ADMINISTRATION
- 6 = MLS- LIBRARY SCIENCE
- 7 = MPH- PUBLIC HEALTH
- 8 = MFA- FINE ARTS
- 9 = MAA- APPLIED ARTS
- 10 = MAT- TEACHING
- 11 = M.DIV- DIVINITY
- 12 = MSW - SOCIAL WORK
- 13 = LANDSCAPE ARCHITECTURE
- 14 = PROFESSIONAL MANAGEMENT
- 15 = OTHER MASTERS

**>CSDPHD1<**

(If currently enrolled or PSTGRD=5) What type of doctoral or professional degree are you working on?

(If not currently enrolled) What type of doctoral or professional degree were you working on there?

- 16 = PHD
- 17 = ED.D- EDUCATION
- 18 = THD- THEOLOGY
- 19 = DBA- BUSINESS ADMIN
- 20 = D.ENG- ENGINEERING
- 21 = DFA- FINE ARTS
- 22 = DPA- PUBLIC ADMIN
- 23 = DSC/SCD- SCIENCE
- 24 = PSYD- PSYCHOLOGY
- 25 = THEOLOGY(D.MIN)
- 26 = CHIROPRACTIC (DC, DCM)
- 27 = DENTISTRY (DDS, DMD)
- 28 = MEDICINE (MD)
- 29 = OPTOMETRY (OD)
- 30 = OSTEOPATHIC MEDICINE (DO)
- 31 = PHARMACY (PHARM.D)
- 32 = PODIATRY (DPM, POD. D)
- 33 = VETERINARY MEDICINE (DVM)
- 34 = LAW (LLB, JD)
- 35 = OTHER DOCTORAL DEGREE

**>CSDFIELD1<**

(If currently enrolled or if PSTGRD=5) What is your field of study or major at [fill CSDSCH1]?

(If not currently enrolled) What was your field of study or major at [fill CSDSCH1]?

- F5 = DOUBLE MAJOR
- F6 = UNDECLARED

If F5 CSDDBLM1; else go to CSDENRST1.

**>CSDDBLM1<**

What is/was your primary major or program of study?

What is/was your secondary major?

Go to D\_ENRST1

**Appendix C  
Facsimile Instruments  
Abbreviated Interview**

---

**>CSDFTRSCH<**

I'd like to learn more about your future education plans. Where do you plan to enroll?

SCHOOLS WE KNOW ABOUT SO FAR ARE:

99 = NEW SCHOOL

**>CSDFTRDEG<**

What degree or certificate do you intend to pursue?

UNDERGRADUATE:

- 1 = CERTIFICATE
- 2 = ASSOCIATE'S DEGREE (AS, AA)
- 3 = SECOND BACHELOR'S DEGREE (BA, BS, BFA, etc.)

GRADUATE:

- 5 = POST-BACCALAUREATE CERTIFICATE
- 6 = MASTER'S DEGREE (MA, MS, MBA, MFA, MDIV, etc.)
- 7 = DOCTORAL/PROFESSIONAL DEGREE (PHD, EDD, JD, MD, DDS, etc.)

**>CSDFTRMST<**

What master's degree do you wish to pursue?

- 1 = MBA - BUSINESS ADMINISTRATION
- 2 = MS - SCIENCE
- 3 = MA - ARTS
- 4 = M.ED - EDUCATION
- 5 = MPA - PUBLIC ADMINISTRATION
- 6 = MLS - LIBRARY SCIENCE
- 7 = MPH - PUBLIC HEALTH
- 8 = MFA - FINE ARTS
- 9 = MAA - APPLIED ARTS
- 10 = MAT - TEACHING
- 11 = M.DIV - DIVINITY
- 12 = MSW - SOCIAL WORK
- 13 = LANDSCAPE ARCHITECTURE
- 14 = PROFESSIONAL MANAGEMENT
- 15 = OTHER MASTERS

**>CSDFTRPHD<**

What doctoral or professional degree do you wish to pursue?

- 16 = PHD
- 17 = ED.D- EDUCATION
- 18 = THD- THEOLOGY
- 19 = DBA- BUSINESS ADMIN
- 20 = D.ENG- ENGINEERING
- 21 = DFA- FINE ARTS
- 22 = DPA- PUBLIC ADMIN
- 23 = DSC/SCD- SCIENCE
- 24 = PSYD- PSYCHOLOGY
- 25 = THEOLOGY(D.MIN)
- 26 = CHIROPRACTIC (DC, DCM)
- 27 = DENTISTRY (DDS, DMD)
- 28 = MEDICINE (MD)
- 29 = OPTOMETRY (OD)
- 30 = OSTEOPATHIC MEDICINE (DO)
- 31 = PHARMACY (PHARM.D)
- 32 = PODIATRY (DPM, POD. D)
- 33 = VETERINARY MEDICINE (DVM)
- 34 = LAW (LLB, JD)
- 35 = OTHER DOCTORAL DEGREE

**>CSDFTRFLD2<**

What do you plan to study?

- F5 = DOUBLE MAJOR
- F6 = UNDECLARED

If F5 CSDDBLM2; Else go to CSDEMPCUR

**>CSDDBLM2<**

What will be your primary major or program of study?  
What will be your secondary major?

**>SDENRST1<**

(If currently enrolled) While working on your master's degree at [fill CSDSCH1], have you been enrolled mainly as a full-time or part-time student?

(If not currently enrolled) While working on your (fill in CSSDEGR1) at [fill CSDSCH1], were you enrolled mainly as a full-time or part-time student?

- 1 = MOSTLY FULL-TIME
- 2 = MOSTLY PART-TIME
- 3 = MIX OF FULL- AND PART-TIME

>CSDAIDTY1<

Have you received any of the following types of financial aid to help cover educational expenses for your [fill CSDDEG1]?

ENTER 1=YES 2=NO.

- 1 = Student loans
- 2 = Other bank loans
- 3 = Grants or scholarships
- 4 = Fellowships
- 5 = A teaching assistantship
- 6 = A research assistantship
- 7 = Any other type of graduate assistantship
- 8 = Tuition reimbursement from your employer
- 9 = A personal loan or gift from your family or other individual
- 10 = Any other financial aid?

>CSDENRGRD<

Now I need to ask you some questions about the dates of your enrollment at the schools you've told me about...

INTERVIEWER: PLEASE ENTER THE RESPONSES IN THE USER EXIT

- 1 = RE-ENTER USEREXIT
- 2 = SKIP OVER USEREXIT
- [else]
- 1 = ENTER USEREXIT

Applies to: *Rs who attended graduate schools.*

>CSEEMPCUR<

Now I'd like to ask you some questions about your employment. In your primary job, do you...

INTERVIEWER: PRIMARY JOB IS THE JOB HELD MOST OF THE YEAR.

INTERVIEWER: PROBE FOR WORK STATUS.

- 1 = WORK FULL-TIME?
- 2 = PART-TIME
- 3 = WAITING TO REPORT TO WORK  
TEMPORARY LAYOFF
- 4 = NOT WORKING
- 6 = HOMEMAKER
- 7 = DISABLED.

Applies to: *All respondents.*

>CSECURTCH<

Are you currently employed as a teacher, a teacher's aide, or a substitute teacher at the K-12 level?

INTERVIEWER: IF RESPONDENT IS A TEACHER, BUT IS OUT FOR SUMMER BREAK CODE AS YES.

- 1 = YES
- 2 = NO

Applies to: *Respondents who are currently working full or part time.*

>CSECURINC<

[if CSECURTCH=1] What is your academic year base salary at your current job, not including extra pay for things like summer teaching, coaching, or extra-curricular activities?

[else] For your current job, about how much do you earn annually, before taxes and other deductions?

RANGE (\$0 - \$999,999):

Applies to: *All respondents who are currently working.*

>CSESALEST<

Can you tell me your hourly, weekly, or monthly wage?

NOTE: ENTER WHOLE NUMBERS. IF R PROVIDES A NUMBER WITH A DECIMAL, ROUND UP OR DOWN TO THE NEAREST DOLLAR.

RANGE (\$0 - \$999,999):

- 1 = HOURLY
- 2 = WEEKLY
- 3 = TWICE MONTHLY/EVERY 2 WEEKS
- 4 = MONTHLY
- 5 = ANNUALLY

Applies to: *Rs who report income in unit other than annual salary.*



## **Appendix D**

### **Mailout Materials**

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Student Information Leaflet (*side 1*)



**B&B:2000/2001**

As a participant in B&B:2000/2001 you will have the opportunity to help researchers better understand the undergraduate experiences of bachelor's degree recipients and how they relate to subsequent graduate or professional education and/or initial labor market outcomes.

We have prepared this leaflet to anticipate questions you may have regarding B&B:2000/2001. If you have additional questions or concerns about the study, please contact the B&B Project Director or Project Officer listed on the back of this leaflet.

**What is B&B:2000/2001?**

**Who** is conducting the study?

**Why** should I participate?

**How** will the data be used?

**When** will the study be conducted?

Will my answers be kept **Confidential?**

**How long** is the interview?

Can I get a copy of the **Results?**

**Where Can I Get More Information About B&B:2000/2001?**

If you have any questions or concerns about the study, please contact the B&B Project Director or Project Officer:

Research Triangle Institute:  
Dr. John Riccobono, Project Director  
1-800-334-8571

National Center for Education and Statistics:  
Dr. Andrew Malizio, Project Officer  
Andrew.Malizio@ed.gov  
202-502-7387  
Ms. Kristin Perry  
Kristin.Perry@ed.gov  
202-502-7428

You may also contact us by:  
E-mail: BB2001@rti.org  
Fax: 919-541-7014  
TDD: 919-541-6538

Please visit the NCEES website for additional information about B&B:2000/2001 and other educational research:  
<http://nces.ed.gov>

If you have questions about your rights as a participant, please contact:

Dr. Wendy Visscher  
Coordinator of Human Subjects Committee  
Research Triangle Institute  
1-800-334-8571

To make an appointment to complete the interview, visit RTI's B&B website:  
<http://public.rti.org/bb01>

May 2001  
7306.600.640

**B&B**  
2000/2001  
**Baccalaureate and Beyond**

Conducted for:  
National Center for Education Statistics  
U.S. Department of Education

Conducted by:  
Research Triangle Institute  
Research Triangle Park, NC 27709-2194

Student Information Leaflet (side 2)

### What is B&B: 2000/2001?

The Baccalaureate & Beyond Longitudinal Study:2000/2001 is designed to collect data on the activities and experiences of recent bachelor's degree recipients, who were first selected to be interviewed as part of the 2000 National Postsecondary Student Aid Study (NPSAS) and are now in their first year after graduation. B&B addresses issues such as:

- Time to degree
- Entry into the labor force and the relationship between initial occupation and training
- Entry of newly qualified teachers into the teaching profession
- Participation in graduate and other post-baccalaureate education
- Level of debt

As a participant in B&B, you will provide information that will be combined with that collected from other respondents to produce national statistics used by education policymakers at the local, state, and national levels. For example, in past studies involving 1993 bachelor's degree recipients, we learned that

- Two-thirds of bachelor's degree recipients who started college immediately after high school completed their degree within 5 years.
- About one-fifth (17%) of all bachelor's degree recipients enroll in graduate or professional programs within 1 year of earning their degree.
- One year after graduation, about 8 out of 10 bachelor's degree recipients expect to earn an advanced degree.

### Who is conducting the study?

B&B:2000/2001 is conducted under contract for the U.S. Department of Education's National Center for Education Statistics (NCES) by Research Triangle Institute (RTI). RTI is a nonprofit research organization in North Carolina. B&B is authorized by the National Education Statistics Act of 1994 (PL 103-382).

### Why should I participate?

By participating, you have the opportunity to help researchers, educational practitioners, and policymakers better understand how collegiate experiences affect early life transitions of bachelor's degree recipients. Your responses will also help the federal government to assess the outcomes of postsecondary education, improve access to education, and improve financial aid packages for those who need financial help.

### How will the data be used?

The data you provide will be used by policymakers at federal, state, and local levels to develop and revise a broad range of education policies and programs relating to undergraduate and graduate education.

### How long is the interview?

The interview will last approximately 20 minutes. When we call, you can choose to complete the interview then or you can schedule an appointment for a time that is more convenient for you. Participation in this study is voluntary. However, your participation is essential in making this study a success.

### When will the study be conducted?

This B&B follow-up study will begin in the summer and continue through the fall of 2001. The study will involve approximately 11,000 baccalaureate recipients randomly selected from 640 colleges and universities.

### Will my answers be kept Confidential?

All information you or others provide will be used for research purposes only. Your responses are confidential, and nothing you say will ever be reported in a way that allows you to be identified. Data collected will be aggregated and used for statistical reports. No individual data will be reported.

Specific procedures we have implemented to ensure confidentiality include:

- All project staff with any access to study data are liable to severe fines and imprisonment for any disclosure of individual responses.
- All electronic data are maintained in secure and protected data files. All personally identifying information is stored separately from files containing descriptive information.
- These procedures have been reviewed and approved by the federal government and by the RTI Committee for the Protection of Human Subjects.

### Can I get a copy of the Results?

The results are scheduled to be released in the fall of 2002 and will be posted on the B&B website (<http://nces.ed.gov/surveys/b&b>) as soon as they are available.

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Letter to NPSAS Respondents

---

Dear «p\_fname» «p\_lname»:

I am writing to urge your participation in the Baccalaureate and Beyond Longitudinal Study: 2000/2001. The U.S. Department of Education initiated the study to better understand what happens to students after earning their bachelor's degree. The study provides data about the early career experiences and educational achievements of students who graduated from four-year colleges and universities in 1999-2000. Results of previous studies have been used by policymakers to better understand graduates' decisions concerning graduate school, employment, and family formation.

The study is being conducted for the U.S. Department of Education's National Center for Education Statistics (NCES) by the Research Triangle Institute (RTI), a nationally recognized research organization located in North Carolina. Please be assured that both NCES and RTI follow strict confidentiality procedures to protect the privacy of study participants and the confidentiality of the information collected.

An interviewer [not a telemarketer!] from RTI will call to conduct a telephone interview with you in the near future. The interview will take about 20 minutes. Your participation is completely voluntary. However, we do need your assistance in collecting these data. Your responses are important to make the results of this study accurate and timely.

Enclosed you will find a leaflet with a brief description of B&B, how you were selected, and confidentiality procedures. We would also like your help in updating our records. ***Please take a few minutes to verify, correct, or update the enclosed Address Update Information Sheet and return it to RTI in the enclosed postage-paid envelope.*** If you have any questions about the study, please contact Dr. John Riccobono, Project Director, at RTI. The toll free number is 1-800-334-8571. Persons who are hearing or speech impaired may call us at 1-919-541-6538 (TTY/TDD).

We sincerely appreciate your assistance and thank you for helping us conduct this important study.

Sincerely,



Gary W. Phillips  
Acting Commissioner

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 1850-0666.
---

«caseid»

Por medio de la presente lo instamos a que participe en el estudio de investigación Más Allá de los Estudios Universitarios: 2000/2001. El Departamento de Educación de los Estados Unidos inició este estudio con el propósito de entender mejor qué sucede con los estudiantes después de graduarse de la universidad. El estudio proporcionará información acerca de las primeras experiencias en la carrera y los logros educativos de los estudiantes que se graduaron de un programa universitario de cuatro años en 1999-2000. Las personas encargadas de formular la política han utilizado los resultados de estudios anteriores para entender mejor las decisiones de egresados con respecto a los estudios graduados, el empleo y la formación de una familia.

Research Triangle Institute (RTI) está realizando el estudio para el Centro Nacional de Estadísticas sobre la Educación (NCES), parte del Departamento de Educación de los Estados Unidos. RTI es una organización de investigación reconocida a nivel nacional que está ubicada en Carolina del Norte. Tenga la seguridad en saber que NCES y RTI exigen el mantenimiento de confidencialidad para proteger la privacidad de los participantes en estudios de investigación y la confidencialidad de la información recopilada.

Un entrevistador de RTI, que no es un vendedor lo llamará para realizar una entrevista con usted por teléfono pronto. La entrevista durará aproximadamente 20 minutos. Su participación es completamente voluntaria. Sin embargo necesitamos su ayuda para recopilar estos datos. Sus respuestas son importantes para asegurar que los resultados de este estudio sean precisos.

Adjunto encontrará un folleto que contiene una descripción breve del estudio, así como la manera en que usted fue seleccionado y el procedimiento de confidencialidad. Además, nos gustaría su ayuda para actualizar nuestros archivos. ***Favor de tomar unos minutos para verificar, corregir, o poner al día el Formulario para Actualizar la Dirección y devolverlo a RTI en el sobre con franqueo postal ya pagado.*** Si tiene cualquier pregunta acerca del estudio, favor de comunicarse con el director del proyecto, Dr. John Riccobono de RTI. El número telefónico gratuito es 1-800-334-8571. Personas con un impedimento auditivo o de habla pueden llamar al número 1-919-541-6538 (TTY/TDD).

Le agradecemos sinceramente su asistencia y su ayuda en la realización de este estudio importante.

De acuerdo a la Ley de Reducción de Papeleo de 1995, ninguna persona está requerida a responder a una encuesta a menos que tenga un número válido de control otorgado por el OMB. El número válido de control otorgado por el OMB para esta recolección de datos es el 1850-0666.
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Letter to NPSAS Nonrespondents

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BB\_FS1/«Addr\_ID»  
«fname» «mname» «lname» «suffix» «caseid»  
«addr1»  
«addr2»  
«city», «state» «zip» «zip4»

Dear «p\_fname» «p\_lname»:

I am writing to urge your participation in the Baccalaureate and Beyond Longitudinal Study: 2000/2001. The U.S. Department of Education initiated the study to better understand what happens to students after earning their bachelor's degree. The study provides data about the early career experiences and educational achievements of students who graduated from four-year colleges and universities in 1999-2000. Results of previous studies have been used by policymakers to better understand graduates' decisions concerning graduate school, employment, and family formation.

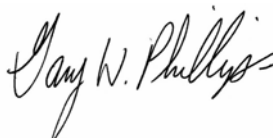
The study is being conducted for the U.S. Department of Education's National Center for Education Statistics (NCES) by the Research Triangle Institute (RTI), a nationally recognized research organization located in North Carolina. Please be assured that both NCES and RTI follow strict confidentiality procedures to protect the privacy of study participants and the confidentiality of the information collected.

An interviewer [not a telemarketer!] from RTI will call to conduct a telephone interview with you in the near future. The interview will take about 20 minutes. Your participation is completely voluntary. However, we do need your assistance in collecting these data. Your responses *are important* to make the results of this study accurate and timely. As a thank you for your participation in the interview, **we will send you \$20.**

Enclosed you will find a leaflet with a brief description of B&B, how you were selected, and confidentiality procedures. We would also like your help in updating our records. ***Please take a few minutes to verify, correct, or update the enclosed Address Update Information sheet and return it to RTI in the enclosed postage-paid envelope.*** If you have any questions about the study, please contact Dr. John Riccobono, Project Director, at RTI. The toll free number is 1-800-334-8571. Persons who are hearing or speech impaired may call us at 1-919-541-6538 (TTY/TDD).

We sincerely appreciate your assistance and thank you for helping us conduct this important study.

Sincerely,



Gary W. Phillips  
Acting Commissioner

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 1850-0666.
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Por medio de la presente lo instamos a que participe en el estudio de investigación Más Allá de los Estudios Universitarios: 2000/2001. El Departamento de Educación de los Estados Unidos inició este estudio con el propósito de entender mejor qué sucede con los estudiantes después de graduarse de la universidad. El estudio proporcionará información acerca de las primeras experiencias en la carrera y los logros educativos de los estudiantes que se graduaron de un programa universitario de cuatro años en 1999-2000. Las personas encargadas de formular la política han utilizado los resultados de estudios anteriores para entender mejor las decisiones de egresados con respecto a los estudios graduados, el empleo y la formación de una familia.

Research Triangle Institute (RTI) está realizando el estudio para el Centro Nacional de Estadísticas sobre la Educación (NCES), parte del Departamento de Educación de los Estados Unidos. RTI es una organización de investigación reconocida a nivel nacional que está ubicada en Carolina del Norte. Tenga la seguridad en saber que NCES y RTI exigen el mantenimiento de confidencialidad para proteger la privacidad de los participantes en estudios de investigación y la confidencialidad de la información recopilada.

Un entrevistador de RTI, que no es un vendedor lo llamará para realizar una entrevista con usted por teléfono pronto. La entrevista durará aproximadamente 20 minutos. Su participación es completamente voluntaria. Sin embargo necesitamos su ayuda para recopilar estos datos. Sus respuestas *son importantes* para asegurar que los resultados de este estudio sean precisos. Para demostrar nuestro agradecimiento por su participación en la entrevista, **le enviaremos \$20.**

Adjunto encontrará un folleto que contiene una descripción breve del estudio, así como la manera en que usted fue seleccionado y el procedimiento de confidencialidad. Además, nos gustaría su ayuda para actualizar nuestros archivos. ***Favor de tomar unos minutos para verificar, corregir, o poner al día el Formulario para Actualizar la Dirección y devolverlo a RTI en el sobre con franqueo postal ya pagado.*** Si tiene cualquier pregunta acerca del estudio, favor de comunicarse con el director del proyecto, Dr. John Riccobono de RTI. El número telefónico gratuito es 1-800-334-8571. Personas con un impedimento auditivo o de habla pueden llamar al número 1-919-541-6538 (TTY/TDD).

Le agradecemos sinceramente su asistencia y su ayuda en la realización de este estudio importante.

De acuerdo a la Ley de Reducción de Papeleo de 1995, ninguna persona está requerida a responder a una encuesta a menos que tenga un número válido de control otorgado por el OMB. El número válido de control otorgado por el OMB para esta recolección de datos es el 1850-0666.
---

**BACCALAUREATE AND BEYOND LONGITUDINAL STUDY**

BB\_FS2/«Addr\_ID»  
«fname» «mname» «lname» «suffix» «caseid»  
«addr1»  
«addr2»  
«city», «state» «zip» «zip4»

**Address Update Information**

\* «CASEID» \*

**Address and Telephone Information**

A. *Previously, you provided us with the following address. If not currently correct, **please update** in the space provided.*

«fname» «mname» «lname» «suffix» «addr1» «addr2» «city», «state» «zip» «zip4»  «sarea1» «sphone1»  BB FS1/«Addr_ID»
--

Name:

Address:

Home phone: ( ) \_\_\_\_\_ Work: ( ) \_\_\_\_\_

- Please check here if all information pre-printed in this section is **currently correct**.
- Please check here if **you do not know** if this information is currently correct.

B. *Please provide us with information on the best times (in your time zone) and dates for us to call.*

a. Best time to call (in your time zone): \_\_\_\_:\_\_\_\_  am  pm *through* \_\_\_\_:\_\_\_\_  am  pm

b. Which days are best for us to reach you?  Sun  Mon  Tues  Wed  Thur  Fri  Sat

C. *If you have an electronic mail address that we can use to contact you, please provide it below.*

Electronic Mail Address:

***Thank you for your assistance and participation. This information is completely confidential.  
Please return this page in the enclosed postage paid envelope.***

**MÁS ALLÁ DE LOS ESTUDIOS UNIVERSITARIOS**  
**Formulario para Actualizar la Dirección del Domicilio**

\* «CASEID» \*

Datos de Dirección y Número de Teléfono

A. *Nos dio anteriormente la siguiente dirección. Si no es correcto en la actualidad, **favor de poner al día** la información en el espacio proporcionado..*

«fname» «mname» «lname» «suffix» «addr1» «addr2» «city», «state» «zip»«zip4»  «sarea1» «sphone1»  BB FS1/«Addr_ID»
---

Nombre:

Dirección:

Teléfono particular: (\_\_\_\_)

Trabajo: (\_\_\_\_)

- Favor de marcar aquí si toda la información ya imprimida en esta sección es **actualmente correcta**.
- Favor de marcar aquí si **no sabe usted** si toda la información es actualmente correcta.

B) *Por favor nos provea con información acerca de la hora más conveniente (en su huso horario) recibir nuestra llamada..*

a. La hora más conveniente (en su huso horario): \_\_\_\_\_ : \_\_\_\_\_  am  pm *hasta*

\_\_\_\_\_ : \_\_\_\_\_  am  pm

b. Los días más convenientes?

Domingo  Lunes  Martes  Miércoles  Jueves  Viernes  Sábado

---

C. *Si tiene una dirección de correo electrónico que podemos usar para ponernos en contacto con usted, por favor escribala en el espacio a continuación.*

Dirección de Correo Electrónico: \_\_\_\_\_

***Le agradecemos su asistencia y su participación. Esta información se mantendrá estrictamente confidencial.  
Favor de devolver esta página en el sobre sellado adjuntado.***



## **Appendix E**

# **Training of Interviewers**

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**B&B: 2001**  
**TELEPHONE INTERVIEWER TRAINING AGENDA**  
**(July 7-8, 2001)**

<b><i>Saturday</i></b>		<i>480 minutes</i>	<i>9:00a-5:00p</i>
	Welcome and Introduction of TIs	5 minutes	9:00a-9:05a
Topic 1	Overview of B&B (Powerpoint presentation)	20 minutes	9:05a-9:25a
Topic 2	Overview of the Training Session - Training agenda and rules	5 minutes	9:25a-9:30a
Topic 3	Confidentiality and Informed Consent - Review signed forms	15 minutes	9:30a-9:45a
Topic 4	Demonstration Interview: audiotaped with dataview projection of screens	20 minutes	9:45a-10:05a
Topic 5	Question and Answer sheet review (round robin)	25 minutes	10:05a-10:30a
BREAK		15 minutes	10:30a-10:45a
Topic 6	Questionnaire Review of Q-by-Qs Round Robin Mock Interview (conduct section by section)	90 minutes	10:45a-12:15p
<b>LUNCH BREAK</b>		<b>60 minutes</b>	<b>12:15p-1:15p</b>
Topic 6	Questionnaire Review of Q-by-Qs Round Robin Mock Interview	90 minutes	1:15p-2:45p
	<b>(Conduct section by section)</b>		
BREAK		15 minutes	2:45p-3:00p
Topic 7	UserExit Review and Practice - For each (IPEDS; Major; Occ/Industry): Conceptual overview diagram Screen-by-screen review on dataview Hands-on navigation practice	60 minutes	3:00p-4:00p
Topic 8	Round Robin Mock #2	45 minutes	4:15p-5:00p

<b>Sunday (Until lunch, new TIs only)</b>		<u>360 minutes</u>	<u>9:00a-3:00a</u>
	Question and Answer sheet review (round robin)	15 minutes	9:00a-9:15a
	Round Robin Mock	60 minutes	9:15a-10:15a
BREAK		15 minutes	10:15a-10:30a
	User Exits Review and Written Exercises	45 minutes	10:30a-11:15a
Topic 9	B&B Front End Module	45 minutes	11:15a-12:00p
	Overview of Contacting/locating procedures		
	Intro to roster line concept (on data view)		
	QxQ Review		
	Examples on Dataview		
	B&B Front End Practice		
<b>LUNCH BREAK</b>		<b>60 minutes</b>	<b>12:00p-1:00p</b>
	B&B Front End Review/Practice	45 minutes	1:00p-1:45p
Topic 10	Round Robin Mock #3	45 minutes	1:45p-2:30p
Topic 11	Refusal Avoidance	30 minutes	2:30p-3:00p
BREAK		15 minutes	3:00p-3:15p
Topic 13	Quality Control Procedures	15 minutes	3:15p-3:30p
	- Monitoring		
	- Reporting problems/Electronic Problem Sheets-QC Meetings		
Topic 14	More UserExit Practice and Coding	30 minutes	3.30p-4:00p
Topic 15	Certification Interview	45 minutes	4:00p-4:45p
	- paired mock		
Topic 16	Question and Answer Session/Final Remarks	15 minutes	4:45p-5:00p

## Appendix F

# **B&B:2000/01 Analysis Variables**

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Note: This list of B&B:2000/01 analysis variables is current as this report is being published. However, it is anticipated that additional variables will be created and added in the future. Links to the most recent B&B:2000/01 Data Analysis Systems, which contain the B&B:2000/01 analysis variables, can be found at the National Center for Education Statistics web site: <http://nces.ed.gov>.





Variable name	DAS/ECB	ECB label	File ID
BACITY	Institution_Characteristics	BA institution city	DERIVED
BANAME	Institution_Characteristics	BA institution name	DERIVED
BASAME	Institution_Characteristics	BA institution same as NPSAS institution	DERIVED
BASTATE	Institution_Characteristics	BA institution state	DERIVED
BBFIPS	Institution_Characteristics	BA institution state FIPS code	DERIVED
BCONTROL	Institution_Characteristics	BA institution control	DERIVED
BENRLCAT	Institution_Characteristics	BA institution enrollment and control	DERIVED
BENRLSZE	Institution_Characteristics	BA institution total enrollment	DERIVED
BHSIPT1	Institution_Characteristics	BA institution Hispanic percent total	DERIVED
BHSIPT2	Institution_Characteristics	BA institution Hispanic percent FTE total	DERIVED
BHSIPT3	Institution_Characteristics	BA institution Hispanic percent undergrad	DERIVED
BHSIPT4	Institution_Characteristics	BA institution Hispanic percent FTE undergrad	DERIVED
BHSITOT1	Institution_Characteristics	BA institution Hispanic-serving total	DERIVED
BHSIUG1	Institution_Characteristics	BA institution Hispanic-serving undergrad	DERIVED
BIPEDS	Institution_Characteristics	BA institution IPEDS ID	DERIVED
BLEVEL	Institution_Characteristics	BA institution level	DERIVED
BOBEREG	Institution_Characteristics	BA institution OBE region	DERIVED
BSECTOR	Institution_Characteristics	BA institution sector	DERIVED
BSECTOR9	Institution_Characteristics	BA institution sector w/ doctorate	DERIVED
COMMCOLL	Institution_Characteristics	Ever attended community/other 2 year	DERIVED
G1CITY	Institution_Characteristics	Post-BA: first institution city	DERIVED
G1CTRL	Institution_Characteristics	Post-BA: first institution control	DERIVED
G1IPEDS	Institution_Characteristics	Post-BA: first institution IPEDS ID	DERIVED
G1LEVEL	Institution_Characteristics	Post-BA: first institution level	DERIVED
G1NAME	Institution_Characteristics	Post-BA: first institution name	DERIVED
G1SECT	Institution_Characteristics	Post-BA: first institution sector	DERIVED
G1STATE	Institution_Characteristics	Post-BA: first institution state	DERIVED
HBCUANY	Institution_Characteristics	Ever attended an HBCU	DERIVED
HBCUBA	Institution_Characteristics	BA institution is HBCU	DERIVED
I1CITY	Institution_Characteristics	First PSE institution city	DERIVED
I1CTRL	Institution_Characteristics	First PSE institution control	DERIVED
I1IPEDS	Institution_Characteristics	First PSE institution IPEDS ID	DERIVED
I1LEVEL	Institution_Characteristics	First PSE institution level	DERIVED
I1NAME	Institution_Characteristics	First PSE institution name	DERIVED
I1SECT	Institution_Characteristics	First PSE institution sector	DERIVED
I1SECT9	Institution_Characteristics	First PSE institution sector w/doctorate	DERIVED

Variable name	DAS/ECB	ECB label	File ID
I1STATE	Institution_Characteristics	First PSE institution state	DERIVED
I2CTRL	Institution_Characteristics	Second PSE institution control	DERIVED
I2LEVEL	Institution_Characteristics	Second PSE institution level	DERIVED
I2SECT	Institution_Characteristics	Second PSE institution sector	DERIVED
I3CTRL	Institution_Characteristics	Third PSE institution control	DERIVED
I3LEVEL	Institution_Characteristics	Third PSE institution level	DERIVED
I3SECT	Institution_Characteristics	Third PSE institution sector	DERIVED
SAMEINST	Institution_Characteristics	BA institution same as first PSE	DERIVED
WHICHBA	Institution_Characteristics	BA institution source of information	DERIVED
EDPCT	Student_Aid_Status_Total Aid	Currently repaying, share of monthly inc	DERIVED
STAFFCT3	Student_Aid_Federal Loans	Stafford unsubsidized maximum 1999-00	DERIVED
STAFTYP2	Student_Aid_Federal Loans	Stafford loan type combination 1999-00	DERIVED
PBANYAS	Student_Aid_Status Total Aid	Post-BA: any assistantships	DERIVED
PBFELL	Student_Aid_Status Total Aid	Post-BA: any fellowships	DERIVED
PBGIFT	Student_Aid_Status Total Aid	Post-BA: any loan/gift from family	DERIVED
PBGRTS	Student_Aid_Status Total Aid	Post-BA: any grants/scholarships	DERIVED
PBOTAI	Student_Aid_Status Total Aid	Post-BA: any unspecified other aid	DERIVED
PBOTAS	Student_Aid_Status Total Aid	Post-BA: any assistantships, other	DERIVED
PBOTLN	Student_Aid_Status Total Aid	Post-BA: any bank loans	DERIVED
PBRESE	Student_Aid_Status Total Aid	Post-BA: any assistantships, research	DERIVED
PBSTULN	Student_Aid_Status Total Aid	Post-BA: any student loans	DERIVED
PBTEAC	Student_Aid_Status Total Aid	Post-BA: any assistantships, teaching	DERIVED
PBTUIT	Student_Aid_Status Total Aid	Post-BA: any tuition reimbursement	DERIVED
AGENBA	Student_Background	Age received BA from NPSAS institution	DERIVED
DISABLT	Student_Background	Reported having a disability	DERIVED
FRGNLANG	Student_Background	Foreign language fluency	DERIVED
CMP1MY	Student_Education_Attainment	Post-BA: date of first completion	DERIVED
CRATAA	Student_Education_Attainment	Certificate/associate before bachelor's	DERIVED
HIOHDEG	Student_Education_Attainment	Highest prior attainment	DERIVED
MACMPL	Student_Education_Attainment	Post-BA: master's degree completed	DERIVED
PBATT	Student_Education_Attainment	Post-BA: highest degree completed	DERIVED
LICENSE	Student_Education_Certificate	Any occupational/professional license	DERIVED
OLTIM	Student_Education_Certificate	License, total prep time	DERIVED
OLTIMC	Student_Education_Certificate	License, total prep time, categorical	DERIVED
PCTIM	Student_Education_Certificate	Certification, total prep time	DERIVED
PCTIMC	Student_Education_Certificate	Certification, total prep time, category	DERIVED

Variable name	DAS/ECB	ECB label	File ID
BAFSTDT	Student_Education_Enrollment	Date first began BA institution	DERIVED
BMAJORS3	Student_Education_Enrollment	Undergrad major field of study 1	DERIVED
DCTR2001	Student_Education_Enrollment	Post-BA degree: enrolled for doctorate	DERIVED
DEG1	Student_Education_Enrollment	Post-BA 1: degree type, collapsed	DERIVED
DEG2	Student_Education_Enrollment	Post-BA 2: degree type, collapsed	DERIVED
ENRCUR	Student_Education_Enrollment	Post-BA degree: current enrollment	DERIVED
FTRDEG	Student_Education_Enrollment	Post-BA future: degree type, collapsed	DERIVED
FUTDEG	Student_Education_Enrollment	Post-BA future: degree type, detailed	DERIVED
FUTMC	Student_Education_Enrollment	Post-BA future: major code, collapsed	DERIVED
G1FSTDT	Student_Education_Enrollment	Date first began post-baccalaureate	DERIVED
GRDPIP	Student_Education_Enrollment	Post-BA degree: grad school pipeline	DERIVED
HIDEG	Student_Education_Enrollment	Post-BA degree: highest, detailed	DERIVED
HIDEGC	Student_Education_Enrollment	Post-BA degree: highest, collapsed	DERIVED
HIDEGMJ	Student_Education_Enrollment	Post-BA degree: highest, detailed major	DERIVED
HS_BA	Student_Education_Enrollment	Time between HS grad and BA completion	DERIVED
HS_PSE	Student_Education_Enrollment	Time between HS grad and PSE	DERIVED
I1FSTDT	Student_Education_Enrollment	Date first began first PSE institution	DERIVED
JOBLOC	Student_Education_Enrollment	First year employment location	DERIVED
MAJORS4	Student_Education_Enrollment	Undergrad major field of study 2	DERIVED
MJCAT1	Student_Education_Enrollment	Post-BA 1: major, collapsed	DERIVED
MJCAT2	Student_Education_Enrollment	Post-BA 2: major, collapsed	DERIVED
MJCD1	Student_Education_Enrollment	Post-BA 1: major, detailed	DERIVED
MJCOD	Student_Education_Enrollment	Post-BA future: major code, detailed	DERIVED
MSTR2001	Student_Education_Enrollment	Post-BA degree: enrolled for masters	DERIVED
NDCR2YR	Student_Education_Enrollment	Post-BA: credit courses at 2-year	DERIVED
NDCR4YR	Student_Education_Enrollment	Post-BA: credit courses at 4-year	DERIVED
NDCROTH	Student_Education_Enrollment	Post-BA: credit courses other location	DERIVED
NDCRVOC	Student_Education_Enrollment	Post-BA: credit courses at voc/tech	DERIVED
NDNC2YR	Student_Education_Enrollment	Post-BA: noncredit courses at 2-year	DERIVED
NDNC4YR	Student_Education_Enrollment	Post-BA: noncredit courses at 4-year	DERIVED
NDNCBUS	Student_Education_Enrollment	Post-BA: noncredit courses at business	DERIVED
NDNCGOV	Student_Education_Enrollment	Post-BA: noncredit courses at gov't	DERIVED
NDNCOTH	Student_Education_Enrollment	Post-BA: noncredit courses at other	DERIVED
NDNCPROF	Student_Education_Enrollment	Post-BA: noncredit courses prof. assoc.	DERIVED
NDNCVOC	Student_Education_Enrollment	Post-BA: noncredit courses at voc/tech	DERIVED
PBDEG1	Student_Education_Enrollment	Post-BA 1: degree type, detailed	DERIVED

Variable name	DAS/ECB	ECB label	File ID
PBDEG2	Student_Education_Enrollment	Post-BA 2: degree type, detailed	DERIVED
PBENST	Student_Education_Enrollment	Post-BA degree: enrollment summary	DERIVED
PSE_BA	Student_Education_Enrollment	Time between PSE and BA completion	DERIVED
STOPTOT	Student_Education_Enrollment	Undergrad total months stopped out 1	DERIVED
STOPTOT2	Student_Education_Enrollment	Undergrad total months stopped out 2	DERIVED
TAKENGRE	Student_Education_Enrollment	Post-BA degree: took admissions test	DERIVED
TXFR	Student_Education_Enrollment	Undergrad transfer, any	DERIVED
TXFR_TYP	Student_Education_Enrollment	Undergrad type of transfer	DERIVED
EDEXP	Student_Education_Goals	Highest degree plans	DERIVED
MSDEGRB	Student_Education_Goals	Planning masters or higher degree, B&B	DERIVED
MSDEGRN	Student_Education_Goals	Planning masters or higher degree, NPSAS	DERIVED
HSTYP	Student_Education_High_School	Detailed high school type	DERIVED
GPAMAJ	Student_Education_Performance	GPA in undergraduate major	DERIVED
CERT1CAR	Student_Education_Reasons	Certification exam for career change	DERIVED
CERT1INC	Student_Education_Reasons	Certification exam for increased income	DERIVED
CERT1OPP	Student_Education_Reasons	Certification exam for advancement	DERIVED
CERT1OTH	Student_Education_Reasons	Certification exam for other reason	DERIVED
CERT1PER	Student_Education_Reasons	Certification exam for personal interest	DERIVED
EDPSTAID	Student_Education_Reasons	Delay grad school b/c no financial aid	DERIVED
EDPSTAPP	Student_Education_Reasons	Delay grad school b/c missed deadline	DERIVED
EDPSTBRK	Student_Education_Reasons	Delay grad school because wants a break	DERIVED
EDPSTCAR	Student_Education_Reasons	Delay grad school b/c indefinite plans	DERIVED
EDPSTDEB	Student_Education_Reasons	Delay grad school b/c undergraduate debt	DERIVED
EDPSTFAM	Student_Education_Reasons	Delay grad school b/c family constraint	DERIVED
EDPSTFIN	Student_Education_Reasons	Delay grad school for other financial	DERIVED
EDPSTJOB	Student_Education_Reasons	Delay grad school for good job	DERIVED
EDPSTKID	Student_Education_Reasons	Delay grad school b/c raising children	DERIVED
EDPSTMIL	Student_Education_Reasons	Delay grad school for military	DERIVED
EDPSTMOV	Student_Education_Reasons	Delay grad school b/c moving/relocating	DERIVED
EDPSTOTH	Student_Education_Reasons	Delay grad school due to other reason	DERIVED
EDPSTSCH	Student_Education_Reasons	Delay grad school because not admitted	DERIVED
EDPSTWRK	Student_Education_Reasons	Delay grad school to gain experience	DERIVED
NDCRACAD	Student_Education_Reasons	Post-BA: credit course due to interest	DERIVED
NDCRADVA	Student_Education_Reasons	Post-BA: credit course to advance career	DERIVED
NDCRCARR	Student_Education_Reasons	Post-BA: credit course for career choice	DERIVED
NDCRCERT	Student_Education_Reasons	Post-BA: credit course for license/cert	DERIVED

Variable name	DAS/ECB	ECB label	File ID
NDCREXAM	Student_Education_Reasons	Post-BA: credit course for license exam	DERIVED
NDCREXPL	Student_Education_Reasons	Post-BA: credit course explore options	DERIVED
NDCRGRAD	Student_Education_Reasons	Post-BA: credit course prep for school	DERIVED
NDCRMARK	Student_Education_Reasons	Post-BA: credit course for marketability	DERIVED
NDCROTR	Student_Education_Reasons	Post-BA: credit course for other reason	DERIVED
NDCRTRAN	Student_Education_Reasons	Post-BA: credit course to transfer	DERIVED
NDNCACAD	Student_Education_Reasons	Post-BA: noncredit course to interest	DERIVED
NDNCADVA	Student_Education_Reasons	Post-BA: noncredit course to advance	DERIVED
NDNCCARR	Student_Education_Reasons	Post-BA: noncredit course for career	DERIVED
NDNCCERT	Student_Education_Reasons	Post-BA: noncredit course for license	DERIVED
NDNCEXAM	Student_Education_Reasons	Post-BA: noncredit course for exam	DERIVED
NDNCEXPL	Student_Education_Reasons	Post-BA: noncredit course to explore	DERIVED
NDNCGRAD	Student_Education_Reasons	Post-BA: noncredit course for grad sch	DERIVED
NDNCMARK	Student_Education_Reasons	Post-BA: noncredit course to market self	DERIVED
NDNCOTR	Student_Education_Reasons	Post-BA: noncredit course for other	DERIVED
NHDGCAR	Student_Education_Reasons	No grad degree because not needed	DERIVED
NHDGFAM	Student_Education_Reasons	No grad degree due to family/personal	DERIVED
NHDGGRA	Student_Education_Reasons	No grad degree because grades too low	DERIVED
NHDGINT	Student_Education_Reasons	No grad degree because no interest	DERIVED
NHDGKID	Student_Education_Reasons	No grad degree because raising children	DERIVED
NHDGLAB	Student_Education_Reasons	No grad degree since not in labor market	DERIVED
NHDGOTH	Student_Education_Reasons	No grad degree due to other reason	DERIVED
NHDGRFIN	Student_Education_Reasons	No grad degree due to financial reasons	DERIVED
NHDGSCH	Student_Education_Reasons	No grad degree since do not like school	DERIVED
PBAC1ACA	Student_Education_Reasons	Post-BA degree due to academic/personal	DERIVED
PBAC1ADV	Student_Education_Reasons	Post-BA degree for career advancement	DERIVED
PBAC1AID	Student_Education_Reasons	Post-BA degree due to aid availability	DERIVED
PBAC1CAR	Student_Education_Reasons	Post-BA degree for career choice	DERIVED
PBAC1FIN	Student_Education_Reasons	Post-BA degree for marketability/money	DERIVED
PBAC1NOJ	Student_Education_Reasons	Post-BA degree because no job prospects	DERIVED
PBAC1OTH	Student_Education_Reasons	Post-BA degree due to other reason	DERIVED
PBAC1UNS	Student_Education_Reasons	Post-BA degree because of uncertainty	DERIVED
PBAC1URG	Student_Education_Reasons	Post-BA degree because urged by others	DERIVED
TRNR1	Student_Education_Reasons	Undergrad transfer 1st reason	DERIVED
TRNRAC	Student_Education_Reasons	Undergrad transfer due to any academic	DERIVED
TWOYRAC	Student_Education_Reasons	Attended 2-year due to any academic	DERIVED

Variable name	DAS/ECB	ECB label	File ID
TWOYRFIN	Student_Education_Reasons	Attended 2-year due to any financial	DERIVED
UG2YCONV	Student_Education_Reasons	Attended 2-year for convenience	DERIVED
UG2YDEGR	Student_Education_Reasons	Attended 2-year to earn degree/cert	DERIVED
UG2YENRI	Student_Education_Reasons	Attended 2-year for personal enrichment	DERIVED
UG2YEXPC	Student_Education_Reasons	Attended 2-year for less expense	DERIVED
UG2YFAID	Student_Education_Reasons	Attended 2-year for financial aid	DERIVED
UG2YFINR	Student_Education_Reasons	Attended 2-year for financial reasons	DERIVED
UG2YOTHR	Student_Education_Reasons	Attended 2-year for other unspecified	DERIVED
UG2YPROG	Student_Education_Reasons	Attended 2-year due to desired program	DERIVED
UG2YSKIL	Student_Education_Reasons	Attended 2-year to learn job skills	DERIVED
UG2YTRAN	Student_Education_Reasons	Attended 2-year to prepare for transfer	DERIVED
UGBRKACA	Student_Education_Reasons	Took 2-year break b/c academic problems	DERIVED
UGBRKFAM	Student_Education_Reasons	Took 2-year break b/c change in family	DERIVED
UGBRKFIN	Student_Education_Reasons	Took 2-year break b/c other financial	DERIVED
UGBRKFUT	Student_Education_Reasons	Took 2-year break b/c unsure of future	DERIVED
UGBRKJOB	Student_Education_Reasons	Took 2-year break b/c job conflicts	DERIVED
UGBRKOTH	Student_Education_Reasons	Took 2-year break b/c other unspecified	DERIVED
UGBRKSTU	Student_Education_Reasons	Took 2-year break for time off	DERIVED
UGBRKWRK	Student_Education_Reasons	Took 2-year break b/c needed to work	DERIVED
UGMULCLA	Student_Education_Reasons	Multiple schools for extra classes	DERIVED
UGMULCON	Student_Education_Reasons	Multiple schools for consortium/classes	DERIVED
UGMULDNE	Student_Education_Reasons	Multiple schools to get done sooner	DERIVED
UGMULEAS	Student_Education_Reasons	Multiple schools to fill requirements	DERIVED
UGMULFIN	Student_Education_Reasons	Multiple schools for financial reasons	DERIVED
UGMULOTH	Student_Education_Reasons	Multiple schools for other unspecified	DERIVED
UGMULPRO	Student_Education_Reasons	Multiple schools to try different major	DERIVED
UGMULSCH	Student_Education_Reasons	Multiple schools for scheduling	DERIVED
UGMULTRN	Student_Education_Reasons	Multiple schools to prepare to transfer	DERIVED
UGTRNACA	Student_Education_Reasons	Undergrad transfer for academic problems	DERIVED
UGTRNDEG	Student_Education_Reasons	Undergrad transfer to earn degree/cert	DERIVED
UGTRNFIN	Student_Education_Reasons	Undergrad transfer for financial reasons	DERIVED
UGTRNLOC	Student_Education_Reasons	Undergrad transfer preferred location	DERIVED
UGTRNOTH	Student_Education_Reasons	Undergrad transfer for other unspecified	DERIVED
UGTRNPER	Student_Education_Reasons	Undergrad transfer for personal/family	DERIVED
UGTRNREP	Student_Education_Reasons	Undergrad transfer for school reputation	DERIVED
UGTRPRI	Student_Education_Reasons	Undergrad transfer back to prior school	DERIVED

Variable name	DAS/ECB	ECB label	File ID
UGTRPRO	Student_Education_Reasons	Undergrad transfer for desired program	DERIVED
HLTHINS	Student_Employment_Benefit	Medical insurance	DERIVED
COSIZ	Student_Employment_Jobs	Number of employees, categories	DERIVED
EMPAPR	Student_Employment_Jobs	Employment status April 2001	DERIVED
EMPCUR	Student_Employment_Jobs	Current employment status	DERIVED
EMPLOY1	Student_Employment_Jobs	Current employment status at least part-time	DERIVED
EMPLOY2	Student_Employment_Jobs	Current employment status full-time	DERIVED
EMPMY	Student_Employment_Jobs	Date began current job, all respondents	DERIVED
EMPOLF	Student_Employment_Jobs	Current employment status, with OLF	DERIVED
INDCD	Student_Employment_Jobs	Current industry code, collapsed	DERIVED
JBRELMJR	Student_Employment_Jobs	Job related to undergraduate major, closely	DERIVED
MOEMP	Student_Employment_Jobs	Months employed in current job	DERIVED
MOSNOEMP	Student_Employment_Jobs	Months since last worked for pay	DERIVED
OCCD	Student_Employment_Jobs	Current occupation code, collapsed	DERIVED
AVGSAT	Student_Employment_Satisfaction	Overall index, all items	DERIVED
JOBSATIS	Student_Employment_Satisfaction	Satisfied-job overall (single item)	DERIVED
SATJBSAL	Student_Employment_Satisfaction	Satisfied-job pay	DERIVED
JFINDEMP	Student_Employment_Strategies	Previous job search, agencies/recruiters	DERIVED
JFINDFAC	Student_Employment_Strategies	Previous job search, faculty/staff	DERIVED
JFINDOTH	Student_Employment_Strategies	Previous job search, other methods	DERIVED
JFINDSCH	Student_Employment_Strategies	Previous job search, placement office	DERIVED
JFINDUNE	Student_Employment_Strategies	Previous job search, unemployment office	DERIVED
JFINDVOL	Student_Employment_Strategies	Previous job search, volunteered	DERIVED
JFINDWWW	Student_Employment_Strategies	Previous job search, Internet/WWW	DERIVED
JFINNET	Student_Employment_Strategies	Previous job search, friends/relatives	DERIVED
JFINNEW	Student_Employment_Strategies	Previous job search, newspaper/ads	DERIVED
JFINREC	Student_Employment_Strategies	Previous job search, fairs/meetings	DERIVED
JFINRES	Student_Employment_Strategies	Previous job search, resume/contacts	DERIVED
JOBSR	Student_Employment_Strategies	Current job search all	DERIVED
JSRCHEMP	Student_Employment_Strategies	Current job search, agencies/recruiters	DERIVED
JSRCHFAC	Student_Employment_Strategies	Current job search, faculty/staff	DERIVED
JSRCHOTH	Student_Employment_Strategies	Current job search, other methods	DERIVED
JSRCHSCH	Student_Employment_Strategies	Current job search, placement office	DERIVED
JSRCHUNE	Student_Employment_Strategies	Current job search, unemployment office	DERIVED
JSRCHVOL	Student_Employment_Strategies	Current job search, volunteering	DERIVED
JSRCHWWW	Student_Employment_Strategies	Current job search, Internet/WWW	DERIVED

Variable name	DAS/ECB	ECB label	File ID
JSRCNET	Student_Employment_Strategies	Current job search, friends/relatives	DERIVED
JSRCNEW	Student_Employment_Strategies	Current job search, newspaper/ads	DERIVED
JSRCREC	Student_Employment_Strategies	Current job search, fairs/meetings	DERIVED
JSRCRES	Student_Employment_Strategies	Current job search, resume/contacts	DERIVED
ADSBPERM	Student_Employment_Teaching	Ever took aide/sub job	DERIVED
CNDRTCHG	Student_Employment_Teaching	Pipeline, never taught but considered	DERIVED
CRLEV97	Student_Employment_Teaching	Current, el/sec school level	DERIVED
CRLOC97	Student_Employment_Teaching	Current, el/sec school locale	DERIVED
CRPMIN97	Student_Employment_Teaching	Current, el/sec school percent minority	DERIVED
CRSIZE97	Student_Employment_Teaching	Current, el/sec school enrollment size	DERIVED
CRSTAT	Student_Employment_Teaching	Current, el/sec school state, recoded	DERIVED
CRTYPE97	Student_Employment_Teaching	Current, el/sec school type	DERIVED
EMPLTCHR	Student_Employment_Teaching	Employed at K-12 level in 2001	DERIVED
FIRSTPOS	Student_Employment_Teaching	First position type	DERIVED
FRLEV97	Student_Employment_Teaching	First, el/sec school level	DERIVED
FRLOC97	Student_Employment_Teaching	First, el/sec school locale	DERIVED
FRPMIN97	Student_Employment_Teaching	First, el/sec school percent minority	DERIVED
FRSIZE97	Student_Employment_Teaching	First, el/sec school enrollment size	DERIVED
FRTYPE97	Student_Employment_Teaching	First, el/sec school type	DERIVED
FSSTAT	Student_Employment_Teaching	First, el/sec school state, recoded	DERIVED
NTAPPCER	Student_Employment_Teaching	Reason no apply not yet certified	DERIVED
NTAPPCON	Student_Employment_Teaching	Reason no apply poor teaching conditions	DERIVED
NTAPPINT	Student_Employment_Teaching	Reason no apply not interested	DERIVED
NTAPPJOB	Student_Employment_Teaching	Reason no apply already in another job	DERIVED
NTAPPOFF	Student_Employment_Teaching	Reason no apply got better job offer	DERIVED
NTAPPOTH	Student_Employment_Teaching	Reason no apply other	DERIVED
NTAPPREQ	Student_Employment_Teaching	Reason no apply not taken required tests	DERIVED
NTAPPSAL	Student_Employment_Teaching	Reason no apply wants higher salary	DERIVED
NTAPTEA	Student_Employment_Teaching	Reason no apply already teaching	DERIVED
NTAPTES	Student_Employment_Teaching	Reason no apply unable to pass tests	DERIVED
NTEACBET	Student_Employment_Teaching	Reason not teaching better offer	DERIVED
NTEACDAN	Student_Employment_Teaching	Reason not teaching dangerous/difficult	DERIVED
NTEACFAR	Student_Employment_Teaching	Reason not teaching too far from home	DERIVED
NTEACINT	Student_Employment_Teaching	Reason not teaching more interesting	DERIVED
NTEACJOB	Student_Employment_Teaching	Reason not teaching accepted other job	DERIVED
NTEACLOW	Student_Employment_Teaching	Reason not teaching low salary/benefits	DERIVED



Variable name	DAS/ECB	ECB label	File ID
NTEACOTH	Student_Employment_Teaching	Reason not teaching other	DERIVED
NTEACQUA	Student_Employment_Teaching	Reason not teaching not qualified	DERIVED
PIPELINE	Student_Employment_Teaching	Pipeline, location in teacher pipeline	DERIVED
STATUS	Student_Employment_Teaching	Teacher status	DERIVED
TCHPIPLN	Student_Employment_Teaching	Pipeline, whether in teacher pipeline	DERIVED
TCURART	Student_Employment_Teaching	Currently teach art/drama/music	DERIVED
TCURBUS	Student_Employment_Teaching	Currently teach business	DERIVED
TCURECO	Student_Employment_Teaching	Currently teach economics/politics	DERIVED
TCURELE	Student_Employment_Teaching	Currently teach elementary/early child	DERIVED
TCURENG	Student_Employment_Teaching	Currently teach English/reading/writing	DERIVED
TCURESLE	Student_Employment_Teaching	Currently teach ESL/bilingual	DERIVED
TCURFOR	Student_Employment_Teaching	Currently teach foreign languages	DERIVED
TCURMAT	Student_Employment_Teaching	Currently teach math	DERIVED
TCUROTH	Student_Employment_Teaching	Currently teach other unspecified	DERIVED
TCURPHY	Student_Employment_Teaching	Currently teach health/physical ed	DERIVED
TCURSCI	Student_Employment_Teaching	Currently teach science	DERIVED
TCURSEC	Student_Employment_Teaching	Currently teach secondary education	DERIVED
TCURSOC	Student_Employment_Teaching	Currently teach social studies/history	DERIVED
TCURSPE	Student_Employment_Teaching	Currently teach special education	DERIVED
TCURVOC	Student_Employment_Teaching	Currently teach vocational/occupational	DERIVED
TFIRSART	Student_Employment_Teaching	First, taught art/drama/music	DERIVED
TFIRSBUS	Student_Employment_Teaching	First, taught business	DERIVED
TFIRSECO	Student_Employment_Teaching	First, taught economics/politics	DERIVED
TFIRSELE	Student_Employment_Teaching	First, taught elementary/early child	DERIVED
TFIRSENG	Student_Employment_Teaching	First, taught English/reading/writing	DERIVED
TFIRSESL	Student_Employment_Teaching	First, taught ESL/bilingual	DERIVED
TFIRSFOR	Student_Employment_Teaching	First, taught foreign languages	DERIVED
TFIRSMAT	Student_Employment_Teaching	First, taught math	DERIVED
TFIRSOTH	Student_Employment_Teaching	First, taught other type of education	DERIVED
TFIRSPHY	Student_Employment_Teaching	First, taught health/physical ed	DERIVED
TFIRSSCI	Student_Employment_Teaching	First, taught science	DERIVED
TFIRSSSEC	Student_Employment_Teaching	First, taught secondary education	DERIVED
TFIRSSOC	Student_Employment_Teaching	First, taught social studies/history	DERIVED
TFIRSSPE	Student_Employment_Teaching	First, taught special education	DERIVED
TFIRSVOC	Student_Employment_Teaching	First, taught vocational/occupational	DERIVED
JBRELTRN	Student_Employment_Training	Any job training in past year	DERIVED

Variable name	DAS/ECB	ECB label	File ID
JTSUPP	Student_Employment_Training	Employer accommodations for job training	DERIVED
TRNCRT	Student_Employment_Training	Job training leading to license	DERIVED
ENREMPC	Student_Employment_Work & Education	Enrollment/employment, current	DERIVED
CHILDREN	Student_Family	Dependents: any dependent children	DERIVED
DEP14P	Student_Family	Dependents: number age 14 or older	DERIVED
DEP4B	Student_Family	Dependents: number age 4 or below	DERIVED
DEP5T13	Student_Family	Dependents: number age 5-13	DERIVED
HSFAM	Student_Family	Household-number of family members total	DERIVED
HSNUM	Student_Family	Household-number of people total	DERIVED
MARRIED	Student_Family	Current marital status, married	DERIVED
SPSED	Student_Family	Spouse highest level of education	DERIVED
SPSENR	Student_Family	Spouse enrolled in 2000-2001	DERIVED
EDCTNDBT	Student_Finances_Debt	Have/had education debt	DERIVED
OWNHOME	Student_Finances_Debt	Home, arrangement is ownership	DERIVED
SPAID	Student_Finances_Debt	Spouse borrowed, any undergrad	DERIVED
SPAMT	Student_Finances_Debt	Spouse borrowed, payment amount	DERIVED
SPLON	Student_Finances_Debt	Spouse borrowed, undergrad loan amount	DERIVED
SPOWE	Student_Finances_Debt	Spouse borrowed, undergrad amount owed	DERIVED
SPSRPY	Student_Finances_Debt	Spouse borrowed, in repayment	DERIVED
ANERNC	Student_Finances_Income	Job income, annual, categories	DERIVED
ANERNP	Student_Finances_Income	Job income, annual, percentile	DERIVED
EARN30K	Student_Finances_Income	Job income, at least \$30,000 annually	DERIVED
INCSP00	Student_Finances_Income	Spouse job income 2000	DERIVED
MOINC	Student_Finances_Income	Job income, monthly amount 2001	DERIVED
SPSEMP	Student_Finances_Income	Spouse employed in 2000	DERIVED
FGVTYP	Student_Finances_Strategies	Loan forgiveness, program type collapsed	DERIVED
LFTMTXCR	Student_Finances_Strategies	Lifetime learning credit 1999,2000,2001	DERIVED
VOTE2000	Student_Public Service_Civic	Voted in 2000 presidential election	DERIVED
COMMALIT	Student_Public Service_Community	Type-adult literacy project	DERIVED
COMMCHUR	Student_Public Service_Community	Type-service to church	DERIVED
COMMCRIS	Student_Public Service_Community	Type-telephone/rape crisis center	DERIVED
COMMFIRE	Student_Public Service_Community	Type-volunteer fire/EMT	DERIVED
COMMFUND	Student_Public Service_Community	Type-nonpolitical fundraising	DERIVED
COMMHLTH	Student_Public Service_Community	Type-health service/hospital/home	DERIVED
COMMHOME	Student_Public Service_Community	Type-homeless shelter/soup kitchen	DERIVED
COMMNEIG	Student_Public Service_Community	Type-neighborhood improvement	DERIVED

Variable name	DAS/ECB	ECB label	File ID
COMMOKID	Student_Public Service_Community	Type-other work with kids/coaching	DERIVED
COMMOTHR	Student_Public Service_Community	Type-other unspecified	DERIVED
COMMPOLI	Student_Public Service_Community	Type-political fundraising	DERIVED
COMMSERV	Student_Public Service_Community	Any community service	DERIVED
COMMTUTR	Student_Public Service_Community	Type-tutoring/education with kids	DERIVED
VOLBASIS	Student_Public Service_Community	Time commitment, all	DERIVED
MILIT	Student_Public Service_Military	Military status 2001	DERIVED
CCNPCUR	Student_Residence	Distance NPSAS institution to current home	DERIVED
CCNPHOM	Student_Residence	Distance NPSAS home to NPSAS institution	DERIVED
CCZIPDST	Student_Residence	Distance high school to current home	DERIVED
CURRUCA	Student_Residence	Rural urban code-current residence	DERIVED
HSRUCA	Student_Residence	Rural urban code-high school residence	DERIVED
LIVWPRNT	Student_Residence	Housing, neither own/rent, with parents	DERIVED
MOVEAFAM	Student_Residence	Reason moved to get away from family	DERIVED
MOVECFAM	Student_Residence	Reason moved to stay close to family	DERIVED
MOVECLIM	Student_Residence	Reason moved to change climates	DERIVED
MOVEJOB	Student_Residence	Reason moved got a job	DERIVED
MOVEJOPP	Student_Residence	Reason moved for better job opportunity	DERIVED
MOVELOCA	Student_Residence	Reason moved preferred location	DERIVED
MOVEOFAM	Student_Residence	Reason moved for other family reasons	DERIVED
MOVEOTHR	Student_Residence	Reason moved other unspecified	DERIVED
MOVEQUAL	Student_Residence	Reason moved for better quality of life	DERIVED
MOVESCHL	Student_Residence	Reason moved for further education	DERIVED
REGION	Student_Residence	Current home region	DERIVED
SMSTATE	Student_Residence	BA institution in residence state 2001	DERIVED



## **Appendix G**

### **Design Effects**

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## Appendix G

### Design Effects

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A common approach to evaluating the efficiency of the survey design for estimating any population parameter,  $\theta$ , using a survey statistic, say  $\hat{\theta}$ , is to compute the design effect, designated as DEFF, and defined as

$$DEFF = \frac{\hat{V}_{design}(\hat{\theta})}{\hat{V}_{SRS}(\hat{\theta})}$$

where  $\hat{V}_{design}(\hat{\theta})$  is the variance estimate of estimator  $\hat{\theta}$  under the design, and  $\hat{V}_{SRS}(\hat{\theta})$  is the variance estimate of  $\hat{\theta}$  for a simple random sample of equal size. The square root of the design effect, or root design effect (DEFT), is also useful as it provides a statistic with units on the same scale as the estimate,  $\theta$ .

The design effect is unity (1.00), by definition, for simple random samples. For most practical sampling designs, the survey design effect is greater than unity, reflecting that the precision is less than could be achieved with a simple random sample of the same size (if such a design were practical). The size of the survey design effect depends largely on the sample size and intracluster correlation within the primary sampling units (e.g., number of students per institution and within-institution correlations). Hence, statistics that are based on observations that are highly correlated within institutions will have higher design effects for the B&B:2000/01 study.

Design effects and root design effects were computed for respondents in the following analysis domains:

- All respondents
- Sex: male and female
- Race<sup>1</sup>: Asian, Black, and White
- Ethnicity: Hispanic
- Institutional control: public and private not-for-profit

Within these domains, design effects were estimated for 30 outcomes, mostly B&B CATI variables, identified in consultation with NCES. All required variance estimates were made by the Taylor series approach, using SUDAAN. These design effects can be found in tables G.1 through G.9.

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<sup>1</sup>Students may be of more than one race and therefore may be represented in more than one table.

## Using Design Effects to Estimate Standard Errors

Design effects can be used when it is necessary to perform an analysis of the B&B:2000/01 data using a software package that is not designed for analysis of complex survey data (see appendix I). In such a situation, the design effects given here can provide a rough guide to the adjustment needed for the resulting standard errors for any of the domains for which design effect tables are provided in this appendix (e.g., all, male, female, Asian,...). Each of these domains has design effects given for 30 variables, providing a range of design effects one might expect to see. This range of design effects can then be easily converted to a range of possible standard errors for any variable not among the 30. If the minimum standard error were required, for example, the computation would be

$$SE_{min,design} = SE_{SRS} \times DEFT_{min}$$

where  $SE_{min,design}$  is the minimum of the range of standard errors,  $DEFT_{min}$  is the minimum root design effect found in the tables for the domain of interest, and  $SE_{SRS}$  is the estimated standard error computed using the study weights and a standard statistical package that ignores sample stratification and clustering (i.e., multistage sampling). The maximum would be found similarly.

For example, table G.2 shows design effects for male respondents. If one had computed a statistic (e.g., mean Pell grant amount) for male students using the study weights and a standard statistical analysis package, then the summary statistics from table G.2 suggest that the computed standard error should be multiplied by a root design effect somewhere around 1.18 to 1.43 (the minimum and the maximum of DEFT for variables given in the table). This product would be a rough approximation to the range of possible standard errors. However, whenever possible, a software package specifically designed for analysis of data from complex sample surveys should be used to directly compute the design-based standard error.



**Table G.1. Design effects for all respondents**

Variable description	Percent estimate	Design standard error	Simple random sample standard error	DEFT <sup>1</sup>	DEFF <sup>2</sup>
Ever attended a community college or other 2-year college	51.5	0.79	0.50	1.58	2.48
Live in same state where BA institution is located	69.2	0.74	0.46	1.60	2.56
Living with parent(s) or other relatives	16.3	0.52	0.37	1.40	1.95
Own home or making mortgage payments	24.3	0.67	0.43	1.57	2.46
Employed at least part-time	87.4	0.46	0.33	1.37	1.89
Employed full-time	76.5	0.56	0.42	1.32	1.75
Employed in a job that offers health insurance	81.2	0.59	0.43	1.35	1.83
Employed in a job closely related to the student's major	54.0	0.72	0.54	1.32	1.75
Earning \$30,000 or more per year of those employed full or part-time	58.1	0.81	0.57	1.41	2.00
Received employer training in the past year	72.9	0.84	0.59	1.41	1.99
Satisfied with job salary	65.7	0.68	0.53	1.29	1.67
Ever considered teaching of those who have never taught	40.4	0.74	0.57	1.31	1.72
In the teacher pipeline	50.6	0.71	0.51	1.38	1.91
Employed as a teacher	11.9	0.44	0.33	1.33	1.77
Was planning to get a Master's or higher degree when interviewed in NPSAS	83.8	0.62	0.40	1.56	2.42
Currently working on or planning to pursue a Master's or higher degree within the next 5 years when interviewed in B&B	70.3	0.62	0.46	1.35	1.83
Have taken the GRE or some other graduate admissions test	10.4	0.38	0.33	1.17	1.36
Voted in 2000 presidential election	76.8	0.62	0.43	1.43	2.06
Did any community service work in 2001	43.0	0.69	0.50	1.36	1.85
Enrolled in a Master's program in 2001	16.5	0.48	0.37	1.30	1.70
Enrolled in a Doctoral program in 2001	5.1	0.27	0.22	1.22	1.50
Have/had education debt	65.6	0.67	0.49	1.38	1.90
Used lifetime learning tax credit in 1999, 2000, or 2001	48.5	0.80	0.63	1.28	1.63
Graduated from same institution where they began their postsecondary education	54.6	0.88	0.53	1.65	2.72
Can speak a foreign language	21.8	0.68	0.42	1.62	2.64
Have a disability	8.5	0.39	0.29	1.36	1.85
Married	29.7	0.72	0.46	1.58	2.50
Have children	18.2	0.62	0.39	1.57	2.47
Satisfied with job	85.0	0.53	0.40	1.34	1.79
Has occupational or professional license	29.7	0.61	0.47	1.30	1.69
SUMMARY STATISTICS					
Mean	†	†	†	1.40	1.99
Minimum	†	†	†	1.17	1.36
Maximum	†	†	†	1.65	2.72

†Not applicable.

<sup>1</sup> DEFT is the root design effect, given by  $DEFT = \sqrt{DEFF}$ .

<sup>2</sup> DEFF is the design effect, given by  $DEFF = \hat{V}_{design}(\hat{\theta}) / \hat{V}_{SRS}(\hat{\theta})$ .

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

Table G.2. Design effects for male respondents

Variable description	Percent estimate	Design standard error	Simple random sample standard error	DEFT <sup>1</sup>	DEFF <sup>2</sup>
Ever attended a community college or other 2-year college	49.3	1.15	0.81	1.42	2.01
Live in same state where BA institution is located	66.7	1.05	0.76	1.38	1.91
Living with parent(s) or other relatives	14.8	0.77	0.57	1.33	1.78
Own home or making mortgage payments	21.6	0.94	0.67	1.41	2.00
Employed at least part-time	89.2	0.65	0.50	1.29	1.66
Employed full-time	80.4	0.78	0.64	1.22	1.48
Employed in a job that offers health insurance	82.7	0.89	0.68	1.32	1.73
Employed in a job closely related to the student's major	52.2	1.08	0.87	1.24	1.53
Earning \$30,000 or more per year of those employed full or part-time	67.7	1.05	0.86	1.21	1.47
Received employer training in the past year	72.2	1.25	0.97	1.28	1.64
Satisfied with job salary	71.2	0.97	0.81	1.20	1.43
Ever considered teaching of those who have never taught	38.5	1.12	0.87	1.29	1.66
In the teacher pipeline	45.7	1.07	0.82	1.31	1.71
Employed as a teacher	7.5	0.51	0.43	1.18	1.38
Was planning to get a Master's or higher degree when interviewed in NPSAS	81.8	0.96	0.68	1.42	2.02
Currently working on or planning to pursue a Master's or higher degree within the next 5 years when interviewed in B&B	70.8	0.91	0.73	1.24	1.55
Have taken the GRE or some other graduate admissions test	9.5	0.58	0.51	1.14	1.31
Voted in 2000 presidential election	75.2	0.95	0.72	1.33	1.77
Did any community service work in 2001	41.4	1.06	0.81	1.30	1.70
Enrolled in a Master's program in 2001	15.0	0.74	0.58	1.28	1.63
Enrolled in a Doctoral program in 2001	6.1	0.46	0.39	1.19	1.41
Have/had education debt	64.4	1.02	0.80	1.29	1.66
Used lifetime learning tax credit in 1999, 2000, or 2001	48.5	1.32	1.01	1.31	1.72
Graduated from same institution where they began their postsecondary education	54.6	1.23	0.86	1.43	2.04
Can speak a foreign language	21.3	0.94	0.67	1.39	1.94
Have a disability	7.3	0.53	0.44	1.21	1.47
Married	27.7	0.99	0.72	1.36	1.86
Have children	16.3	0.86	0.61	1.42	2.03
Satisfied with job	86.2	0.74	0.62	1.20	1.43
Has occupational or professional license	26.8	0.89	0.73	1.22	1.50
SUMMARY STATISTICS					
Mean	†	†	†	1.29	1.68
Minimum	†	†	†	1.14	1.31
Maximum	†	†	†	1.43	2.04

†Not applicable.

<sup>1</sup> DEFT is the root design effect, given by  $DEFT = \sqrt{DEFF}$ .

<sup>2</sup> DEFF is the design effect, given by  $DEFF = \hat{V}_{design}(\hat{\theta}) / \hat{V}_{SRS}(\hat{\theta})$ .

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

**Table G.3. Design effects for female respondents**

Variable description	Percent estimate	Design standard error	Simple random sample standard error	DEFT <sup>1</sup>	DEFF <sup>2</sup>
Ever attended a community college or other 2-year college	53.1	0.98	0.64	1.53	2.35
Live in same state where BA institution is located	71.0	0.87	0.58	1.51	2.27
Living with parent(s) or other relatives	17.4	0.65	0.48	1.35	1.82
Own home or making mortgage payments	26.2	0.84	0.56	1.50	2.26
Employed at least part-time	86.1	0.60	0.44	1.36	1.86
Employed full-time	73.6	0.73	0.56	1.29	1.67
Employed in a job that offers health insurance	80.2	0.76	0.57	1.34	1.79
Employed in a job closely related to the student's major	55.4	0.94	0.69	1.35	1.83
Earning \$30,000 or more per year of those employed full or part-time	50.7	1.08	0.74	1.45	2.11
Received employer training in the past year	73.5	1.10	0.75	1.47	2.16
Satisfied with job salary	61.5	0.94	0.69	1.36	1.85
Ever considered teaching of those who have never taught	42.0	0.97	0.75	1.30	1.69
In the teacher pipeline	54.3	0.89	0.65	1.36	1.86
Employed as a teacher	15.2	0.62	0.47	1.33	1.77
Was planning to get a Master's or higher degree when interviewed in NPSAS	85.2	0.69	0.49	1.41	1.99
Currently working on or planning to pursue a Master's or higher degree within the next 5 years when interviewed in B&B	69.9	0.79	0.58	1.35	1.84
Have taken the GRE or some other graduate admissions test	11.0	0.49	0.43	1.14	1.30
Voted in 2000 presidential election	78.0	0.74	0.54	1.37	1.87
Did any community service work in 2001	44.2	0.90	0.64	1.40	1.95
Enrolled in a Master's program in 2001	17.5	0.64	0.48	1.31	1.73
Enrolled in a Doctoral program in 2001	4.5	0.31	0.26	1.17	1.36
Have/had education debt	66.6	0.89	0.62	1.43	2.05
Used lifetime learning tax credit in 1999, 2000, or 2001	48.6	1.05	0.80	1.31	1.72
Graduated from same institution where they began their postsecondary education	54.6	1.04	0.68	1.53	2.35
Can speak a foreign language	22.2	0.84	0.54	1.56	2.43
Have a disability	9.3	0.54	0.38	1.41	1.99
Married	31.2	0.89	0.59	1.51	2.29
Have children	19.7	0.77	0.52	1.48	2.19
Satisfied with job	84.0	0.72	0.52	1.38	1.89
Has occupational or professional license	31.9	0.77	0.61	1.27	1.62
SUMMARY STATISTICS					
Mean	†	†	†	1.39	1.93
Minimum	†	†	†	1.14	1.30
Maximum	†	†	†	1.56	2.43

†Not applicable.

<sup>1</sup> DEFT is the root design effect, given by  $DEFT = \sqrt{DEFF}$ .

<sup>2</sup> DEFF is the design effect, given by  $DEFF = \hat{V}_{design}(\hat{\theta}) / \hat{V}_{SRS}(\hat{\theta})$ .

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

**Table G.4. Design effects for Asian respondents**

Variable description	Percent estimate	Design standard error	Simple random sample standard error	DEFT <sup>1</sup>	DEFF <sup>2</sup>
Ever attended a community college or other 2-year college	55.5	3.05	2.29	1.33	1.77
Live in same state where BA institution is located	73.7	2.48	2.02	1.23	1.51
Living with parent(s) or other relatives	24.7	2.21	1.98	1.12	1.25
Own home or making mortgage payments	13.8	2.10	1.58	1.33	1.76
Employed at least part-time	80.7	2.02	1.81	1.12	1.25
Employed full-time	69.4	2.30	2.11	1.09	1.19
Employed in a job that offers health insurance	86.7	2.12	1.84	1.15	1.33
Employed in a job closely related to the student's major	55.6	2.91	2.59	1.12	1.26
Earning \$30,000 or more per year of those employed full or part-time	70.5	2.90	2.58	1.12	1.26
Received employer training in the past year	71.2	3.80	3.07	1.24	1.53
Satisfied with job salary	74.0	2.69	2.37	1.14	1.29
Ever considered teaching of those who have never taught	30.3	2.67	2.23	1.20	1.43
In the teacher pipeline	33.9	2.54	2.23	1.14	1.29
Employed as a teacher	2.3	0.67	0.70	0.96	0.92
Was planning to get a Master's or higher degree when interviewed in NPSAS	84.7	2.42	1.85	1.31	1.71
Currently working on or planning to pursue a Master's or higher degree within the next 5 years when interviewed in B&B	73.6	2.46	2.02	1.22	1.48
Have taken the GRE or some other graduate admissions test	14.7	2.18	1.78	1.22	1.50
Voted in 2000 presidential election	58.8	2.88	2.60	1.11	1.22
Did any community service work in 2001	34.6	2.55	2.23	1.15	1.31
Enrolled in a Master's program in 2001	17.4	2.36	1.74	1.36	1.85
Enrolled in a Doctoral program in 2001	6.6	1.03	1.14	0.90	0.82
Have/had education debt	57.7	2.96	2.34	1.26	1.60
Used lifetime learning tax credit in 1999, 2000, or 2001	45.1	3.42	2.96	1.16	1.34
Graduated from same institution where they began their postsecondary education	54.2	2.85	2.51	1.14	1.29
Can speak a foreign language	65.8	2.65	2.22	1.19	1.43
Have a disability	4.9	1.43	1.07	1.35	1.81
Married	19.4	2.17	1.81	1.20	1.45
Have children	8.4	1.65	1.30	1.27	1.61
Satisfied with job	85.6	2.36	1.90	1.24	1.54
Has occupational or professional license	18.8	2.35	1.83	1.28	1.64
SUMMARY STATISTICS					
Mean	†	†	†	1.19	1.42
Minimum	†	†	†	0.90	0.82
Maximum	†	†	†	1.36	1.85

†Not applicable.

<sup>1</sup>DEFT is the root design effect, given by  $DEFT = \sqrt{DEFF}$ .

<sup>2</sup>DEFF is the design effect, given by  $DEFF = \hat{V}_{design}(\hat{\theta}) / \hat{V}_{SRS}(\hat{\theta})$ .

NOTE: Students may be of more than one race and therefore may be represented in more than one table.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

**Table G.5. Design effects for Black respondents**

Variable description	Percent estimate	Design standard error	Simple random sample standard error	DEFT <sup>1</sup>	DEFF <sup>2</sup>
Ever attended a community college or other 2-year college	52.4	2.18	1.78	1.22	1.50
Live in same state where BA institution is located	69.3	2.45	1.64	1.49	2.22
Living with parent(s) or other relatives	18.8	1.58	1.39	1.14	1.30
Own home or making mortgage payments	20.3	1.95	1.43	1.36	1.84
Employed at least part-time	87.3	1.59	1.18	1.35	1.82
Employed full-time	76.1	2.09	1.51	1.38	1.90
Employed in a job that offers health insurance	82.4	1.98	1.50	1.33	1.76
Employed in a job closely related to the student's major	56.8	2.88	1.92	1.50	2.26
Earning \$30,000 or more per year of those employed full or part-time	55.6	2.78	2.09	1.33	1.76
Received employer training in the past year	71.1	2.86	2.04	1.40	1.97
Satisfied with job salary	48.1	2.58	1.95	1.32	1.74
Ever considered teaching of those who have never taught	50.7	2.92	2.07	1.41	2.00
In the teacher pipeline	60.2	2.61	1.79	1.46	2.12
Employed as a teacher	11.6	1.50	1.16	1.29	1.67
Was planning to get a Master's or higher degree when interviewed in NPSAS	92.7	1.07	1.00	1.07	1.15
Currently working on or planning to pursue a Master's or higher degree within the next 5 years when interviewed in B&B	78.9	1.72	1.45	1.18	1.40
Have taken the GRE or some other graduate admissions test	10.5	1.45	1.16	1.25	1.56
Voted in 2000 presidential election	79.5	1.85	1.49	1.24	1.53
Did any community service work in 2001	49.6	2.29	1.81	1.26	1.60
Enrolled in a Master's program in 2001	22.3	2.06	1.48	1.39	1.92
Enrolled in a Doctoral program in 2001	4.3	0.88	0.72	1.23	1.51
Have/had education debt	80.5	2.15	1.45	1.48	2.19
Used lifetime learning tax credit in 1999, 2000, or 2001	48.4	2.60	2.12	1.22	1.50
Graduated from same institution where they began their postsecondary education	53.2	2.82	1.89	1.49	2.22
Can speak a foreign language	19.7	1.98	1.44	1.37	1.89
Have a disability	7.8	1.26	0.99	1.27	1.60
Married	24.5	1.95	1.53	1.28	1.64
Have children	34.5	2.27	1.72	1.32	1.73
Satisfied with job	78.3	1.95	1.61	1.21	1.46
Has occupational or professional license	29.3	2.15	1.65	1.30	1.68
SUMMARY STATISTICS					
Mean	†	†	†	1.32	1.75
Minimum	†	†	†	1.07	1.15
Maximum	†	†	†	1.50	2.26

†Not applicable.

<sup>1</sup>DEFT is the root design effect, given by  $DEFT = \sqrt{DEFF}$ .

<sup>2</sup>DEFF is the design effect, given by  $DEFF = \hat{V}_{design}(\hat{\theta}) / \hat{V}_{SRS}(\hat{\theta})$ .

NOTE: Students may be of more than one race and therefore may be represented in more than one table.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

Table G.6. Design effects for White respondents

Variable description	Percent estimate	Design standard error	Simple random sample standard error	DEFT <sup>1</sup>	DEFF <sup>2</sup>
Ever attended a community college or other 2-year college	50.4	0.89	0.56	1.60	2.55
Live in same state where BA institution is located	68.2	0.84	0.51	1.63	2.64
Living with parent(s) or other relatives	14.8	0.56	0.39	1.43	2.04
Own home or making mortgage payments	25.5	0.74	0.48	1.54	2.36
Employed at least part-time	88.3	0.48	0.36	1.37	1.86
Employed full-time	77.6	0.63	0.46	1.36	1.85
Employed in a job that offers health insurance	81.0	0.65	0.48	1.37	1.87
Employed in a job closely related to the student's major	53.8	0.79	0.60	1.33	1.77
Earning \$30,000 or more per year of those employed full or part-time	57.3	0.88	0.63	1.41	1.98
Received employer training in the past year	73.3	0.88	0.65	1.36	1.84
Satisfied with job salary	67.1	0.75	0.57	1.30	1.70
Ever considered teaching of those who have never taught	40.1	0.80	0.63	1.28	1.64
In the teacher pipeline	50.7	0.77	0.56	1.37	1.88
Employed as a teacher	12.5	0.49	0.37	1.32	1.75
Was planning to get a Master's or higher degree when interviewed in NPSAS	82.4	0.70	0.46	1.54	2.36
Currently working on or planning to pursue a Master's or higher degree within the next 5 years when interviewed in B&B	68.8	0.68	0.51	1.33	1.77
Have taken the GRE or some other graduate admissions test	10.1	0.41	0.36	1.15	1.32
Voted in 2000 presidential election	77.8	0.69	0.47	1.47	2.17
Did any community service work in 2001	42.7	0.75	0.56	1.35	1.81
Enrolled in a Master's program in 2001	15.6	0.50	0.40	1.24	1.54
Enrolled in a Doctoral program in 2001	5.0	0.30	0.24	1.24	1.54
Have/had education debt	64.2	0.76	0.54	1.39	1.93
Used lifetime learning tax credit in 1999, 2000, or 2001	48.3	0.90	0.69	1.29	1.66
Graduated from same institution where they began their postsecondary education	55.3	0.98	0.59	1.67	2.79
Can speak a foreign language	15.5	0.64	0.41	1.56	2.44
Have a disability	8.9	0.42	0.32	1.28	1.64
Married	31.2	0.80	0.51	1.56	2.42
Have children	17.1	0.65	0.42	1.55	2.40
Satisfied with job	85.5	0.61	0.43	1.41	1.99
Has occupational or professional license	30.8	0.67	0.52	1.29	1.67
SUMMARY STATISTICS					
Mean	†	†	†	1.40	1.97
Minimum	†	†	†	1.15	1.32
Maximum	†	†	†	1.67	2.79

†Not applicable.

<sup>1</sup>DEFT is the root design effect, given by  $DEFT = \sqrt{DEFF}$ .

<sup>2</sup>DEFF is the design effect, given by  $DEFF = \hat{V}_{design}(\hat{\theta}) / \hat{V}_{SRS}(\hat{\theta})$ .

NOTE: Students may be of more than one race and therefore may be represented in more than one table.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

**Table G.7. Design effects for Hispanic respondents**

Variable description	Percent estimate	Design standard error	Simple random sample standard error	DEFT <sup>1</sup>	DEFF <sup>2</sup>
Ever attended a community college or other 2-year college	51.0	2.70	1.96	1.38	1.90
Live in same state where BA institution is located	80.0	2.08	1.51	1.38	1.89
Living with parent(s) or other relatives	21.4	1.92	1.55	1.24	1.53
Own home or making mortgage payments	24.7	2.12	1.63	1.30	1.70
Employed at least part-time	87.2	1.62	1.26	1.28	1.64
Employed full-time	76.2	2.15	1.61	1.33	1.78
Employed in a job that offers health insurance	80.8	2.33	1.73	1.35	1.83
Employed in a job closely related to the student's major	57.8	2.71	2.12	1.28	1.63
Earning \$30,000 or more per year of those employed full or part-time	54.5	3.08	2.19	1.41	1.99
Received employer training in the past year	70.7	2.69	2.36	1.14	1.30
Satisfied with job salary	63.9	2.75	2.10	1.31	1.71
Ever considered teaching of those who have never taught	44.2	2.85	2.33	1.22	1.49
In the teacher pipeline	58.3	2.77	1.99	1.39	1.94
Employed as a teacher	18.7	2.46	1.55	1.59	2.52
Was planning to get a Master's or higher degree when interviewed in NPSAS	90.0	1.67	1.31	1.28	1.64
Currently working on or planning to pursue a Master's or higher degree within the next 5 years when interviewed in B&B	75.1	2.01	1.64	1.23	1.52
Have taken the GRE or some other graduate admissions test	10.2	1.43	1.30	1.10	1.21
Voted in 2000 presidential election	70.2	2.40	1.92	1.25	1.57
Did any community service work in 2001	40.9	2.30	1.97	1.17	1.36
Enrolled in a Master's program in 2001	19.3	1.61	1.49	1.08	1.16
Enrolled in a Doctoral program in 2001	4.6	0.85	0.79	1.07	1.15
Have/had education debt	71.8	2.08	1.80	1.15	1.33
Used lifetime learning tax credit in 1999, 2000, or 2001	54.3	2.90	2.45	1.18	1.40
Graduated from same institution where they began their postsecondary education	51.7	2.95	2.15	1.37	1.88
Can speak a foreign language	69.3	2.68	1.85	1.45	2.10
Have a disability	8.1	1.47	1.10	1.34	1.80
Married	30.1	2.15	1.73	1.24	1.54
Have children	21.6	1.98	1.65	1.20	1.44
Satisfied with job	84.2	2.22	1.59	1.39	1.94
Has occupational or professional license	29.5	2.26	1.83	1.23	1.52
SUMMARY STATISTICS					
Mean	†	†	†	1.28	1.65
Minimum	†	†	†	1.07	1.15
Maximum	†	†	†	1.59	2.52

†Not applicable.

<sup>1</sup>DEFT is the root design effect, given by  $DEFT = \sqrt{DEFF}$ .

<sup>2</sup>DEFF is the design effect, given by  $DEFF = \hat{V}_{design}(\hat{\theta}) / \hat{V}_{SRS}(\hat{\theta})$ .

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

**Table G.8. Design effects for respondents who received their degree from a public institution**

Variable description	Percent estimate	Design standard error	Simple random sample standard error	DEFT <sup>1</sup>	DEFF <sup>2</sup>
Ever attended a community college or other 2-year college	53.4	0.97	0.62	1.55	2.40
Live in same state where BA institution is located	74.0	0.88	0.55	1.61	2.59
Living with parent(s) or other relatives	15.8	0.64	0.45	1.42	2.01
Own home or making mortgage payments	24.4	0.80	0.54	1.50	2.24
Employed at least part-time	87.9	0.58	0.41	1.43	2.04
Employed full-time	76.8	0.71	0.53	1.34	1.80
Employed in a job that offers health insurance	81.6	0.72	0.53	1.36	1.85
Employed in a job closely related to the student's major	54.3	0.90	0.67	1.34	1.80
Earning \$30,000 or more per year of those employed full or part-time	58.2	0.97	0.71	1.37	1.87
Received employer training in the past year	73.3	1.03	0.73	1.41	1.99
Satisfied with job salary	65.4	0.84	0.65	1.29	1.66
Ever considered teaching of those who have never taught	38.6	0.89	0.70	1.27	1.60
In the teacher pipeline	49.4	0.87	0.64	1.37	1.88
Employed as a teacher	12.4	0.58	0.42	1.38	1.90
Was planning to get a Master's or higher degree when interviewed in NPSAS	82.6	0.78	0.51	1.52	2.31
Currently working on or planning to pursue a Master's or higher degree within the next 5 years when interviewed in B&B	68.2	0.72	0.58	1.25	1.56
Have taken the GRE or some other graduate admissions test	10.8	0.47	0.41	1.13	1.29
Voted in 2000 presidential election	75.9	0.81	0.55	1.47	2.17
Did any community service work in 2001	40.9	0.81	0.62	1.30	1.70
Enrolled in a Master's program in 2001	15.5	0.57	0.45	1.25	1.57
Enrolled in a Doctoral program in 2001	4.6	0.33	0.26	1.29	1.65
Have/had education debt	63.4	0.85	0.62	1.38	1.91
Used lifetime learning tax credit in 1999, 2000, or 2001	48.6	1.00	0.78	1.28	1.63
Graduated from same institution where they began their postsecondary education	53.5	1.00	0.66	1.51	2.27
Can speak a foreign language	21.2	0.90	0.52	1.74	3.03
Have a disability	8.1	0.48	0.35	1.38	1.89
Married	30.0	0.85	0.57	1.49	2.21
Have children	17.8	0.70	0.48	1.45	2.09
Satisfied with job	85.6	0.64	0.48	1.32	1.74
Has occupational or professional license	30.2	0.75	0.58	1.29	1.66
SUMMARY STATISTICS					
Mean	†	†	†	1.39	1.94
Minimum	†	†	†	1.13	1.29
Maximum	†	†	†	1.74	3.03

†Not applicable.

<sup>1</sup>DEFT is the root design effect, given by  $DEFT = \sqrt{DEFF}$ .

<sup>2</sup>DEFF is the design effect, given by  $DEFF = \hat{V}_{design}(\hat{\theta}) / \hat{V}_{SRS}(\hat{\theta})$ .

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).



**Table G.9. Design effects for respondents who received their degree from a private not-for-profit institution**

Variable description	Percent estimate	Design standard error	Simple random sample standard error	DEFT <sup>1</sup>	DEFF <sup>2</sup>
Ever attended a community college or other 2-year college	47.0	1.44	0.86	1.68	2.83
Live in same state where BA institution is located	59.7	1.31	0.84	1.57	2.46
Living with parent(s) or other relatives	17.5	0.90	0.65	1.38	1.91
Own home or making mortgage payments	22.9	1.20	0.72	1.67	2.80
Employed at least part-time	86.3	0.74	0.59	1.27	1.60
Employed full-time	75.5	0.96	0.73	1.31	1.72
Employed in a job that offers health insurance	80.2	1.04	0.76	1.36	1.84
Employed in a job closely related to the student's major	53.3	1.21	0.94	1.29	1.67
Earning \$30,000 or more per year of those employed full or part-time	56.5	1.46	0.99	1.47	2.16
Received employer training in the past year	71.8	1.49	1.05	1.42	2.01
Satisfied with job salary	66.7	1.16	0.90	1.28	1.63
Ever considered teaching of those who have never taught	43.4	1.35	0.97	1.39	1.94
In the teacher pipeline	53.0	1.25	0.87	1.43	2.05
Employed as a teacher	11.4	0.69	0.55	1.25	1.57
Was planning to get a Master's or higher degree when interviewed in NPSAS	86.0	1.08	0.65	1.67	2.80
Currently working on or planning to pursue a Master's or higher degree within the next 5 years when interviewed in B&B	74.7	1.09	0.74	1.47	2.17
Have taken the GRE or some other graduate admissions test	9.8	0.65	0.54	1.20	1.44
Voted in 2000 presidential election	78.0	0.99	0.73	1.36	1.86
Did any community service work in 2001	47.3	1.24	0.87	1.42	2.03
Enrolled in a Master's program in 2001	18.0	0.86	0.66	1.32	1.73
Enrolled in a Doctoral program in 2001	6.6	0.48	0.42	1.14	1.31
Have/had education debt	69.6	1.11	0.81	1.37	1.89
Used lifetime learning tax credit in 1999, 2000, or 2001	48.0	1.33	1.07	1.25	1.55
Graduated from same institution where they began their postsecondary education	58.5	1.79	0.90	1.98	3.93
Can speak a foreign language	22.5	0.94	0.73	1.29	1.67
Have a disability	9.2	0.69	0.51	1.36	1.84
Married	28.2	1.33	0.77	1.74	3.02
Have children	17.8	1.13	0.67	1.69	2.86
Satisfied with job	84.3	0.93	0.70	1.33	1.78
Has occupational or professional license	28.8	1.07	0.79	1.36	1.85
SUMMARY STATISTICS					
Mean	†	†	†	1.43	2.06
Minimum	†	†	†	1.14	1.31
Maximum	†	†	†	1.98	3.93

†Not applicable.

<sup>1</sup> DEFT is the root design effect, given by  $DEFT = \sqrt{DEFF}$ .

<sup>2</sup> DEFF is the design effect, given by  $DEFF = \hat{V}_{design}(\hat{\theta}) / \hat{V}_{SRS}(\hat{\theta})$ .

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).



## **Appendix H**

# **Item Nonresponse Analysis**

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# Appendix H

## Item Nonresponse Analysis

Item nonresponse occurs when a responding individual completes the interview but does not answer some of the survey questions. For these items, the individual is a nonrespondent. This differs from unit nonresponse (see chapter 6), in which a sampled individual fails to answer all of the interview questions. In this appendix, a brief analysis of item nonresponse among B&B CATI respondents is given.

An item nonresponse occurs when a full-interview respondent<sup>1</sup> fails to answer an item, and the failure is not due to legitimate skip. The item nonresponse rate is then the sum of the weights of item respondents over the sum of the weights of all eligible individuals. This rate is found using the final study weights. A variable was considered to have high item nonresponse if its weighted item nonresponse rate exceeded 0.15.

All variables with high item nonresponse rates were identified, and those with at least 1,000 eligible sample members were considered for further analysis. The identified variables are given in table H.1, together with counts and unweighted and weighted item nonresponse rates. All of these variables have well less than 9,650 eligible full-interview respondents because of legitimate skips. The table shows that the percent weighted item nonresponse rate varies between 17 percent and 61 percent.

**Table H.1. Item nonresponse rates for selected B&B:2000/01 CATI variables**

Variable description	Number eligible	Number of item respondents	Number of item nonrespondents	Unweighted item nonresponse rate	Weighted item nonresponse rate
Education tax credits: Claim lifetime learning tax in 2001	4,170	3,460	710	17	17
Spouse information: Spouse's income in 2000	3,090	2,400	690	22	23
Education tax credits: Tax credit help to continue education	2,690	1,720	970	36	35
Current income: Hourly/weekly/monthly wage	2,480	1,720	750	30	33
Spouse information: Spouse repaying student loans	2,480	2,040	440	18	18
Spouse information: Amount spouse owes on student loans	2,480	2,040	440	18	18
Spouse information: Amount spouse borrowed in loans	2,480	2,070	410	17	17
Spouse information: Spouse's monthly student loan payment	2,270	1,810	460	20	21
Current teaching job: Sections taught per day-current job	1,500	1,060	450	30	29
Current income: Time scale of pay—hourly/weekly/monthly <sup>1</sup>	1,290	540	750	58	61

<sup>1</sup>Is not applicable for students who reported an annual salary.

NOTE: Statistics are based on sample members for whom specific items were applicable and asked. Details may not sum to total due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B: 2000/01).

<sup>1</sup>There were 9,650 full-interview respondents. Other types of respondents are 370 abbreviated-interview respondents and 10 partial-interview respondents.

**Appendix H**  
**Item Nonresponse Analysis**

Nonresponse bias analysis was then conducted for each of the variables with a high level of item nonresponse using the same methodology described in chapter 6 for unit nonresponse. The results of these analyses are presented in tables H.2 through H.11.

**Table H.2. Comparison of item respondents and nonrespondents for “Claim lifetime learning tax in 2001”**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Institutional sector</b>							
<b>Public 4-year</b>	2,730	2,270	460	66	66	65	0.1113
Non-doctorate-granting	830	690	140	19	19	19	0.0569
Doctorate-granting	1,910	1,590	320	47	47	47	0.0691
<b>Private not-for-profit 4-year</b>	1,400	1,150	250	33	32	34	-0.3628
Non-doctorate-granting	740	610	130	18	18	19	-0.2055
Doctorate-granting	650	540	120	14	14	15	-0.1719
<b>Private for-profit 4-year</b>	50	40	#	2	2	0	0.2514*
<b>Institutional control and enrollment category</b>							
<b>Public</b>							
Fewer than 2,500	50	50	10	1	1	1	0.0614
2,500–4,999	150	130	10	3	4	2	0.3606*
5,000–9,999	450	370	80	8	8	9	-0.0478
10,000–19,999	730	610	120	17	17	17	0.1288
20,000 or more	1,350	1,110	240	36	36	38	-0.3918
<b>Private not-for-profit</b>							
Fewer than 1,000	100	80	20	2	2	2	-0.0553
1,000–2,499	310	250	60	7	7	8	-0.2305
2,500–4,999	370	310	70	9	9	10	-0.2256
5,000–9,999	240	200	40	5	5	5	0.0686
10,000 or more	380	320	60	9	10	10	0.0800
<b>Private for-profit</b>							
Fewer than 999	10	10	0	#	1	0	0.0834
1,000 or more	40	30	#	1	1	#	0.1681
<b>Institution region</b>							
New England	220	190	20	6	6	4	0.3525
Mid East	720	570	140	16	16	18	-0.4442
Great Lakes	720	600	120	17	17	18	-0.0501
Plains	370	310	60	9	9	10	-0.1890
South East	1,000	820	180	21	21	23	-0.3824
South West	430	370	60	11	11	8	0.4323
Rocky Mountains	180	150	30	4	4	3	0.1376
Far West	510	420	80	16	16	15	0.1213
Outlying Area	30	20	10	1	1	1	0.0220
<b>Gender</b>							
Male	1,590	1,350	240	43	44	37	1.2292*
Female	2,590	2,110	470	57	56	63	-1.2292*
<b>Age</b>							
21 or younger	1,110	870	240	25	24	34	-1.7566*
22	1,010	820	200	23	22	28	-0.9216
23	520	440	80	12	12	12	0.0410
24 to 27	630	540	90	17	18	12	1.0043*
28 or older	900	790	110	23	24	15	1.6329*
<b>Race</b>							
White	3,370	2,800	560	78	78	75	0.4780
Black or African American	350	290	70	9	9	11	-0.3499
Asian	190	170	30	6	6	6	0.1178
American Indian/Alaska Native	40	40	#	1	1	1	0.0691
Native Hawaiian/Other Pacific Islander	20	20	10	1	1	1	-0.0149
Other	200	150	50	5	5	7	-0.3001
<b>Hispanic</b>							
Yes	280	240	40	9	10	6	0.6465*
No	3,890	3,220	670	91	90	94	-0.6465*
<b>Citizenship</b>							
U.S. citizen	3,980	3,300	680	93	92	94	-0.2236
Resident alien	120	100	20	5	5	4	0.1557
Foreign/international student	70	60	10	3	3	3	0.0679

See notes at end of table.

**Table H.2. Comparison of item respondents and nonrespondents for “Claim lifetime learning tax in 2001”—Continued**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Attendance status</b>							
Full-time/full year, 1 institution	2,010	1,650	370	47	46	50	-0.7722
Full-time/full year, more than 1 institution	200	150	50	4	3	7	-0.5808*
Full-time/part year	830	700	120	19	20	16	0.6106
Part-time/full year, 1 institution	460	390	70	13	13	12	0.2391
Part-time/full year, more than 1 institution	80	70	10	2	2	1	0.1279
Part-time/part year	590	500	90	16	16	14	0.3753
<b>Parents' income (for dependent students)</b>							
Less than \$10,000	80	70	20	2	2	2	-0.0866
\$10,000–\$19,999	110	90	30	3	3	4	-0.3239
\$20,000–\$29,999	220	180	40	5	5	6	-0.1105
\$30,000–\$39,999	210	170	40	5	5	6	-0.1827
\$40,000–\$49,999	240	190	50	5	5	6	-0.0809
\$50,000–\$59,999	250	200	60	6	5	8	-0.5255
\$60,000–\$69,999	220	180	40	5	5	5	-0.0163
\$70,000–\$79,999	210	170	50	5	4	6	-0.2901
\$80,000–\$99,999	310	250	60	7	7	9	-0.3501
\$100,000 or more	520	420	100	12	12	14	-0.4066
<b>Student's income (for independent students)</b>							
Less than \$5,000	250	210	50	6	6	6	-0.1002
\$5,000–\$9,999	240	210	30	6	6	4	0.4155
\$10,000–\$19,999	330	280	50	9	9	7	0.3098
\$20,000–\$29,999	250	220	30	6	7	4	0.4314
\$30,000–\$49,999	360	320	40	9	10	6	0.6649
\$50,000 or more	370	320	50	10	10	7	0.6519
<b>Applied for aid</b>							
Yes	2,400	1,990	410	55	55	57	-0.4722
No	1,770	1,470	300	45	46	43	0.4722
<b>Receipt of federal aid</b>							
Yes	2,070	1,720	350	47	47	49	-0.2324
No	2,100	1,740	360	53	53	51	0.2324
<b>Receipt of Pell grant</b>							
Yes	930	780	150	20	21	21	-0.0986
No	3,250	2,690	560	79	80	79	0.0986
<b>Receipt of Stafford loan</b>							
Yes	1,810	1,500	310	42	41	43	-0.2845
No	2,360	1,960	400	59	59	57	0.2845
<b>Receipt of state aid</b>							
Yes	800	650	150	17	16	20	-0.6133
No	3,370	2,820	560	84	84	81	0.6133
<b>Receipt of institution aid</b>							
Yes	1,390	1,130	260	31	30	35	-0.9133*
No	2,780	2,330	440	69	70	65	0.9133*
<b>Receipt of any aid</b>							
Yes	2,960	2,460	500	68	68	68	0.0189
No	1,220	1,010	210	32	32	32	-0.0189
<b>Ever married</b>							
Yes	1,580	1,380	200	37	39	27	2.0063*
No	2,580	2,080	490	64	62	73	-2.0063*
<b>Dependents other than spouse</b>							
Yes	820	720	100	19	20	14	0.9841*
No	3,330	2,740	590	81	80	86	-0.9841*

See notes at end of table.

**Table H.2. Comparison of item respondents and nonrespondents for “Claim lifetime learning tax in 2001”—Continued**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Student’s state of legal residence 1999–2000</b>							
New England	200	170	30	5	5	4	0.2729
Mid East	730	580	150	17	16	20	-0.5794
Great Lakes	710	590	120	17	17	18	-0.1482
Plains	350	290	60	8	8	8	0.0400
Southeast	970	800	170	20	20	21	-0.2145
Southwest	430	370	60	11	11	9	0.2434
Rocky Mountains	180	150	30	4	4	3	0.1567
Far West	550	460	90	17	17	16	0.1317
Outlying Areas	60	50	10	2	2	2	0.0973
<b>Current employment status for B&amp;B interview</b>							
Work full-time	2,930	2,500	430	72	73	62	1.9538*
Work part-time	660	520	130	15	15	20	-0.8390
Waiting to report to work/layoff	30	30	10	1	1	1	-0.0220
Not working	510	400	120	12	11	18	-1.1359*
Homemaker	10	10	#	#	#	#	0.0284
Disabled	#	#	0	#	#	0	0.0148
<b>Cumulative amount of Federal loans</b>							
\$0	2,100	1,740	360	53	53	52	0.2301
\$1 to \$2,499	480	410	70	11	11	10	0.2157
\$3,500 to \$7,499	860	700	160	19	20	21	-0.4096
\$7,500 or more	710	600	120	17	17	17	-0.0362

# Rounds to zero. All zeros provided in this table are actual values.

\*Bias is significant at the  $.05/(c-1)$  level, where c is the number of categories within the primary variable.

NOTE: Details may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B: 2000/01).



Table H.3. Comparison of item respondents and nonrespondents for “Spouse’s income in 2000”

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Institutional sector</b>							
<b>Public 4-year</b>	2,100	1,630	460	66	67	64	0.6981
Non-doctorate-granting	740	570	180	23	23	23	0.1443
Doctorate-granting	1,350	1,060	290	43	44	40	0.8424
<b>Private not-for-profit 4-year</b>	950	730	220	31	31	34	-0.6716
Non-doctorate-granting	650	500	160	22	22	25	-0.8399
Doctorate-granting	290	230	60	9	9	8	0.1682
<b>Private for-profit 4-year</b>	50	40	10	3	2	3	-0.0265
<b>Institutional control and enrollment category</b>							
<b>Public</b>							
Fewer than 2,500	50	40	10	1	1	1	-0.0195
2,500–4,999	170	130	40	5	5	6	-0.2541
5,000–9,999	390	310	80	10	11	8	0.5557
10,000–19,999	580	460	120	19	21	16	0.8919
20,000 or more	900	690	210	32	31	33	-0.4758
<b>Private not-for-profit</b>							
Fewer than 1,000	130	90	40	3	3	3	0.1226
1,000–2,499	240	180	60	8	7	10	-0.5840
2,500–4,999	290	220	70	10	9	12	-0.6181
5,000–9,999	130	110	30	4	4	4	0.0985
10,000 or more	160	130	30	6	7	5	0.3094
<b>Private for-profit</b>							
Fewer than 999	10	10	#	1	1	1	0.0106
1,000 or more	40	30	10	2	2	2	-0.0371
<b>Institution region</b>							
New England	90	60	30	3	3	5	-0.4965
Mid East	360	270	100	11	10	13	-0.5965
Great Lakes	520	380	140	18	16	22	-1.1713
Plains	310	250	60	10	10	9	0.2669
South East	880	690	200	26	27	24	0.5220
South West	400	320	80	13	13	13	-0.0090
Rocky Mountains	190	170	20	6	7	3	0.7400*
Far West	310	250	60	13	14	11	0.6324
Outlying Area	20	20	#	1	1	1	0.1120
<b>Gender</b>							
Male	1,120	910	220	40	42	35	1.4703*
Female	1,970	1,490	480	60	58	65	-1.4703*
<b>Age</b>							
21 or younger	400	310	90	11	11	11	-0.0405
22	560	440	120	16	17	14	0.6837
23	370	300	80	11	12	10	0.4419
24 to 27	600	480	120	21	22	18	0.7595
28 or older	1,170	880	290	41	39	47	-1.8446*
<b>Race</b>							
White	2,650	2,070	580	83	84	80	0.8017
Black or African American	190	140	50	7	7	8	-0.4327
Asian	80	70	20	4	4	4	0.0371
American Indian/Alaska Native	30	20	10	1	1	1	0.0250
Native Hawaiian/Other Pacific Islander	10	10	#	1	#	1	-0.1008
Other	120	100	30	5	5	6	-0.3304
<b>Hispanic</b>							
Yes	190	150	40	8	9	7	0.4941
No	2,900	2,250	660	92	91	93	-0.4941
<b>Citizenship</b>							
U.S. citizen	2,980	2,320	660	94	95	93	0.3897
Resident alien	80	60	20	4	4	5	-0.3200
Foreign/international student	30	20	10	2	2	2	-0.0698

See notes at end of table.

Table H.3. Comparison of item respondents and nonrespondents for “Spouse’s income in 2000”—Continued

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Attendance status</b>							
Full-time/full year, 1 institution	1,180	940	240	36	36	34	0.5007
Full-time/full year, more than 1 institution	90	70	20	3	3	3	-0.0535
Full-time/part year	770	610	160	25	26	21	0.9877
Part-time/full year, 1 institution	440	320	120	16	15	20	-1.1400
Part-time/full year, more than 1 institution	60	50	20	2	2	2	-0.0872
Part-time/part year	550	410	140	20	19	20	-0.2078
<b>Parents’ income (for dependent students)</b>							
Less than \$10,000	30	30	10	1	1	1	-0.1014
\$10,000–\$19,999	50	40	10	2	2	1	0.0531
\$20,000–\$29,999	70	50	20	2	2	2	-0.1515
\$30,000–\$39,999	90	60	30	3	2	4	-0.3084
\$40,000–\$49,999	120	100	20	4	4	2	0.5427*
\$50,000–\$59,999	110	80	30	3	3	4	-0.2434
\$60,000–\$69,999	110	80	30	3	3	4	-0.2082
\$70,000–\$79,999	80	60	20	2	3	1	0.3000
\$80,000–\$99,999	120	90	30	4	4	3	0.1040
\$100,000 or more	150	120	30	5	5	5	0.0895
<b>Student’s income (for independent students)</b>							
Less than \$5,000	160	130	40	5	5	5	0.1547
\$5,000–\$9,999	170	130	30	5	5	4	0.1796
\$10,000–\$19,999	360	300	70	11	12	8	0.8179
\$20,000–\$29,999	310	250	60	10	10	8	0.5194
\$30,000–\$49,999	520	420	100	17	18	16	0.3715
\$50,000 or more	650	460	180	24	22	31	-2.1198*
<b>Applied for aid</b>							
Yes	1,750	1,420	320	54	57	45	2.4983*
No	1,350	970	370	46	44	55	-2.4983*
<b>Receipt of federal aid</b>							
Yes	1,550	1,270	280	48	50	40	2.4034*
No	1,550	1,130	410	52	50	60	-2.4034*
<b>Receipt of Pell grant</b>							
Yes	800	660	140	24	26	19	1.6084*
No	2,290	1,740	550	76	74	82	-1.6084*
<b>Receipt of Stafford loan</b>							
Yes	1,290	1,050	230	40	42	34	1.9540*
No	1,810	1,340	460	60	58	66	-1.9540*
<b>Receipt of state aid</b>							
Yes	570	460	110	16	16	13	0.8179*
No	2,520	1,940	580	85	84	87	-0.8179*
<b>Receipt of institution aid</b>							
Yes	860	690	180	25	26	21	0.9920*
No	2,230	1,710	520	75	74	79	-0.9920*
<b>Receipt of any aid</b>							
Yes	2,240	1,790	450	70	72	64	1.7662*
No	850	610	240	30	28	36	-1.7662*
<b>Dependents other than spouse</b>							
Yes	1,350	1,080	270	44	45	43	0.5005
No	1,720	1,320	400	56	55	58	-0.5005

See notes at end of table.

**Table H.3. Comparison of item respondents and nonrespondents for “Spouse’s income in 2000”—Continued**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Student's state of legal residence 1999–2000</b>							
New England	90	60	30	3	3	6	–0.6514
Mid East	360	270	100	11	11	12	–0.3491
Great Lakes	520	390	140	17	16	20	–0.9698
Plains	290	220	60	9	9	9	0.0356
Southeast	880	690	190	27	26	24	0.5179
Southwest	410	330	80	13	13	13	0.1764
Rocky Mountains	180	160	20	6	6	4	0.5755
Far West	330	260	70	13	14	12	0.5469
Outlying Areas	40	30	10	2	2	2	0.1179
<b>Current employment status for B&amp;B interview</b>							
Work full-time	2,390	1,890	500	79	80	76	0.8666
Work part-time	320	240	80	9	9	10	–0.2704
Waiting to report to work/layoff	30	20	10	1	1	1	–0.1091
Not working	260	190	70	9	9	9	–0.1372
Homemaker	70	50	20	2	2	3	–0.2295
Disabled	10	#	#	1	#	1	–0.1204
<b>Cumulative amount of Federal loans</b>							
\$0	1,550	1,130	410	52	50	61	–2.3541*
\$1 to \$2,499	440	360	80	13	14	9	1.0432*
\$3,500 to \$7,499	630	510	120	19	20	16	0.9577
\$7,500 or more	470	380	80	15	16	14	0.3531

# Rounds to zero.

\*Bias is significant at the  $.05/(c-1)$  level, where c is the number of categories within the primary variable.

NOTE: Details may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B: 2000/01).

Table H.4. Comparison of item respondents and nonrespondents for “Tax credit help to continue education”

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Institutional sector</b>							
<b>Public 4-year</b>	1,730	1,110	620	65	65	65	-0.2508
Non-doctorate-granting	540	350	200	19	20	19	0.4102
Doctorate-granting	1,190	760	430	45	45	46	-0.6379
<b>Private not-for-profit 4-year</b>	930	590	340	34	33	34	-0.3588
Non-doctorate-granting	490	310	180	19	19	20	-0.2565
Doctorate-granting	430	280	160	15	15	15	-0.1252
<b>Private for-profit 4-year</b>	30	20	10	2	2	0	0.6094*
<b>Institutional control and enrollment category</b>							
<b>Public</b>							
Fewer than 2,500	40	30	10	1	1	1	0.1426
2,500–4,999	80	60	20	3	3	2	0.5838
5,000–9,999	300	180	120	8	8	9	-0.1215
10,000–19,999	460	300	160	17	17	17	0.0444
20,000 or more	860	550	320	36	35	38	-0.9001
<b>Private not-for-profit</b>							
Fewer than 1,000	60	40	30	2	2	2	-0.2076
1,000–2,499	210	130	80	8	8	8	-0.0075
2,500–4,999	250	160	90	9	9	10	-0.5028
5,000–9,999	160	100	60	5	5	5	0.0535
10,000 or more	250	160	80	10	10	9	0.3055
<b>Private for-profit</b>							
Fewer than 999	10	10	0	#	1	0	0.2091
1,000 or more	20	20	10	1	2	#	0.4006
<b>Institution region</b>							
New England	140	90	40	5	6	5	0.2906
Mid East	490	290	200	18	17	20	-1.1262
Great Lakes	470	300	170	17	17	18	-0.2966
Plains	250	160	90	9	9	9	0.0668
South East	630	400	230	20	19	22	-0.9331
South West	260	180	80	10	11	8	0.9686
Rocky Mountains	120	90	40	5	5	3	0.5576
Far West	310	200	110	16	16	15	0.5236
Outlying Area	20	10	10	1	1	1	-0.0513
<b>Gender</b>							
Male	1,010	680	330	42	44	38	2.4106*
Female	1,670	1,040	640	58	56	62	-2.4106*
<b>Age</b>							
21 or younger	740	420	320	26	23	33	-3.7275*
22	630	370	270	23	20	27	-2.4247*
23	340	230	110	12	12	12	0.2342
24 to 27	410	300	120	17	20	12	2.6521*
28 or older	570	410	160	22	25	16	3.2658*
<b>Race</b>							
White	2,140	1,360	780	76	76	77	-0.3196
Black or African American	250	170	80	11	11	10	0.4868
Asian	110	70	40	6	6	6	-0.0179
American Indian/Alaska Native	20	20	10	1	1	1	0.0944
Native Hawaiian/Other Pacific Islander	20	10	10	1	1	1	-0.1198
Other	140	90	50	6	6	6	-0.1239
<b>Hispanic</b>							
Yes	200	140	60	9	11	6	1.5560*
No	2,490	1,580	910	91	89	94	-1.5560*
<b>Citizenship</b>							
U.S. citizen	2,570	1,640	930	93	92	94	-0.4973
Resident alien	80	60	30	5	5	4	0.4881
Foreign/international student	30	20	10	3	3	3	0.0092

See notes at end of table.

**Table H.4. Comparison of item respondents and nonrespondents for “Tax credit help to continue education”—Continued**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Attendance status</b>							
Full-time/full year, 1 institution	1,360	850	500	49	48	50	-0.7550
Full-time/full year, more than 1 institution	150	80	70	5	4	6	-0.7881
Full-time/part year	490	330	170	19	20	17	0.9750
Part-time/full year, 1 institution	300	200	100	13	13	12	0.5431
Part-time/full year, more than 1 institution	50	40	10	2	2	2	0.0040
Part-time/part year	350	230	120	14	14	14	0.0210
<b>Parents' income (for dependent students)</b>							
Less than \$10,000	40	30	20	2	1	2	-0.1637
\$ 10,000–\$19,999	80	50	30	3	3	4	-0.3286
\$ 20,000–\$29,999	150	90	60	6	5	6	-0.3437
\$ 30,000–\$39,999	140	90	50	5	5	5	-0.1619
\$ 40,000–\$49,999	160	100	60	5	5	5	-0.1188
\$ 50,000–\$59,999	180	110	70	7	6	8	-0.5123
\$ 60,000–\$69,999	140	80	60	5	4	6	-0.4663
\$ 70,000–\$79,999	130	70	60	4	4	6	-0.9176
\$ 80,000–\$99,999	190	110	80	7	6	9	-1.1374
\$ 100,000 or more	310	170	140	11	9	14	-1.7611*
<b>Student's income (for independent students)</b>							
Less than \$5,000	170	110	60	6	6	6	-0.0469
\$ 5,000–\$9,999	160	110	50	6	7	5	0.7779
\$ 10,000–\$19,999	220	160	60	9	10	7	1.1468
\$ 20,000–\$29,999	160	120	40	6	8	4	1.2170
\$ 30,000–\$49,999	250	180	60	10	12	7	1.6693*
\$ 50,000 or more	210	150	60	9	10	7	1.1474
<b>Applied for aid</b>							
Yes	1,660	1,110	550	60	62	55	2.6030*
No	1,030	610	420	40	38	45	-2.6030*
<b>Receipt of federal aid</b>							
Yes	1,450	970	480	52	55	47	2.7909*
No	1,240	750	490	48	45	53	-2.7909*
<b>Receipt of Pell grant</b>							
Yes	630	430	200	22	23	20	0.8867
No	2,060	1,290	770	78	77	80	-0.8867
<b>Receipt of Stafford loan</b>							
Yes	1,290	870	420	47	50	42	2.7983*
No	1,400	850	550	53	50	58	-2.7983*
<b>Receipt of state aid</b>							
Yes	540	350	200	18	17	19	-0.5179
No	2,140	1,370	770	82	83	82	0.5179
<b>Receipt of institution aid</b>							
Yes	940	580	360	32	31	34	-1.1556
No	1,750	1,140	610	68	69	66	1.1556
<b>Receipt of any aid</b>							
Yes	1,980	1,290	690	70	72	67	2.0158*
No	710	430	280	30	28	34	-2.0158*
<b>Ever married</b>							
Yes	1,030	730	300	37	42	27	5.1391*
No	1,650	990	660	63	58	73	-5.1391*
<b>Dependents other than spouse</b>							
Yes	530	380	150	19	22	15	2.4986*
No	2,140	1,340	810	81	78	85	-2.4986*

See notes at end of table.

**Table H.4. Comparison of item respondents and nonrespondents for “Tax credit help to continue education”—Continued**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Student's state of legal residence 1999–2000</b>							
New England	120	80	40	5	5	4	0.4734
Mid East	500	290	210	18	17	21	-1.2878
Great Lakes	470	310	160	17	17	17	-0.1660
Plains	240	160	80	8	8	8	0.1817
Southeast	610	390	220	19	18	21	-0.9714
Southwest	260	180	80	10	11	9	0.6991
Rocky Mountains	130	90	40	5	6	4	0.6213
Far West	330	210	120	16	16	15	0.2632
Outlying Areas	30	20	10	2	2	2	0.1866
<b>Current employment status for B&amp;B interview</b>							
Work full-time	1,850	1,240	610	70	73	64	3.3609*
Work part-time	450	270	180	17	16	19	-0.9908
Waiting to report to work/layoff	20	20	10	1	1	1	0.1973
Not working	330	180	150	12	10	17	-2.6332*
Homemaker	#	#	#	#	#	#	0.0423
Disabled	#	#	#	#	#	#	0.0234
<b>Cumulative amount of Federal loans</b>							
\$0	1,240	750	490	48	46	53	-2.7784*
\$1 to \$2,499	300	200	100	11	11	9	0.6979
\$3,500 to \$7,499	610	400	210	22	23	21	0.5966
\$7,500 or more	520	360	160	19	21	17	1.4840

# Rounds to zero. All zeros provided in this table are actual values.

\*Bias is significant at the  $.05/(c-1)$  level, where  $c$  is the number of categories within the primary variable.

NOTE: Details may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B: 2000/01).

**Table H.5. Comparison of item respondents and nonrespondents for “Hourly/weekly/monthly wage”**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Institutional sector</b>							
<b>Public 4-year</b>	1,530	1,040	490	64	63	65	-0.5913
Non-doctorate-granting	470	310	160	18	18	18	-0.1663
Doctorate-granting	1,060	730	340	46	45	47	-0.5044
<b>Private not-for-profit 4-year</b>	920	670	250	35	36	33	1.0331
Non-doctorate-granting	470	320	150	20	18	22	-1.3186
Doctorate-granting	450	350	90	15	18	10	2.4241*
<b>Private for-profit 4-year</b>	30	10	20	2	1	2	-0.4348
<b>Institutional control and enrollment category</b>							
<b>Public</b>							
Fewer than 2,500	20	20	#	1	1	#	0.1573
2,500–4,999	70	50	30	3	2	3	-0.2405
5,000–9,999	240	160	80	8	7	8	-0.2809
10,000–19,999	450	290	160	18	18	19	-0.1431
20,000 or more	750	520	230	35	34	35	-0.0842
<b>Private not-for-profit</b>							
Fewer than 1,000	70	50	20	2	3	2	0.2237
1,000–2,499	220	160	60	9	9	8	0.2240
2,500–4,999	230	160	70	9	9	10	-0.3085
5,000–9,999	150	100	50	6	5	6	-0.3320
10,000 or more	250	200	50	9	11	7	1.2259
<b>Private for-profit</b>							
Fewer than 999	#	#	#	#	#	#	-0.0584
1,000 or more	30	10	10	1	1	2	-0.3834
<b>Institution region</b>							
New England	140	100	40	7	7	6	0.1206
Mid East	470	330	140	18	18	17	0.4751
Great Lakes	380	250	140	16	14	20	-1.9217
Plains	200	130	70	8	8	10	-0.6210
South East	620	420	200	22	23	22	0.3260
South West	240	160	80	10	9	11	-0.6199
Rocky Mountains	100	80	20	3	4	3	0.1122
Far West	310	240	80	15	17	12	1.8344*
Outlying Area	20	10	#	1	1	#	0.2944
<b>Gender</b>							
Male	880	550	330	41	36	51	-5.1618*
Female	1,590	1,170	420	59	65	49	5.1618*
<b>Age</b>							
21 or younger	710	570	140	27	32	18	4.5815*
22	570	410	160	21	22	19	0.9888
23	300	190	110	12	10	16	-1.9783*
24 to 27	370	250	120	16	17	15	0.4705
28 or older	530	310	220	23	19	31	-4.0625*
<b>Race</b>							
White	1,930	1,360	570	74	75	74	0.3233
Black or African American	220	140	90	10	9	11	-0.5113
Asian	160	110	50	8	8	9	-0.1496
American Indian/Alaska Native	20	20	#	1	1	#	0.3259*
Native Hawaiian/Other Pacific Islander	10	10	10	1	1	1	0.0329
Other	130	90	40	6	6	6	-0.0211
<b>Hispanic</b>							
Yes	160	110	50	8	8	6	0.5941
No	2,320	1,610	710	92	92	94	-0.5941
<b>Citizenship</b>							
U.S. citizen	2,330	1,620	710	90	90	92	-0.6309
Resident alien	90	70	30	6	6	4	0.5580
Foreign/international student	50	40	20	4	4	4	0.0729

See notes at end of table.

**Appendix H**  
**Item Nonresponse Analysis**

**Table H.5. Comparison of item respondents and nonrespondents for “Hourly/weekly/monthly wage”—Continued**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Attendance status</b>							
Full-time/full year, 1 institution	1,230	920	310	48	52	38	4.8458*
Full-time/full year, more than 1 institution	140	100	40	4	4	4	0.0370
Full-time/part year	450	290	150	19	17	23	-1.8350
Part-time/full year, 1 institution	280	180	100	13	12	15	-0.9936
Part-time/full year, more than 1 institution	50	30	20	1	1	2	-0.2757
Part-time/part year	330	200	140	15	13	19	-1.7784
<b>Parents' income (for dependent students)</b>							
Less than \$10,000	40	30	10	1	1	1	-0.0522
\$10,000-\$19,999	80	50	30	3	3	4	-0.3664
\$20,000-\$29,999	120	80	40	5	4	6	-0.6767
\$30,000-\$39,999	120	90	30	4	5	4	0.0883
\$40,000-\$49,999	130	100	30	5	6	4	0.5672
\$50,000-\$59,999	150	120	30	6	6	5	0.6321
\$60,000-\$69,999	140	90	40	5	5	6	-0.1854
\$70,000-\$79,999	120	90	30	5	5	4	0.2574
\$80,000-\$99,999	210	160	50	8	9	6	1.0731
\$100,000 or more	310	240	70	12	13	9	1.5415
<b>Student's income (for independent students)</b>							
Less than \$5,000	200	130	60	8	8	6	0.6776
\$5,000-\$9,999	160	120	40	6	7	5	0.6491
\$10,000-\$19,999	180	130	50	7	8	6	0.4926
\$20,000-\$29,999	130	80	50	5	5	5	-0.1381
\$30,000-\$49,999	180	100	80	8	6	12	-1.9012*
\$50,000 or more	240	120	120	11	8	17	-2.6587*
<b>Applied for aid</b>							
Yes	1,320	970	350	50	51	46	1.8096
No	1,160	760	400	51	49	54	-1.8096
<b>Receipt of federal aid</b>							
Yes	1,130	830	310	44	45	40	1.6588
No	1,340	890	450	56	55	60	-1.6588
<b>Receipt of Pell grant</b>							
Yes	540	400	140	20	22	18	1.3843
No	1,940	1,330	610	80	78	82	-1.3843
<b>Receipt of Stafford loan</b>							
Yes	950	690	260	37	38	36	0.8265
No	1,520	1,030	490	63	62	64	-0.8265
<b>Receipt of state aid</b>							
Yes	460	340	120	16	17	14	0.8809
No	2,020	1,380	630	84	83	86	-0.8809
<b>Receipt of institution aid</b>							
Yes	810	610	200	29	32	23	2.8667*
No	1,660	1,110	550	71	68	77	-2.8667*
<b>Receipt of any aid</b>							
Yes	1,650	1,150	500	63	62	65	-0.8851
No	820	570	250	37	38	35	0.8851
<b>Ever married</b>							
Yes	870	560	320	34	31	41	-3.1920*
No	1,580	1,160	420	66	69	59	3.1920*
<b>Dependents other than spouse</b>							
Yes	460	300	160	18	17	21	-1.1835
No	1,990	1,420	570	82	83	79	1.1835

See notes at end of table.



**Table H.5. Comparison of item respondents and nonrespondents for “Hourly/weekly/monthly wage”—Continued**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Student's state of legal residence 1999–2000</b>							
New England	130	90	40	6	6	6	-0.1038
Mid East	460	320	140	17	17	18	-0.3219
Great Lakes	380	250	130	16	14	18	-1.1095
Plains	190	130	60	8	3	9	-0.5255
Southeast	610	420	200	22	23	21	0.3953
Southwest	240	160	80	10	9	12	-0.7650
Rocky Mountains	90	70	20	3	3	4	-0.1189
Far West	340	260	80	17	19	13	1.9770*
Outlying Areas	40	30	10	2	3	1	0.5722
<b>Current employment status for B&amp;B interview</b>							
Work full-time	910	290	620	39	16	87	-23.2064*
Work part-time	360	250	110	14	14	14	0.1508
<b>Cumulative amount of Federal loans</b>							
\$0	1,340	890	450	57	55	60	-1.6497
\$1 to \$2,499	260	180	80	10	10	9	0.0467
\$3,500 to \$7,499	480	350	130	18	19	17	0.4751
\$7,500 or more	390	290	90	16	17	14	1.1279

# Rounds to zero.

†Not Applicable.

\*Bias is significant at the .05/(c-1) level, where c is the number of categories within the primary variable.

NOTE: Details may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B: 2000/01).

**Table H.6. Comparison of item respondents and nonrespondents for “Spouse repaying student loans”**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Institutional sector</b>							
<b>Public 4-year</b>	1,680	1,390	290	67	68	64	0.7361
Non-doctorate-granting	570	470	100	22	22	22	-0.1260
Doctorate-granting	1,120	920	190	45	46	42	0.8621
<b>Private not-for-profit 4-year</b>	760	630	140	31	31	34	-0.5661
Non-doctorate-granting	520	420	100	22	21	26	-0.9292
Doctorate-granting	250	200	40	9	10	8	0.3631
<b>Private for-profit 4-year</b>	30	20	10	2	2	2	-0.1700
<b>Institutional control and enrollment category</b>							
<b>Public</b>							
Fewer than 2,500	40	30	10	2	1	1	-0.0290
2,500–4,999	130	120	20	5	6	4	0.3254
5,000–9,999	290	240	50	10	10	8	0.2726
10,000–19,999	460	380	80	19	19	20	-0.1244
20,000 or more	760	620	130	33	33	31	0.2914
<b>Private not-for-profit</b>							
Fewer than 1,000	100	80	20	3	3	3	-0.0377
1,000–2,499	190	160	40	8	8	8	-0.1222
2,500–4,999	230	180	50	9	9	12	-0.6637
5,000–9,999	110	200	10	5	5	3	0.3448
10,000 or more	130	110	20	6	6	7	-0.0872
<b>Private for-profit</b>							
Fewer than 999	10	#	#	#	#	1	-0.1483
1,000 or more	30	20	10	1	1	2	-0.0217
<b>Institution region</b>							
New England	71	60	20	3	3	4	-0.2472
Mid East	272	200	70	10	9	14	-0.8455
Great Lakes	429	350	80	18	18	17	0.1674
Plains	262	220	50	10	10	13	-0.6088
South East	690	580	110	26	27	22	0.8376
South West	322	280	50	13	14	9	0.9039
Rocky Mountains	162	150	20	6	6	6	0.0818
Far West	248	200	50	13	13	15	-0.4280
Outlying Area	19	20	#	1	1	1	0.1388
<b>Gender</b>							
Male	950	800	150	41	42	40	0.4052
Female	1,530	1,240	290	59	58	60	-0.4052
<b>Age</b>							
21 or younger	320	280	50	12	12	10	0.4756
22	460	390	70	17	18	14	0.7619
23	310	260	50	12	12	11	0.2467
24 to 27	480	410	80	21	21	16	0.9280
28 or older	900	700	200	39	36	50	-2.4123*
<b>Race</b>							
White	2,130	1,770	360	83	84	78	0.9978
Black or African American	140	100	40	7	6	12	-1.1493*
Asian	70	60	10	4	5	3	0.3180
American Indian/Alaska Native	20	20	#	1	1	1	0.0120
Native Hawaiian/Other Pacific Islander	10	10	#	1	#	1	-0.0348
Other	100	80	20	5	4	5	-0.1437
<b>Hispanic</b>							
Yes	140	120	30	8	8	8	-0.0282
No	2,330	1,920	410	92	92	92	0.0282
<b>Citizenship</b>							
U.S. citizen	2,380	1,960	420	94	95	93	0.1885
Resident alien	70	50	10	4	4	4	-0.0867
Foreign/international student	30	20	10	2	2	2	-0.1018

See notes at end of table.

**Table H.6. Comparison of item respondents and nonrespondents for “Spouse repaying student loans”—Continued**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Attendance status</b>							
Full-time/full year, 1 institution	960	790	170	37	37	34	0.5475
Full-time/full year, more than 1 institution	70	60	10	3	3	4	-0.1850
Full-time/part year	620	520	100	25	25	23	0.3967
Part-time/full year, 1 institution	350	280	70	16	15	19	-0.7943
Part-time/full year, more than 1 institution	50	40	10	2	1	2	-0.1722
Part-time/part year	430	350	80	19	19	18	0.2073
<b>Parents' income (for dependent students)</b>							
Less than \$10,000	20	20	10	1	1	2	-0.1275
\$10,000-\$19,999	40	30	10	2	2	3	-0.1989
\$20,000-\$29,999	60	50	10	2	2	2	-0.0528
\$30,000-\$39,999	80	70	10	3	3	2	0.2141
\$40,000-\$49,999	100	90	10	4	4	2	0.3409
\$50,000-\$59,999	90	80	10	3	4	2	0.2571
\$60,000-\$69,999	90	70	20	4	4	4	-0.0726
\$70,000-\$79,999	70	50	20	3	3	3	-0.0537
\$80,000-\$99,999	110	90	20	4	4	4	0.0723
\$100,000 or more	130	110	20	5	5	4	0.3255
<b>Student's income (for independent students)</b>							
Less than \$5,000	140	110	20	6	6	4	0.3641
\$5,000-\$9,999	140	110	30	5	5	5	0.0601
\$10,000-\$19,999	290	240	40	11	11	9	0.3459
\$20,000-\$29,999	230	190	40	9	9	9	-0.0034
\$30,000-\$49,999	380	310	70	16	16	16	-0.0571
\$50,000 or more	530	410	110	23	22	30	-1.4142
<b>Applied for aid</b>							
Yes	1,390	1,150	240	54	55	52	0.6011
No	1,090	890	200	46	45	48	-0.6011
<b>Receipt of federal aid</b>							
Yes	1,220	1,010	210	48	48	45	0.5619
No	1,250	1,030	230	52	52	55	-0.5619
<b>Receipt of Pell grant</b>							
Yes	630	530	110	24	24	23	0.2219
No	1,840	1,510	330	76	76	77	-0.2219
<b>Receipt of Stafford loan</b>							
Yes	1,020	830	180	40	40	39	0.1501
No	1,460	1,200	260	60	60	61	-0.1501
<b>Receipt of state aid</b>							
Yes	450	370	90	16	16	16	0.0532
No	2,020	1,670	350	84	84	84	-0.0532
<b>Receipt of institution aid</b>							
Yes	710	600	120	26	26	24	0.3907
No	1,760	1,440	320	74	74	76	-0.3907
<b>Receipt of any aid</b>							
Yes	1,790	1,480	310	70	70	69	0.3118
No	690	560	130	30	30	32	-0.3118
<b>Dependents other than spouse</b>							
Yes	1,020	830	190	41	40	46	-1.0602
No	1,430	1,200	230	59	60	54	1.0602

See notes at end of table.

**Table H.6. Comparison of item respondents and nonrespondents for “Spouse repaying student loans”—Continued**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Student's state of legal residence</b>							
<b>1999–2000</b>							
New England	80	60	20	3	3	4	-0.1989
Mid East	270	200	70	10	9	15	-1.1113
Great Lakes	430	350	80	17	17	18	-0.0764
Plains	240	190	50	9	9	12	-0.6802
Southeast	690	590	100	26	27	21	1.0505
Southwest	320	270	50	13	14	9	0.8478
Rocky Mountains	150	140	10	6	6	5	0.2114
Far West	270	220	50	13	13	15	-0.2916
Outlying Areas	40	30	10	2	3	1	0.2486
<b>Current employment status for B&amp;B interview</b>							
Work full-time	1,870	1,560	310	77	77	76	0.2937
Work part-time	270	210	60	10	9	13	-0.6247
Waiting to report to work/layoff	30	30	10	1	1	2	-0.2235
Not working	220	180	40	9	10	9	0.1841
Homemaker	60	50	10	2	3	1	0.4240*
Disabled	#	#	#	#	#	#	-0.0537
<b>Cumulative amount of Federal loans</b>							
\$0	1,250	1,030	230	52	52	55	-0.5423
\$1 to \$2,499	340	290	50	13	14	11	0.5627
\$3,500 to \$7,499	510	410	100	20	19	21	-0.4318
\$7,500 or more	370	310	60	15	15	13	0.4115

# Rounds to zero.

\*Bias is significant at the  $.05/(c-1)$  level, where c is the number of categories within the primary variable.

NOTE: Details may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B: 2000/01).

**Table H.7. Comparison of item respondents and nonrespondents for “Amount spouse owes on student loans”**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Institutional sector</b>							
<b>Public 4-year</b>	1,680	1,390	290	67	68	64	0.7425
Non-doctorate-granting	570	470	100	22	22	22	-0.1103
Doctorate-granting	1,120	920	190	45	46	42	0.8528
<b>Private not-for-profit 4-year</b>	760	630	140	31	31	34	-0.5722
Non-doctorate-granting	520	420	100	22	21	26	-0.9333
Doctorate-granting	250	200	40	9	10	8	0.3612
<b>Private for-profit 4-year</b>	30	20	10	2	2	2	-0.1704
<b>Institutional control and enrollment category</b>							
<b>Public</b>							
Fewer than 2,500	40	30	10	1	1	1	-0.0292
2,500–4,999	130	120	20	5	6	4	0.3243
5,000–9,999	290	240	50	10	10	8	0.2908
10,000–19,999	460	380	80	19	19	20	-0.1282
20,000 or more	760	620	130	33	33	31	0.2848
<b>Private not-for-profit</b>							
Fewer than 1,000	100	80	20	3	3	3	-0.0384
1,000–2,499	190	160	40	8	8	8	-0.1238
2,500–4,999	230	180	50	9	9	12	-0.6655
5,000–9,999	110	100	10	5	5	3	0.3438
10,000 or more	130	110	20	6	6	7	-0.0884
<b>Private for-profit</b>							
Fewer than 999	10	#	#	#	#	1	-0.1484
1,000 or more	30	20	10	1	1	2	-0.0220
<b>Institution region</b>							
New England	70	60	20	3	3	4	-0.2478
Mid East	270	200	70	10	9	14	-0.8272
Great Lakes	430	350	80	18	18	17	0.1638
Plains	260	210	50	10	10	13	-0.6107
South East	690	580	110	26	27	22	0.8322
South West	320	280	50	13	14	9	0.9011
Rocky Mountains	160	150	20	6	6	6	0.0805
Far West	250	200	50	13	13	15	-0.4306
Outlying Area	20	20	#	1	1	1	0.1385
<b>Gender</b>							
Male	950	800	150	41	42	40	0.3968
Female	1,530	1,240	290	59	58	60	-0.3968
<b>Age</b>							
21 or younger	320	280	50	12	12	10	0.4933
22	460	390	70	17	18	14	0.7583
23	3010	260	50	12	12	11	0.2443
24 to 27	480	410	80	21	21	16	0.9237
28 or older	900	700	200	39	36	50	-2.4196*
<b>Race</b>							
White	2,130	1,770	360	83	84	78	0.9809
Black or African American	140	100	40	7	6	12	-1.1504*
Asian	70	60	10	4	5	3	0.3170
American Indian/Alaska Native	20	20	#	1	1	1	0.0118
Native Hawaiian/Other Pacific Islander	10	10	#	1	#	1	-0.0349
Other	100	80	20	5	4	5	-0.1245
<b>Hispanic</b>							
Yes	140	120	30	8	8	8	-0.0298
No	2,330	1,920	410	92	92	92	0.0298
<b>Citizenship</b>							
U.S. citizen	2,380	1,970	420	94	95	93	0.1897
Resident alien	70	50	10	4	4	4	-0.0875
Foreign/international student	30	20	10	2	2	2	-0.1022

See notes at end of table.

Appendix H  
Item Nonresponse Analysis

Table H.7. Comparison of item respondents and nonrespondents for “Amount spouse owes on student loans”—Continued

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Attendance status</b>							
Full-time/full year, 1 institution	960	790	170	37	37	34	0.5400
Full-time/full year, more than 1 institution	70	60	10	3	3	4	-0.1855
Full-time/part year	620	520	100	25	25	23	0.4118
Part-time/full year, 1 institution	350	280	70	16	15	19	-0.7973
Part-time/full year, more than 1 institution	50	40	10	2	1	2	-0.1725
Part-time/part year	430	350	80	19	19	18	0.2034
<b>Parents' income (for dependent students)</b>							
Less than \$10,000	20	20	10	1	1	2	-0.1276
\$10,000–\$19,999	40	30	10	2	2	3	-0.1992
\$20,000–\$29,999	60	50	10	2	2	2	-0.0532
\$30,000–\$39,999	80	70	10	3	3	2	0.2135
\$40,000–\$49,999	100	90	10	4	4	2	0.3400
\$50,000–\$59,999	90	80	10	3	4	2	0.2564
\$60,000–\$69,999	90	70	20	4	4	4	-0.0733
\$70,000–\$79,999	70	50	20	3	3	3	-0.0542
\$80,000–\$99,999	110	90	20	4	4	4	0.0715
\$100,000 or more	130	110	20	5	5	4	0.3245
<b>Student's income (for independent students)</b>							
Less than \$5,000	140	110	20	6	6	4	0.3629
\$5,000–\$9,999	140	110	30	5	5	5	0.0591
\$10,000–\$19,999	290	240	40	11	11	9	0.3638
\$20,000–\$29,999	230	190	40	9	9	9	-0.0053
\$30,000–\$49,999	380	310	70	16	16	16	-0.0603
\$50,000 or more	530	410	110	23	22	30	-1.4186
<b>Applied for aid</b>							
Yes	1,390	1,150	240	54	55	52	0.6102
No	1,090	890	200	46	45	48	-0.6102
<b>Receipt of federal aid</b>							
Yes	1,220	1,010	210	48	49	45	0.5722
No	1,250	1,030	230	52	52	55	-0.5722
<b>Receipt of Pell grant</b>							
Yes	630	530	110	24	24	23	0.2371
No	1,840	1,510	330	76	76	77	-0.2371
<b>Receipt of Stafford loan</b>							
Yes	1,020	830	180	40	40	39	0.1622
No	1,460	1,200	260	60	60	61	-0.1622
<b>Receipt of state aid</b>							
Yes	450	370	90	16	16	16	0.0701
No	2,020	1,670	350	84	84	85	-0.0701
<b>Receipt of institution aid</b>							
Yes	710	600	110	26	26	24	0.4055
No	1,760	1,440	320	74	74	76	-0.4055
<b>Receipt of any aid</b>							
Yes	1,790	1,480	300	70	70	69	0.3178
No	690	560	130	30	30	32	-0.3178
<b>Dependents other than spouse</b>							
Yes	1,020	830	190	41	40	46	-1.0475
No	1,430	1,200	230	59	60	54	1.0475

See notes at end of table.

**Table H.7. Comparison of item respondents and nonrespondents for “Amount spouse owes on student loans”—Continued**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Student's state of legal residence 1999–2000</b>							
New England	80	60	20	3	3	4	-0.1995
Mid East	270	200	70	10	9	15	-1.0930
Great Lakes	430	350	80	17	17	18	-0.0798
Plains	240	190	50	9	9	12	-0.6819
Southeast	690	590	100	26	27	21	1.0450
Southwest	320	270	50	13	14	9	0.8450
Rocky Mountains	150	140	10	6	6	5	0.2103
Far West	270	220	50	13	13	15	-0.2942
Outlying Areas	40	30	10	2	3	1	0.2481
<b>Current employment status for B&amp;B interview</b>							
Work full-time	1,870	1,560	310	77	77	76	0.2985
Work part-time	270	210	60	10	9	13	-0.6266
Waiting to report to work/layoff	30	30	10	1	1	2	-0.2237
Not working	220	180	40	9	10	9	0.1821
Homemaker	60	50	10	2	3	1	0.4234*
Disabled	#	#	#	#	#	#	-0.0537
<b>Cumulative amount of Federal loans</b>							
\$0	1,250	1,030	230	52	52	55	-0.5528
\$1 to \$2,499	340	290	50	13	14	11	0.5599
\$3,500 to \$7,499	510	410	100	20	19	21	-0.4155
\$7,500 or more	370	310	60	15	15	13	0.4084

# Rounds to zero.

\*Bias is significant at the  $.05/(c-1)$  level, where  $c$  is the number of categories within the primary variable.

NOTE: Details may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B: 2000/01).

**Appendix H**  
**Item Nonresponse Analysis**

**Table H.8. Comparison of item respondents and nonrespondents for “Amount spouse borrowed in loans”**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Institutional sector</b>							
<b>Public 4-year</b>	1,680	1,410	2,710	67	68	63	0.8360
Non-doctorate-granting	570	480	90	22	22	22	0.0436
Doctorate-granting	1,120	930	180	45	46	42	0.7924
<b>Private not-for-profit 4-year</b>	760	630	130	31	30	34	-0.6470
Non-doctorate-granting	520	430	90	22	21	26	-0.9166
Doctorate-granting	250	210	40	9	10	8	0.2696
<b>Private for-profit 4-year</b>	30	20	10	2	2	3	-0.1890
<b>Institutional control and enrollment category</b>							
<b>Public</b>							
Fewer than 2,500	40	30	10	1	1	1	0.0350
2,500–4,999	130	120	10	5	6	4	0.3228
5,000–9,999	290	240	50	10	10	8	0.2503
10,000–19,999	460	390	80	19	19	20	-0.0736
20,000 or more	760	630	130	33	33	31	0.3017
<b>Private not-for-profit</b>							
Fewer than 1,000	100	80	20	3	3	3	-0.0369
1,000–2,499	190	160	30	8	8	8	-0.1152
2,500–4,999	230	180	40	9	9	12	-0.6424
5,000–9,999	110	100	10	5	5	3	0.3108
10,000 or more	130	110	20	6	6	7	-0.1634
<b>Private for-profit</b>							
Fewer than 999	10	#	#	#	#	1	-0.1499
1,000 or more	30	20	10	1	1	2	-0.0391
<b>Institution region</b>							
New England	70	60	20	3	3	4	-0.2802
Mid East	270	210	60	10	9	13	-0.6513
Great Lakes	430	360	70	18	18	17	0.1660
Plains	260	210	50	10	10	13	-0.5707
South East	690	590	100	26	27	23	0.7642
South West	320	280	50	13	14	9	0.7463
Rocky Mountains	160	150	20	6	6	6	0.0633
Far West	250	200	40	13	13	15	-0.4063
Outlying Area	20	20	#	1	1	#	0.1687
<b>Gender</b>							
Male	950	810	140	41	42	40	0.4018
Female	1,530	1,260	270	59	58	61	-0.4018
<b>Age</b>							
21 or younger	30	280	40	12	12	10	0.4998
22	460	400	70	17	18	13	0.8095
23	310	270	40	12	12	11	0.2525
24 to 27	480	420	80	21	21	16	0.9283
28 or older	900	700	190	39	36	51	-2.4901*
<b>Race</b>							
White	2,130	1,800	340	83	84	79	0.8761
Black or African American	140	100	40	7	6	11	-0.9610
Asian	70	60	10	4	5	3	0.2603
American Indian/Alaska Native	20	20	#	1	1	1	-0.0033
Native Hawaiian/Other Pacific Islander	10	10	#	1	#	1	-0.0401
Other	100	80	20	5	4	5	-0.1321
<b>Hispanic</b>							
Yes	140	120	20	8	8	8	0.0666
No	2,330	1,950	390	92	92	92	-0.0666
<b>Citizenship</b>							
U.S. citizen	2,380	1,990	390	94	94	94	0.1115
Resident alien	70	50	10	4	4	5	-0.1345
Foreign/international student	30	20	10	2	2	2	0.0229

See notes at end of table.



**Table H.8. Comparison of item respondents and nonrespondents for “Amount spouse borrowed in loans”—Continued**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Attendance status</b>							
Full-time/full year, 1 institution	960	810	150	37	37	34	0.5188
Full-time/full year, more than 1 institution	70	60	10	3	2	4	-0.2157
Full-time/part year	620	520	90	25	25	22	0.4472
Part-time/full year, 1 institution	350	280	70	16	15	19	-0.7378
Part-time/full year, more than 1 institution	50	40	10	2	1	2	-0.1605
Part-time/part year	430	350	70	19	19	18	0.1480
<b>Parents' income (for dependent students)</b>							
Less than \$10,000	20	20	#	1	1	1	-0.0216
\$10,000–\$19,999	40	30	10	2	2	3	-0.1725
\$20,000–\$29,999	60	50	10	2	2	2	-0.0298
\$30,000–\$39,999	80	70	10	3	3	2	0.2366
\$40,000–\$49,999	100	90	10	4	4	3	0.2877
\$50,000–\$59,999	90	80	100	3	4	2	0.2685
\$60,000–\$69,999	90	80	10	4	4	4	0.0284
\$70,000–\$79,999	70	60	10	3	3	3	-0.0494
\$80,000–\$99,999	110	100	20	4	4	4	0.0491
\$100,000 or more	130	110	20	5	5	4	0.2602
<b>Student's income (for independent students)</b>							
Less than \$5,000	140	110	20	6	6	4	0.2907
\$5,000–\$9,999	140	110	30	5	5	5	0.0242
\$10,000–\$19,999	290	250	40	11	11	9	0.4727
\$20,000–\$29,999	230	190	40	9	9	10	-0.1018
\$30,000–\$49,999	380	320	60	16	16	16	-0.0550
\$50,000 or more	530	420	110	23	22	31	-1.4880
<b>Applied for aid</b>							
Yes	1,390	1,170	220	54	55	50	0.8481
No	1,090	900	190	46	45	50	-0.8481
<b>Receipt of federal aid</b>							
Yes	1,220	1,030	190	48	49	44	0.7318
No	1,250	1,040	220	52	51	56	-0.7318
<b>Receipt of Pell grant</b>							
Yes	630	540	90	24	25	22	0.4371
No	1,840	1,530	320	76	75	78	-0.4371
<b>Receipt of Stafford loan</b>							
Yes	1,020	850	170	40	41	38	0.3662
No	1,460	1,220	240	60	60	62	-0.3662
<b>Receipt of state aid</b>							
Yes	450	370	80	16	16	15	0.1769
No	2,020	1,690	330	84	84	85	-0.1769
<b>Receipt of institution aid</b>							
Yes	710	610	100	26	26	23	0.5828
No	1,760	1,460	310	74	74	77	-0.5828
<b>Receipt of any aid</b>							
Yes	1,790	1,500	280	70	70	69	0.2533
No	690	560	130	30	30	31	-0.2533
<b>Ever married</b>							
Yes	0	0	0	0	0	0	0.0000
No	2,450	2,070	380	100	100	100	0.0000
<b>Dependents other than spouse</b>							
Yes	1,020	840	180	41	40	47	-1.1658
No	1,430	1,220	210	59	60	53	1.1658

See notes at end of table.

**Table H.8. Comparison of item respondents and nonrespondents for “Amount spouse borrowed in loans”—Continued**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Student's state of legal residence</b>							
<b>1999–2000</b>							
New England	80	60	20	3	3	4	-0.2358
Mid East	270	210	60	10	9	14	-0.9069
Great Lakes	430	350	80	17	17	18	-0.0663
Plains	240	190	50	9	9	12	-0.6314
Southeast	690	590	90	26	27	21	0.9664
Southwest	320	270	50	13	14	10	0.6914
Rocky Mountains	150	140	10	6	6	5	0.1940
Far West	270	220	50	13	13	15	-0.2745
Outlying Areas	40	30	10	2	3	1	0.2631
<b>Current employment status for B&amp;B interview</b>							
Work full-time	1,870	1,580	290	77	77	76	0.2477
Work part-time	270	220	60	10	9	13	-0.6266
Waiting to report to work/layoff	30	30	10	1	1	2	-0.0868
Not working	220	190	30	9	10	9	0.1317
Homemaker	60	50	10	2	3	1	0.3885*
Disabled	#	#	#	#	#	#	-0.0546
<b>Cumulative amount of Federal loans</b>							
\$0	1,250	1,040	220	52	52	56	-0.7154
\$1 to \$2,499	340	290	50	13	14	10	0.6585
\$3,500 to \$7,499	510	420	90	20	19	21	-0.2920
\$7,500 or more	370	310	60	15	15	13	0.3490

# Rounds to zero.

\*Bias is significant at the  $.05/(c-1)$  level, where  $c$  is the number of categories within the primary variable.

NOTE: Details may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B: 2000/01).

**Table H.9. Comparison of item respondents and nonrespondents for “Spouse’s monthly student loan payment”**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Institutional sector</b>							
<b>Public 4-year</b>	1,540	1,230	310	67	68	65	0.6588
Non-doctorate-granting	560	460	110	22	22	23	-0.3323
Doctorate-granting	1,120	920	200	45	46	41	1.0189
<b>Private not-for-profit 4-year</b>	700	560	140	31	31	33	-0.4928
Non-doctorate-granting	520	420	100	22	21	25	-0.8947
Doctorate-granting	250	200	40	9	10	8	0.3801
<b>Private for-profit 4-year</b>	30	20	10	2	2	2	-0.1720
<b>Institutional control and enrollment category</b>							
<b>Public</b>							
Fewer than 2,500	40	30	10	1	1	1	-0.0323
2,500–4,999	130	110	20	5	6	4	0.4161
5,000–9,999	260	210	60	9	9	9	-0.0047
10,000–19,999	430	340	90	20	19	20	-0.0943
20,000 or more	690	550	140	33	33	31	0.3740
<b>Private not-for-profit</b>							
Fewer than 1,000	90	70	20	3	3	3	-0.0417
1,000–2,499	180	140	40	8	8	8	-0.0731
2,500–4,999	210	160	50	9	9	12	-0.7228
5,000–9,999	110	90	20	5	5	3	0.3774
10,000 or more	120	100	20	6	6	6	-0.0327
<b>Private for-profit</b>							
Fewer than 999	10	#	#	#	#	1	-0.1575
1,000 or more	20	20	10	1	1	2	-0.0085
<b>Institution region</b>							
New England	70	50	20	3	3	4	-0.2216
Mid East	250	180	70	10	9	14	-0.9895
Great Lakes	390	300	80	18	18	17	0.1924
Plains	230	170	60	10	9	13	-0.8049
South East	650	540	110	27	28	22	1.3194
South West	290	240	50	13	14	10	0.8340
Rocky Mountains	140	130	20	6	6	6	0.0601
Far West	230	180	50	13	12	15	-0.5641
Outlying Area	20	10	#	1	1	1	0.1742
<b>Gender</b>							
Male	850	700	160	41	41	40	0.2129
Female	1,410	1,120	300	59	59	60	-0.2129
<b>Age</b>							
21 or younger	290	230	60	12	12	11	0.2530
22	420	340	80	17	18	14	0.7865
23	280	230	50	12	12	11	0.2062
24 to 27	440	360	80	20	21	16	1.0546
28 or older	850	650	200	40	38	49	-2.3002*
<b>Race</b>							
White	1,960	1,580	380	83	84	79	1.0693
Black or African American	130	90	40	7	6	12	-1.2531*
Asian	70	60	10	4	5	3	0.3943
American Indian/Alaska Native	20	20	#	1	1	1	-0.0193
Native Hawaiian/Other Pacific Islander	10	#	#	#	#	1	-0.0587
Other	90	70	20	5	4	5	-0.1324
<b>Hispanic</b>							
Yes	140	110	30	8	8	8	0.0220
No	2,130	1,700	430	92	92	92	-0.0220
<b>Citizenship</b>							
U.S. citizen	2,190	1,750	440	95	95	94	0.2431
Resident alien	60	40	20	4	4	4	-0.1094
Foreign/international student	20	20	10	2	2	2	-0.1337

See notes at end of table.

**Table H.9. Comparison of item respondents and nonrespondents for “Spouse’s monthly student loan payment”—Continued**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Attendance status</b>							
Full-time/full year, 1 institution	850	680	180	35	36	34	0.2465
Full-time/full year, more than 1 institution	70	50	20	3	3	4	-0.2060
Full-time/part year	570	460	110	24	25	23	0.2761
Part-time/full year, 1 institution	320	250	70	16	15	19	-0.7873
Part-time/full year, more than 1 institution	50	40	10	2	1	2	-0.1913
Part-time/part year	410	340	80	21	21	18	0.6620
<b>Parents’ income (for dependent students)</b>							
Less than \$10,000	20	10	10	1	1	2	-0.1287
\$10,000–\$19,999	40	30	10	2	1	3	-0.2451
\$20,000–\$29,999	50	40	10	2	2	2	-0.0773
\$30,000–\$39,999	60	50	10	3	3	2	0.1316
\$40,000–\$49,999	80	70	10	4	4	3	0.3052
\$50,000–\$59,999	80	70	10	3	4	2	0.2443
\$60,000–\$69,999	80	60	20	4	4	4	-0.0413
\$70,000–\$79,999	70	50	20	3	2	3	-0.2103
\$80,000–\$99,999	100	80	20	4	4	4	0.0639
\$100,000 or more	120	100	20	5	6	4	0.3829
<b>Student’s income (for independent students)</b>							
Less than \$5,000	120	90	20	5	6	5	0.2063
\$5,000–\$9,999	120	90	30	5	4	5	-0.0674
\$10,000–\$19,999	250	200	50	10	10	9	0.1404
\$20,000–\$29,999	210	170	40	9	9	9	0.0440
\$30,000–\$49,999	360	300	70	16	17	16	0.2273
\$50,000 or more	520	400	120	25	24	29	-0.9759
<b>Applied for aid</b>							
Yes	1,220	970	250	52	52	52	0.0806
No	1,040	840	200	48	48	48	-0.0806
<b>Receipt of federal aid</b>							
Yes	1,070	850	220	46	46	46	-0.0232
No	1,200	960	240	54	55	54	0.0232
<b>Receipt of Pell grant</b>							
Yes	540	430	110	22	22	23	-0.1501
No	1,730	1,380	350	78	78	77	0.1501
<b>Receipt of Stafford loan</b>							
Yes	890	690	190	38	37	40	-0.5345
No	1,380	1,120	260	62	63	60	0.5345
<b>Receipt of state aid</b>							
Yes	400	310	90	15	14	16	-0.3566
No	1,870	1,510	370	85	86	84	0.3566
<b>Receipt of institution aid</b>							
Yes	630	510	120	25	26	24	0.2969
No	1,640	1,300	340	75	75	76	-0.2969
<b>Receipt of any aid</b>							
Yes	1,610	1,290	320	69	69	69	-0.0090
No	660	520	140	31	31	31	0.0090
<b>Dependents other than spouse</b>							
Yes	930	740	190	41	40	46	-1.2412
No	1,310	1,070	240	59	60	54	1.2412

See notes at end of table.

**Table H.9. Comparison of item respondents and nonrespondents for “Spouse’s monthly student loan payment”—Continued**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Student’s state of legal residence 1999–2000</b>							
New England	70	60	20	3	3	4	-0.1875
Mid East	250	180	70	10	9	15	-1.2487
Great Lakes	380	300	90	17	17	18	-0.1606
Plains	210	160	50	9	8	12	-0.8074
Southeast	640	540	100	27	28	21	1.4805
Southwest	290	240	50	13	14	10	0.7701
Rocky Mountains	140	120	20	6	6	5	0.2372
Far West	240	190	50	13	13	15	-0.3911
Outlying Areas	30	30	10	2	3	1	0.3074
<b>Current employment status for B&amp;B interview</b>							
Work full-time	1,720	1,400	330	77	78	76	0.3792
Work part-time	250	180	70	9	9	12	-0.7918
Waiting to report to work/layoff	30	20	10	1	1	2	-0.2175
Not working	200	160	40	10	10	9	0.2231
Homemaker	50	50	10	2	3	1	0.4634*
Disabled	#	#	#	#	#	#	-0.0565
<b>Cumulative amount of Federal loans</b>							
\$0	1,200	960	240	55	55	54	0.0423
\$1 to \$2,499	300	250	60	13	13	11	0.3986
\$3,500 to \$7,499	450	350	100	19	18	21	-0.6774
\$7,500 or more	310	250	60	14	14	13	0.2365

# Rounds to zero.

\*Bias is significant at the  $.05/(c-1)$  level, where c is the number of categories within the primary variable.

NOTE: Details may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B: 2000/01).

**Table H.10. Comparison of item respondents and nonrespondents for “Sections taught per day—current job”**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Institutional sector</b>							
<b>Public 4-year</b>	1,020	730	290	68	69	65	0.9440
Non-doctorate-granting	430	300	120	27	28	26	0.5400
Doctorate-granting	590	420	170	40	41	39	0.4040
<b>Private not-for-profit 4-year</b>	480	330	150	32	31	34	-0.8670
Non-doctorate-granting	330	230	100	22	21	25	-1.0493
Doctorate-granting	150	100	50	10	10	9	0.1823
<b>Private for-profit 4-year</b>	#	#	#	#	#	#	-0.0770
<b>Institutional control and enrollment category</b>							
<b>Public</b>							
Fewer than 2,500	20	20	10	1	1	0	0.1017
2,500–4,999	80	60	20	6	6	6	0.1237
5,000–9,999	230	170	60	13	14	11	0.8714
10,000–19,999	310	230	90	21	21	20	0.1723
20,000 or more	370	260	110	27	27	28	-0.3251
<b>Private not-for-profit</b>							
Fewer than 1,000	60	40	20	3	3	5	-0.6041
1,000–2,499	120	100	30	8	9	5	1.1645
2,500–4,999	150	100	60	10	8	13	-1.3248
5,000–9,999	80	50	20	5	5	5	0.2264
10,000 or more	70	50	20	6	6	7	-0.3290
<b>Private for-profit</b>							
Fewer than 999	#	#	0	#	#	0	0.0181
1,000 or more	#	0	#	#	0	#	-0.0951
<b>Institution region</b>							
New England	80	50	30	6	6	6	0.0400
Mid East	270	180	80	16	17	15	0.3263
Great Lakes	240	170	60	18	19	16	0.6883
Plains	150	100	40	9	9	9	-0.1996
South East	430	320	120	25	25	24	0.3632
South West	180	120	50	13	13	14	-0.3551
Rocky Mountains	50	40	10	3	3	3	0.0406
Far West	110	60	50	10	9	13	-1.3076
Outlying Area	10	10	0	1	1	0	0.4040
<b>Gender</b>							
Male	370	310	60	28	32	19	3.7080*
Female	1,130	750	390	72	68	81	-3.7080*
<b>Age</b>							
21 or younger	360	240	120	22	21	24	-0.8458
22	420	300	120	26	26	24	0.7371
23	220	170	60	16	17	12	1.4465
24 to 27	240	170	70	18	17	20	-0.9659
28 or older	270	190	80	19	19	20	-0.3720
<b>Race</b>							
White	1,280	920	360	82	84	76	2.1173
Black or African American	120	80	40	9	9	10	-0.2173
Asian	20	10	10	1	1	2	-0.4571
American Indian/Alaska Native	10	10	#	1	1	1	-0.0841
Native Hawaiian/Other Pacific Islander	10	#	#	1	#	1	-0.2559
Other	80	50	30	7	6	9	-1.1029
<b>Hispanic</b>							
Yes	130	90	40	13	12	15	-1.1161
No	1,380	970	400	87	88	85	1.1161
<b>Citizenship</b>							
U.S. citizen	1,470	1,040	440	96	96	97	-0.4949
Resident alien	30	20	10	3	4	2	0.4810
Foreign/international student	#	#	#	1	1	1	0.0139

See notes at end of table.

**Table H.10. Comparison of item respondents and nonrespondents for “Sections taught per day—current job”—Continued**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Attendance status</b>							
Full-time/full year, 1 institution	710	490	220	44	42	47	-1.4680
Full-time/full year, more than 1 institution	50	40	20	3	3	3	0.0501
Full-time/part year	430	310	120	28	29	26	0.7231
Part-time/full year, 1 institution	140	100	40	11	11	11	0.0705
Part-time/full year, more than 1 institution	20	20	#	2	2	1	0.4841
Part-time/part year	150	100	40	13	13	12	0.1401
<b>Parents' income (for dependent students)</b>							
Less than \$10,000	30	20	10	2	2	2	0.0255
\$10,000–\$19,999	40	30	10	3	3	3	0.1995
\$20,000–\$29,999	70	50	20	4	4	5	-0.4716
\$30,000–\$39,999	80	50	30	6	5	6	-0.3169
\$40,000–\$49,999	90	70	20	6	6	4	0.8390
\$50,000–\$59,999	100	70	30	6	6	6	-0.0533
\$60,000–\$69,999	100	70	30	7	7	7	0.1211
\$70,000–\$79,999	90	60	30	5	6	5	0.2454
\$80,000–\$99,999	100	70	30	6	6	5	0.2879
\$100,000 or more	150	100	50	9	9	9	0.0360
<b>Student's income (for independent students)</b>							
Less than \$5,000	120	90	40	8	8	8	0.1865
\$5,000–\$9,999	110	80	30	8	7	9	-0.5451
\$10,000–\$19,999	140	100	40	9	9	9	0.0265
\$20,000–\$29,999	110	80	30	7	7	7	-0.0913
\$30,000–\$49,999	120	80	30	8	8	7	0.3577
\$50,000 or more	70	50	20	6	5	8	-0.8470
<b>Applied for aid</b>							
Yes	1,040	720	320	69	68	73	-1.4705
No	470	340	130	31	33	27	1.4705
<b>Receipt of federal aid</b>							
Yes	900	630	280	60	59	63	-1.0389
No	600	430	170	40	41	37	1.0389
<b>Receipt of Pell grant</b>							
Yes	460	330	130	30	29	32	-0.7415
No	1,050	730	310	70	71	68	0.7415
<b>Receipt of Stafford loan</b>							
Yes	770	530	240	52	50	55	-1.5828
No	740	530	210	49	50	45	1.5828
<b>Receipt of state aid</b>							
Yes	370	260	110	21	21	22	-0.3446
No	1,130	800	330	79	79	78	0.3446
<b>Receipt of institution aid</b>							
Yes	550	400	150	33	34	32	0.7520
No	960	660	300	67	66	68	-0.7520
<b>Receipt of any aid</b>							
Yes	1,140	800	340	73	73	74	-0.2587
No	370	260	110	27	27	26	0.2587
<b>Ever married</b>							
Yes	700	510	190	44	45	41	1.4111
No	790	550	240	56	55	59	-1.4111
<b>Dependents other than spouse</b>							
Yes	380	270	110	25	24	27	-0.9323
No	1,120	790	330	75	76	73	0.9323

See notes at end of table.

**Table H.10. Comparison of item respondents and nonrespondents for “Sections taught per day—current job”—Continued**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Student's state of legal residence</b>							
<b>1999–2000</b>							
New England	70	40	30	5	5	4	0.0892
Mid East	270	180	90	17	18	17	0.2028
Great Lakes	250	190	70	19	19	18	0.3560
Plains	120	90	30	7	7	5	0.6483
Southeast	430	310	120	24	25	24	0.1197
Southwest	170	120	50	13	13	14	-0.3820
Rocky Mountains	50	40	10	3	3	3	0.1068
Far West	120	70	50	11	9	15	-1.7000
Outlying Areas	10	10	#	2	2	#	0.5593*
<b>Current employment status for B&amp;B interview</b>							
Work full-time	1,360	970	380	91	90	91	-0.2527
Work part-time	70	50	20	5	5	4	0.4418
Waiting to report to work/layoff	10	10	0	1	1	0	0.2272
Not working	40	20	20	4	3	5	-0.5067
Homemaker	10	10	0	#	#	0	0.0903
<b>Cumulative amount of Federal loans</b>							
\$0	600	430	170	40	41	38	0.9937
\$1 to \$2,499	260	170	80	15	16	15	0.1149
\$3,500 to \$7,499	400	280	120	28	28	27	0.2893
\$7,500 or more	240	170	80	17	16	20	-1.3979

# Rounds to zero. All zeros provided in this table are actual values.

\*Bias is significant at the  $.05/(c-1)$  level, where  $c$  is the number of categories within the primary variable.

NOTE: Details may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B: 2000/01).



**Table H.11. Comparison of item respondents and nonrespondents for “Time scale of pay—hourly/weekly/monthly”**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Institutional sector</b>							
<b>Public 4-year</b>	810	320	490	63	61	65	-2.0440
Non-doctorate-granting	260	100	160	18	17	18	-0.3207
Doctorate-granting	550	220	340	46	44	47	-1.8344
<b>Private not-for-profit 4-year</b>	460	220	240	35	37	33	2.8054
Non-doctorate-granting	290	140	150	23	25	23	1.4579
Doctorate-granting	180	80	90	11	13	10	1.4469
<b>Private for-profit 4-year</b>	20	#	20	2	1	2	-0.7497
<b>Institutional control and enrollment category</b>							
<b>Public</b>							
Fewer than 2,500	10	10	#	1	1	#	0.5552
2,500–4,999	40	10	30	3	1	3	-1.1477
5,000–9,999	140	60	80	8	8	8	-0.0281
10,000–19,999	250	100	160	19	19	19	0.0687
20,000 or more	370	150	230	33	32	34	-1.4920
<b>Private not-for-profit</b>							
Fewer than 1,000	50	30	20	3	4	2	1.3439
1,000–2,499	120	60	60	9	10	8	1.1896
2,500–4,999	130	60	70	10	10	10	0.2419
5,000–9,999	80	30	50	6	6	6	-0.3369
10,000 or more	100	50	50	7	8	7	0.3669
<b>Private for-profit</b>							
Fewer than 999	#	#	#	#	#	#	-0.0933
1,000 or more	20	#	10	2	1	2	-0.6681
<b>Institution region</b>							
New England	70	30	40	6	6	6	-0.4574
Mid East	240	100	140	17	19	17	1.3078
Great Lakes	230	100	130	19	17	20	-1.9522
Plains	120	60	70	10	10	10	0.4432
South East	330	130	200	22	23	22	0.5786
South West	130	50	80	10	8	11	-2.2838
Rocky Mountains	40	20	20	3	3	3	-0.1798
Far West	130	60	70	12	14	11	1.7496
Outlying Area	10	10	#	1	1	#	0.7939
<b>Gender</b>							
Male	490	160	330	44	33	51	-11.1173*
Female	800	380	420	56	67	49	11.1173*
<b>Age</b>							
21 or younger	310	180	140	23	33	17	9.7241*
22	310	150	160	21	24	19	2.7459
23	180	70	110	15	12	16	-2.4961
24 to 27	190	70	120	16	16	16	0.0116
28 or older	300	80	220	25	15	32	-9.9855*
<b>Race</b>							
White	1,020	450	570	76	78	74	2.7546
Black or African American	130	50	90	11	11	11	0.1064
Asian	70	20	50	7	4	9	-3.1094*
American Indian/Alaska Native	10	10	#	1	1	#	0.6151
Native Hawaiian/Other Pacific Islander	10	#	10	1	1	1	0.1788
Other	60	20	40	5	5	6	-0.5456
<b>Hispanic</b>							
Yes	80	30	50	7	8	6	1.3063
No	1,220	510	710	93	92	94	-1.3063
<b>Citizenship</b>							
U.S. citizen	1,220	520	710	91	91	91	-0.3423
Resident alien	50	20	30	5	5	5	0.4517
Foreign/international student	30	10	20	4	4	4	-0.1095

See notes at end of table.

**Table H.11. Comparison of item respondents and nonrespondents for “Time scale of pay—hourly/weekly/monthly”—Continued**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Attendance status</b>							
Full-time/full year, 1 institution	610	310	300	45	57	38	11.8537*
Full-time/full year, more than 1 institution	70	30	40	4	4	4	-0.4853
Full-time/part year	240	90	150	20	15	23	-4.5966*
Part-time/full year, 1 institution	150	50	100	14	11	15	-2.5997
Part-time/full year, more than 1 institution	30	10	20	1	#	2	-0.9117*
Part-time/part year	190	60	140	16	13	18	-3.2604
<b>Parents' income (for dependent students)</b>							
Less than \$10,000	20	10	10	1	2	1	0.6395*
\$10,000–\$19,999	50	20	30	4	3	4	-0.5192*
\$20,000–\$29,999	70	30	40	6	5	6	-0.9832
\$30,000–\$39,999	60	30	30	4	5	4	0.7944
\$40,000–\$49,999	70	40	30	5	7	4	1.7741
\$50,000–\$59,999	80	50	30	6	8	5	1.7748
\$60,000–\$69,999	70	30	40	5	4	6	-1.0113
\$70,000–\$79,999	60	30	30	5	7	4	1.8085
\$80,000–\$99,999	100	50	50	7	9	6	1.9046
\$100,000 or more	140	80	70	11	14	9	3.3712
<b>Student's income (for independent students)</b>							
Less than \$5,000	110	50	60	8	10	6	2.1374
\$5,000–\$9,999	70	30	40	6	7	5	0.7952
\$10,000–\$19,999	80	30	50	6	6	7	-0.1246
\$20,000–\$29,999	60	20	50	4	2	5	-1.7866
\$30,000–\$49,999	110	30	80	10	7	12	-3.2168
\$50,000 or more	140	20	120	12	5	17	-7.3581*
<b>Applied for aid</b>							
Yes	660	310	350	48	52	45	3.7668
No	630	230	400	52	49	55	-3.7668
<b>Receipt of federal aid</b>							
Yes	580	270	300	43	47	40	4.2548
No	720	270	450	58	53	60	-4.2548
<b>Receipt of Pell grant</b>							
Yes	270	130	140	19	23	17	3.7764*
No	1030	410	610	81	77	83	-3.7764*
<b>Receipt of Stafford loan</b>							
Yes	500	240	260	38	41	36	3.5187
No	800	310	490	62	59	64	-3.5187
<b>Receipt of state aid</b>							
Yes	240	120	120	15	18	13	3.1255*
No	1,060	430	630	85	82	87	-3.1255*
<b>Receipt of institution aid</b>							
Yes	410	210	200	28	37	23	8.5329*
No	880	330	550	72	63	77	-8.5329*
<b>Receipt of any aid</b>							
Yes	880	380	500	65	65	65	0.0878
No	420	160	250	35	35	35	-0.0878
<b>Ever married</b>							
Yes	460	150	310	35	25	41	-9.5585*
No	810	400	420	65	75	59	9.5585*
<b>Dependents other than spouse</b>							
Yes	230	80	160	18	13	21	-4.7552*
No	1,040	470	570	82	87	79	4.7552*

See notes at end of table.

**Table H.11. Comparison of item respondents and nonrespondents for “Time scale of pay—hourly/weekly/monthly”—Continued**

Variable description	Sample size			Percent estimate			Bias
	Total	Respondent	Nonrespondent	Total	Respondent	Nonrespondent	
<b>Student's state of legal residence 1999–2000</b>							
New England	70	20	40	5	4	6	-1.3318
Mid East	250	110	140	18	20	18	1.3114
Great Lakes	220	90	130	17	16	18	-0.9344
Plains	120	60	60	9	9	9	0.4107
Southeast	320	120	200	22	21	22	-0.3971
Southwest	130	50	80	11	9	12	-1.8302
Rocky Mountains	40	20	20	3	2	4	-0.8048
Far West	140	70	80	13	15	12	1.7147
Outlying Areas	20	10	10	2	4	1	1.8615
<b>Current employment status for B&amp;B interview</b>							
Work full-time	910	290	620	74	55	86	-20.1531*
Work part-time	360	250	110	26	46	14	20.1531*
<b>Cumulative amount of Federal loans</b>							
\$0	720	270	450	58	53	60	-4.2938
\$1 to \$2,499	130	60	80	9	8	9	-0.7430
\$3,500 to \$7,499	260	120	130	19	21	17	2.0223
\$7,500 or more	190	90	90	15	18	13	3.0145

# Rounds to zero.

†Not Applicable.

\*Bias is significant at the  $.05/(c-1)$  level, where c is the number of categories within the primary variable.

NOTE: Details may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B: 2000/01).



**Appendix I**  
**Using the B&B:2000/01 Survey Weights**

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# Appendix I

## Using the B&B:2000/01 Survey Weights

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The B&B sampling design consisted of three stratified stages. A stratified sample of postsecondary institutions was selected with probabilities proportional to a composite measure of size at the first stage, a stratified systematic sample of students was selected from sample institutions at the second stage, and a stratified sample of individuals identified as confirmed or potential baccalaureate recipients was selected at the third stage. With three sample stages and stratified sampling at each stage, the B&B data were obtained from a complex sampling design and require specialized software for appropriate estimation. In this appendix, sample code from SUDAAN, one such package, is provided to show how the estimation can be done. Also provided are the names and locations of available weight variables, and a description of a design effects based approach that can be used as a rough guide in situations in which appropriate software is not available.

### I.1 B&B:2000/01 Weight Variables and Location

The B&B:2000/01 weight variables can be found in two files on the ECB: the Weights file and the Analysis file.

The Analysis file contains, in addition to many other variables, the final Taylor series weight variable BB01AWT, together with its analysis strata variable BB01ASTR and analysis PSU variable BB01APSU.

The Weights file contains the above three Analysis file variables and also contains BRR weights BB1BRR01 through BB1BRR64, and the initial NPSAS institution weight INSTWT. The student ID variable ZRID is provided for merging, as well as an indicator of B&B:2000/01 respondent status, B01INT.

### I.2 Using the B&B:2000/01 Survey Weights in Practice

Most commonly used statistical computing packages (e.g., SAS and SPSS) assume independent, identically distributed observations from a population of infinite size. When the data come from a finite population and have been collected using a complex sampling design, then the assumptions of the commonly used packages usually lead to an underestimate of the sampling variance, producing artificially small confidence intervals and nonconservative hypothesis test results (i.e., rejecting the null hypothesis when it is in fact true more often than indicated by the nominal Type I error level) (Carlson et al, 1993).<sup>1</sup>

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<sup>1</sup>Carlson, B.L., Johnson, A.E., and Cohen, S.B. (1993). An evaluation of the use of personal computers for variance estimation with complex survey data. *Journal of Official Statistics*, 9: 795-814.

Statistical strategies that have been developed to address this issue include first-order Taylor series expansion, balanced repeated replication, and the Jackknife approach. The first two of these approaches are described briefly in chapter 6; all are covered in-depth in Wölter (1985).<sup>2</sup>

Special-purpose software packages that have been developed for analysis of complex sample survey data include SUDAAN, WesVar, and Stata. Evaluations of the relative performances of these packages are reported by Cohen (1997).<sup>3</sup> SUDAAN is a commercial product developed by RTI, and information regarding the features of this package is available from <http://www.rti.org/sudaan>. Information regarding WesVar, a product of Westat, Inc., is available from the website <http://www.westat.com/wesvar>; and information regarding Stata, a product of Stata Corporation, is available at <http://www.stata.com>. NCES also has developed a software tool called the DAS for analysis of complex survey data. Information about using the DAS is available from <http://nces.ed.gov/das>.

For Taylor series approximation of standard errors using SUDAAN or Stata, analysis strata and analysis PSUs for the baccalaureate recipients of the B&B study are provided in the B&B:2000/01 ECB Weights file by variables **BB01ASTR** and **BB01APSU**, respectively. The study weights used with these strata and PSUs are the final weights (the rounded  $w_{5i}$  of chapter 6) given by the variable **BB01AWT**.

Below is an example of generic SUDAAN code to produce estimates and standard errors using Taylor Series approximation for baccalaureate recipients. The symbols `/*` and `*/` in the code indicate the beginning and end of a comment. The data set must already be sorted by analysis strata and analysis PSUs within strata.

```
proc descript data=/* insert dataset filename*/ design=wr;
  nest bb01astr bb01apsu;
  weight bb01awt;
  var /*insert NPSAS:2000 or B&B:2000/2001 variables*/;
  subpopn /* insert domain of interest if domain is a subset of baccalaureates*/;
  print nsum mean semean / style=nchs;
run;
```

For BRR approximation of standard errors using SUDAAN or WesVar, there are 64 separate BRR weights, and these are provided in the B&B:2000/01 ECB Weights file by the variables **BB1BRR01** through **BB1BRR64**.

Below is an example of generic SUDAAN code to produce BRR standard errors for baccalaureate recipients. For the BRR approach, the data set does not need to be sorted by analysis strata and PSUs.

```
proc descript data=/* insert dataset filename*/ design=brr;
  repwgt bb1brr01-bb1brr64;
  weight bb01awt;
  var /*insert NPSAS:2000 or B&B:2000/2001 variables*/;
```

---

<sup>2</sup>Wölter, K.N. (1985). *Introduction to variance estimation*. New York, Springer-Verlag.

<sup>3</sup>Cohen, S.B. (1997). An evaluation of alternative PC-based software packages developed for the analysis of complex survey data. *The American Statistician*, 57:285–292.



```
subpopn /* insert domain of interest if domain is a subset of baccalaureates*/;  
print nsum mean semean / style=nchs;  
run;
```

### **I.3 Using Design Effects Without Analysis Software**

If one must perform an analysis of B&B:2000/01 data using a software package that does not allow for complex survey data analysis, the design effects in appendix G can provide a rough guide to the adjustment needed for the resulting standard errors. See appendix G for more details.



**Appendix J**  
**GEM Adjustment Procedure**

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## Appendix J

# GEM Adjustment Procedure

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Weight adjustments are obtained using a generalized exponential model (GEM) with weight adjustment at adjustment step  $j$  for individual  $i$  having the following form:

$$a_{ji}(\lambda_j) = \frac{l_{ji}(u_{ji} - c_{ji}) + u_{ji}(c_{ji} - l_{ji}) \exp(A_{ji} \mathbf{x}_{ji}' \lambda_j)}{(u_{ji} - c_{ji}) + (c_{ji} - l_{ji}) \exp(A_{ji} \mathbf{x}_{ji}' \lambda_j)}$$

where the  $l_{ji}$ ,  $u_{ji}$  are lower and upper bounds on  $a_{ji}$ , the  $c_{ji}$  are pre-specified centering constants such that  $l_{ji} < c_{ji} < u_{ji}$ ,  $\mathbf{x}_{ji}$  is a  $px1$  covariate-vector, and  $A_{ji} = u_{ji} - l_{ji} / (u_{ji} - c_{ji})(c_{ji} - l_{ji})$  is a scale factor.<sup>1</sup> The  $p$ -dimensional parameter vector  $\lambda_j$  is estimated by solving

$$\sum_{i \in A} \mathbf{x}_{ji} w_{ji} a_{ji}(\lambda_j) - T_x = 0 \quad (1)$$

where  $T_x$  is a control total vector and  $A$  is the set of individuals whose weights are being adjusted.

To fit a GEM, at adjustment step  $j$ , individuals are first stratified and then grouped according to extreme weights within strata: low-extreme, normal, or high-extreme weights. Depending on the strata and extreme weight group they are in, each individual is then assigned a bounds adjustment multiple. Furthermore, across all strata, each extreme weight group is given group-specific bounds. Each individual's final adjustment bounds for model fitting is obtained by multiplying their individual adjustment multiple by the group-specific bounds. The GEM can then be fit with individual weight adjustments constrained to lie within the obtained bounds

The first step in finding individual bounds was to stratify individuals by institutional sector, the five level cross of institutional control, and highest level of offering.<sup>2</sup> These strata were used in the sampling design, as outlined in section 2.1, and so should group similar weights together.

For each stratum, individuals were then further partitioned into extreme weight groups: low-extreme, normal, and high-extreme. This partitioning was accomplished using a standard nonparametric approach to outlier detection based on the interquartile range. Within stratum  $k$  for  $k=1, \dots, 5$ , the interquartile range,  $IQR_k$  is as follows:

---

<sup>1</sup>To see the relationship to a logit model, let the lower bound  $l_{ji}$  equal 1, the centering constant  $c_{ji}$  equal 2, and let the upper bound  $u_{ji}$  go to infinity. In the limit there is  $a_{ji} = 1 + \exp(\mathbf{x}_{ji}' \lambda_j)$ , a logit model in which  $a_{ji}$  is the reciprocal of a response probability.

<sup>2</sup>At institution where degree was received.

$$IQR_{jk} = \hat{P}_{jk,75} - \hat{P}_{jk,25},$$

the difference of the estimated 75<sup>th</sup> and 25<sup>th</sup> percentiles (the third and first quartiles). Using  $\hat{P}_{jk,50}$ , the estimated stratum  $k$  sample median, outlier bounds  $b_{jk1}$ ,  $b_{jk2}$  were computed where

$$b_{jk1} = \hat{P}_{jk,50} - 3IQR_{jk}$$

$$b_{jk2} = \hat{P}_{jk,50} + 3IQR_{jk}$$

and the weights in stratum  $k$  could then be grouped:  $w_{ji}$  is considered low-extreme if  $w_{ji} < b_{jk1}$ ,  $w_{ji}$  is considered high-extreme if  $w_{ji} > b_{jk2}$ , and  $w_{ji}$  is considered normal otherwise. The individual  $i$  bounds adjustment multiple,  $m_{ji}$ , is then obtained as follows:

$$m_{ji} = \frac{b_{jk1}}{w_{ji}} \quad \text{if } w_{ji} \text{ is low-extreme}$$

$$= 1 \quad \text{if } w_{ji} \text{ is normal}$$

$$= \frac{b_{jk2}}{w_{ji}} \quad \text{if } w_{ji} \text{ is high-extreme}$$

and so  $m_{ji} > 1$  for low-extreme weights and  $m_{ji} < 1$  for high-extreme weights. This has the desirable effect of increasing the lower bound for low-extreme weights and decreasing the upper bound for high-extreme weights.

To obtain the extreme weight group bounds, let  $g$  give the grouping, with  $g=1$  being low-extreme,  $g=2$  being normal, and  $g=3$  being high-extreme. The group bounds are then a lower bound  $l_{jg}^*$ , and an upper bound  $u_{jg}^*$ , and also a centering constant  $c_j^*$ . To reduce the total number of bounds in the model and so simplify the fitting process,  $l_{j2}^* = l_{j3}^*$ , and  $u_{j1}^* = u_{j2}^*$  was always constrained. Extreme weight group bounds were then further constrained depending on whether the adjustment step was for nonresponse or poststratification.

The additional constraints on the extreme weight group bounds for nonresponse adjustment are that  $l_{j1}^* = l_{j2}^* = l_{j3}^* = 1$  because individual weight adjustments were restricted to be greater than 1. This is desirable as nonresponse adjustments represent the inverse of response probabilities. The centering constant  $c_j^*$  is then set equal to the reciprocal of the estimated weighted response rate.

The additional constraints on the extreme weight group bounds for poststratification, the fourth adjustment step, are that centering constant  $c_4^* = 1$  in order to not adjust the weights too far away from the original design weight. This forces  $l_{4g}^* < 1$

and  $u_{4g}^* > 1$ , which are consistent with the control totals being either larger or smaller than the estimated totals based on the design weights.

Subject to all of the above constraints, the extreme weight group bounds used in adjusting the B&B initial weights are provided in table J.1. All further specifications of these bounds were made to ensure model convergence.

**Table J.1. Bounds and centering constants for group weight adjustments for each GEM adjustment step**

Adjustment step	Lower Bounds			Centering constant $c_j^*$	Upper bounds		
	Low-extreme $l_{j1}^*$	Normal $l_{j2}^*$	High extreme $l_{j3}^*$		Low-extreme $u_{j1}^*$	Normal $u_{j2}^*$	High extreme $u_{j3}^*$
Location adjustment, $j=1$	1.00	1.00	1.00	1.09	1.10	3.00	3.00
Refusal adjustment, $j=2$	1.00	1.00	1.00	1.08	1.80	2.00	2.00
Other nonresponse adjustment, $j=3$	1.00	1.00	1.00	1.05	2.20	2.20	2.20
Poststratification adjustment, $j=4$	0.70	0.70	0.90	1.00	1.10	1.30	1.30

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–2001 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01).

Once the group bounds had been determined, individual weight adjustment bounds were found by multiplying the individual bounds adjustment multiples by the appropriate group specific bounds:

$$l_{ji} = l_{jg}^* m_{ji}$$

$$c_{ji} = c_j^* m_{ji}$$

$$u_{ji} = u_{jg}^* m_{ji}$$

where  $g$  is determined by the group to which  $w_{ji}$  belongs.

GEM adjustment for nonresponse and poststratification also differs by choice of covariate vector  $\mathbf{x}_{ji}$ , and the composition of control total vector  $T_x$ .

For nonresponse adjustment, the components of  $\mathbf{x}_{ji}$  are the predictors of nonresponse. Vector  $T_x$  is in this case the full sample (respondents and nonrespondents) weight totals for the levels of the predictors in  $\mathbf{x}_{ji}$ . Solution of equation (1) is then equivalent to finding the  $\lambda_j$  for which  $\sum_{i \in A} x_{ji} w_{ji} a_{ji}(\lambda_j) = T_x$  where  $A$  is the set of all

respondents. That is, the lambda is found such that its associated adjustments have the property that sums of adjusted weights for respondents equal sums of the current weights over the entire sample. Since nonrespondents have adjusted weights set equal to zero, it is then also true that over all sampled individuals, sums of adjusted weights equal those of current weights.

For poststratification adjustment, the components of  $x_{ji}$  are the levels of the selected variables for which population level control totals are available. In this case, vector  $T_x$  contains these IPEDS totals, and the resulting weights have been adjusted to preserve the totals.