

# **2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test Methodology Report**

## **Working Paper Series**

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# **2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test Methodology Report**

**Working Paper Series**

**February 2010**

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# Executive Summary

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## Introduction

The 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09), conducted for the National Center for Education Statistics (NCES) in the U.S. Department of Education's (ED's) Institute of Education Sciences, collected information primarily about students' education and employment in the first year since receipt of their bachelor's degree.

This report describes the methodology and findings of the B&B:08/09 field test, which took place during the 2007–08 school year. The field test was used to plan, implement, and evaluate methodological procedures, instruments, and systems proposed for use in the full-scale study scheduled for the 2008–09 school year.

## Sample Design

The respondent universe for the field test was students who completed degree requirements for a bachelor's degree between July 1, 2006 and June 30, 2007, and who were awarded their bachelor's degree by June 30, 2008, from a postsecondary institution in the United States or Puerto Rico. All sampled students were potential bachelor's degree recipients in the 2008 National Postsecondary Student Aid Study (NPSAS:08).

The field test sample included a total of 1,820 sample members.<sup>1</sup> About one-third of the sample, 600 individuals, consisted of base-year interview nonrespondents identified as potential bachelor's degree recipients through institutional records.

## Instrumentation

The field test instrument was designed as a mixed-mode instrument. The single web-based instrument was used for both self-administered interviews and interviewer-administered interviews. Several methodological features were built into the instrument to minimize mode effects, including: help text on every form, telephone interviewer instructions on every form, pop-up messages when a response was entered in an incorrect format, and conversion text to encourage responses to critical items when sample members did not provide a response.

## Data Collection Design and Outcomes

### Student Locating and Interviewing

The initial process of locating sample members involved batch-locating activities to update sample members' address and telephone information. Sources for this task included ED's Central Processing System, the National Change of Address (NCOA) system, and Telematch. In addition, sample members and their parents were sent an initial mailing to collect updated contact information.

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<sup>1</sup> The numbers appearing in the tables, figures, and text of this report were rounded to the nearest ten to maintain the confidentiality of study respondents. As a result, reported percentages (based on unrounded numbers) may differ somewhat from those that would result from these rounded numbers.

Once the initial round of locating was completed, sample members were sent a packet of study materials, and the data collection period began. Data collection was conducted in three phases. The early response phase, spanned the first 4 weeks of the data collection period. Sample members who completed the field test interview during this phase were offered an incentive of \$35, paid in full on interview completion or with \$5 prepaid, based on assignment to a random experimental group. During this phase, sample members could complete the self-administered interview or call the help desk to complete a telephone interview. The production phase, the second phase, telephone interviewers began calling the remaining sample members to obtain interviews. Production phase respondents were randomly assigned a \$0 or \$20 production incentive. The final phase of data collection was the nonresponse conversion phase, during which telephone interviewers attempted to obtain interviews from sample members who had previously refused to participate or were difficult to locate. Sample members who completed interviews during this last phase were offered an incentive of \$35. In addition, all NPSAS:08 interview nonrespondents were offered an additional \$20 to complete the interview during each phase of interview completion.

Of the 1,820 sample members for the field test, 1,430 (79 percent) were successfully located, and 1,220 (67 percent) completed an interview. The response rate for the eligible sample was 78 percent. Among the eligible sample that was successfully located, 89 percent responded. The majority of completed interviews (73 percent) were obtained via self-administration.

On average, the field test interview took 38 minutes to complete. Self-administered respondents took an average of 35 minutes to complete the interview, compared with approximately 48 minutes for interviewer-administered respondents.

## **Experiments**

Three experiments included in the field test were designed to evaluate the effectiveness of data collection strategies in increasing early response rates. The first evaluated the impact of the type of envelope used to mail the initial study materials. The second evaluated the effectiveness of prepaid cash versus check incentives. The third experiment involved offering a \$20 incentive to respondents for interviews conducted during the production phase of the survey data collection period. The sample was randomly assigned to each experiment prior to data collection and response rates for each group were compared at the end of the early response period and at the end of the production period. Additionally, all incentive offerings included an additional \$20 differential for base-year nonrespondents.

Another experiment for the field test evaluated three question response formats for selected items in the interview: radio button, check-all, and open-ended. For the radio button format, respondents were asked to respond either “yes” or “no” to each item. For the check-all format, respondents were asked to check the box next to each item that was applicable; respondent could check all of the items that were applicable. For the open-ended format, respondents were first asked to provide their answer in the form of a text string and then to select a corresponding category for each text string.

## **Evaluation of Operations and Data Quality**

The field test was used to plan, implement, and evaluate methodological procedures, instruments, and systems proposed for use in the full-scale study scheduled for the 2008–09 school year. Assessments of operations, procedures, and data quality were critical at this stage. Evaluation of operations and procedures focused on tracing and locating procedures, refusal conversion efforts,

effectiveness of incentives, and length of the student interview. Evaluation of data quality included an examination of items with high rates of nonresponse and help text usage, the accuracy of data collected with coding systems, telephone interview question delivery, and quality control procedures for data entry. The results of the field test experiments and evaluations were used to inform revisions to the full-scale instrument.

## **File Preparation**

The data from the field test are not released to the public; however, all data file processing procedures were tested rigorously to prepare for the full-scale effort. Procedures tested included online coding and editing systems, range and consistency checks for all data, and post-data-collection editing. Detailed documentation was also developed to describe question text, response options, logical imputations, and recoding.

## **Planned Changes for the B&B:08/09 Full-scale Study**

The final chapter of this report summarizes the changes planned for the B&B:08/09 full-scale study, based on the results of the field test. The full-scale study will incorporate slight changes to the processes regarding locating sample members, instrument design, and data collection to improve efficiency and clarity. More substantial changes recommended for the full-scale study include the following:

- Data collection notification materials will be sent to sample members in a regular 9" x 12" envelope.
- During the early response period, sample members will be offered a \$5 prepaid cash incentive, followed by a \$30 check if the interview is completed during the early response period (the first 4 weeks of data collection).
- Incentives will be offered for interviews completed during the early response period and the nonresponse conversion period. No incentives will be offered during production interviewing.
- All incentive offers made after the early response period will be promised rather than prepaid.
- Based on results of the question response format experiment, the open-ended response format will not be used for the full-scale instrument. In its place, either the check-all or the radio button response format will be used, as appropriate, depending on the nature of the question.

# Working Paper Foreword

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In addition to official NCES publications, NCES staff and individuals commissioned by NCES produce preliminary research reports that include analyses of survey results and presentations of technical, methodological, and statistical evaluation issues.

The Working Paper Series was initiated to promote the sharing of the valuable work experience and knowledge reflected in these preliminary reports. These reports are viewed as works in progress and have not undergone a rigorous review for consistency with NCES Statistical Standards prior to inclusion in the Working Paper Series.

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# Foreword

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This report describes and evaluates the methods and procedures used in the field test of the 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09). The B&B:08/09 field test is the first follow-up interview for the cohort of bachelor's degree recipients identified as part of the field test of the 2008 National Postsecondary Student Aid Study.

We hope that the information provided in this report will be useful to interested readers. This study was based on a purposive and complementary sample of the nationally representative sample of institutions to be used in the B&B:08/09 full-scale study. Additional information about B&B:08/09 is available on the Web at <http://nces.ed.gov/surveys/b%26b/>.

Tom Weko  
Associate Commissioner  
Postsecondary Studies Division

# Acknowledgments

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We are greatly indebted to the students who generously participated in the survey. Their willingness to take the time to share their information and experiences made the B&B:08/09 field test a success. The authors also gratefully acknowledge the assistance of the Technical Review Panel members, who provided considerable insight and guidance in the development of the design and instrumentation of the study.

# Contents

Executive Summary.....	iii
Working Paper Foreword .....	vi
Foreword.....	vii
Acknowledgments .....	viii
List of Tables .....	xi
List of Figures.....	xiii
<b>Chapter 1. Overview .....</b>	<b>1</b>
1.1 Background and Objectives of B&B .....	1
1.2 Overview of the Field Test Study Design .....	4
1.3 Schedule and Products of B&B:08/09 .....	4
<b>Chapter 2. Design and Method .....</b>	<b>6</b>
2.1 Sampling Design .....	6
2.1.1 Respondent Universe.....	6
2.1.2 Statistical Methodology .....	7
2.2 Data Collection Design.....	12
2.2.1 Student Interview Data Collection .....	12
2.2.2 Transcript Data Collection .....	29
2.2.3 Administrative Data Sources .....	32
<b>Chapter 3. Student Interview Data Collection Outcomes.....</b>	<b>33</b>
3.1 Student Interview Response Rates .....	33
3.1.1 Overall Summary of Interview Results .....	33
3.1.2 Locating and Interviewing Outcomes.....	37
3.1.3 Interview Outcomes, by Mode.....	38
3.2 Interview Burden .....	39
3.2.1 Student Interview Completion Times.....	39
3.2.2 Telephone Interviewer Hours .....	43
3.2.3 Number of Calls and Call Screening .....	43
3.3 Results of Data Collection Experiments .....	45
3.3.1 Analysis of Priority Mail.....	45
3.3.2 Analysis of Prepaid Incentives .....	45
3.3.3 Analysis of Production Incentives .....	46
<b>Chapter 4. Transcript Data Collection Outcomes .....</b>	<b>48</b>
4.1 Institution Response Rates .....	48
4.2 Transcript Eligibility Rates .....	49
4.3 Transcript Keying and Coding Outcomes .....	50
4.4 Evaluation of Transcript Keying and Coding.....	51
4.5 Transcript Data Files .....	52
4.6 Conclusions.....	53

<b>Chapter 5. File Preparation and Evaluation of Data Quality.....</b>	<b>54</b>
5.1 Student Interview Evaluation.....	54
5.1.1 Question Format Experiment.....	54
5.1.2 Identifying Difficult Items: Help Text, Conversion Text, and Item Nonresponse.....	60
5.1.3 Reliability Reinterview.....	68
5.1.4 Interviewer Delivery and Data Entry Error Rates.....	75
5.1.5 Help Desk.....	76
5.1.6 Student Evaluation of Interview.....	78
5.1.7 Online Coding and Editing.....	80
5.1.8 Post-Data-Collection Editing.....	82
5.1.9 Question-Level Edits.....	84
5.2 Student Interview Data Files.....	84
5.3 B&B Eligibility Evaluation.....	85
5.4 Conclusions.....	86
<b>Chapter 6. Recommendations for the Full-scale Study .....</b>	<b>87</b>
6.1 B&B:08/09 Full-scale Sample.....	87
6.2 Locating and Contacting Sample Members.....	88
6.3 Data Collection.....	88
6.1 Instrumentation.....	89
6.2 Interviewer Training.....	89
6.3 Transcripts.....	89
6.4 Conclusion.....	90
<b>References.....</b>	<b>91</b>
<b>Appendixes</b>	
A. Technical Review Panel Contact List.....	A-1
B. Data Elements for the B&B:04/06 Student Interview.....	B-1
C. Data Collection Materials.....	C-1
D. Training Materials.....	D-1
E. Facsimile of Field Test Instrument.....	E-1
F. Facsimile of Reinterview Data Collection Instrument.....	F-1

# List of Tables

1.	Schedule of major B&B:08/09 activities: 2008–11 .....	5
2.	Unweighted percentage of sampled, eligible, and participating NPSAS:08 field test institutions, by sampling stratum: 2007 .....	8
3.	Expected and actual student samples for NPSAS:08 field test, by student type and level of institution: 2007.....	10
4.	Initial classification of NPSAS:08 field test total and potential bachelor’s samples, by institution: 2007.....	11
5.	Distribution of the B&B:08/09 field test sample, by NPSAS:08 field test interview response status and B&B eligibility: 2008.....	12
6.	Question wording for items tested, by interview section: 2008 .....	26
7.	Locate and response rate, by NPSAS:08 field test response status: 2008.....	34
8.	Locate and response rate, by institution type: 2008 .....	35
9.	Locate and response rates for field cases, by NPSAS:08 field test response status and institution type: 2008.....	36
10.	Interview completeness, by NPSAS:08 field test response status: 2008 .....	37
11.	Batch processing record match rates, by tracing source: 2008 .....	37
12.	Interview completion rates, by address update reply: 2008 .....	38
13.	Interview completion rates for cases sent to intensive tracing, by tracing status: 2008 .....	38
14.	Distribution of interview completions, by mode of administration: 2008.....	39
15.	Average time to complete field test interview, by interview section and mode of administration: 2008.....	40
16.	Average time to complete field test interview, by number of schools reported in Undergraduate Education section: 2008.....	41
17.	Average time to complete field test interview, by number of schools reported in Postbaccalaureate Education/Training section: 2008.....	41
18.	Average time to complete field test interview, by employment status: 2008.....	42
19.	Average time to complete field test interview, by teacher status: 2008.....	42
20.	Average time to complete field test interview, by teacher status: 2008.....	42
21.	Call counts, by interview status and completion mode: 2008.....	44
22.	Early participation rates, by type of mailing: 2008 .....	45
23.	Early participation rates, by prepaid incentive status: 2008 .....	46
24.	Interview participation rates, by production incentive status: 2008.....	47
25.	Eligible institution participation, by institution type: 2008 .....	48
26.	Institution transmission mode for transcript data: 2008 .....	49

27.	Student-level transcript collection results: 2008.....	49
28.	Course coding results: 2008.....	50
29.	Completeness of data for experimental items, by question format: 2008.....	58
30.	Rates of help text access, by item: 2008.....	61
31.	Use of conversion text to minimize nonresponse: 2008.....	63
32.	B&B:08/09 interview item nonresponse, undergraduate education: 2008.....	65
33.	Interview item nonresponse, Postbaccalaureate Education/Training: 2008.....	66
34.	Interview item nonresponse, Postbaccalaureate Employment: 2008.....	67
35.	Interview item nonresponse, teaching: 2008.....	67
36.	B&B:08/09 interview item nonresponse, Student Background: 2008.....	68
37.	Reliability reinterview response, by completion mode: 2007.....	69
38.	Reliability indices, by interview section: 2008.....	71
39.	Help desk requests, by type of incident reported: 2008.....	77
40.	Opinions response rates for student interview respondents, by mode of administration: 2008.....	79
41.	Problems reported by self-administered debriefing respondents: 2008.....	79
42.	Reasons for completing the interview via telephone versus the Web: 2008.....	80
43.	Description of missing data codes: 2008.....	82
44.	Distribution of the B&B field test sample, by NPSAS:08 status and transcript status: 2008.....	85
45.	Distribution of the B&B field test sample, by NPSAS:08 status and interview outcome: 2008.....	86
46.	Final B&B:08 field test eligible sample: 2008.....	86
47.	Expected eligibility and response rates, by NPSAS:08 field test response status: 2008.....	88

# List of Figures

---

1.	Chronology of the Baccalaureate and Beyond Longitudinal Study: 1993–2012.....	3
2.	Interview sections and primary topics: 2008.....	14
3.	B&B:08/09 field test website home page: 2008.....	20
4.	Field test incentive experiments: 2008.....	25
5.	Field test question format experiment: 2008.....	27
6.	Overall locating and interviewing results: 2008.....	34
7.	Course recode rates over time: 2008.....	51
8.	Screen shot of radio button format: 2008.....	55
9.	Screen shot of check-all format: 2008.....	55
10.	Screen shot of open-ended format with follow-up coding: 2008.....	56
11.	Screen shot of follow-up coding of open-ended responses: 2008.....	56
12.	Mean total time required to administer experimental questions, by response format: 2008.....	57
13.	Codability of “Other, specify” responses offered across question formats: 2008.....	60
14.	Question delivery error rate, by batch: 2008.....	75
15.	Data entry error rate, by batch: 2008.....	76
16.	Summary of recode results, by completion mode: 2008.....	81
17.	Summary of upcoding results, by coding system and administration mode: 2008.....	82



# Chapter 1. Overview

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This working paper describes the design, methodological procedures, and related evaluations for the 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) field test. RTI International,<sup>1</sup> with the assistance of MPR Associates, Inc., is conducting the B&B:08/09 field test and subsequent full-scale study for the National Center for Education Statistics (NCES) of the U.S. Department of Education’s Institute of Education Sciences (Contract No. ED-05-CO-0033).

This introductory chapter describes the background and legislative authorization, schedule, and products of the study and the unique purposes of the field test. Chapter 2 provides detail about the field test design and procedures. In chapter 3, the outcomes of the student data collection are reviewed. Chapter 4 reports the outcomes of the transcript data collection. Chapter 5 contains information on file preparation and evaluations of data quality and findings. Finally, chapter 6 summarizes the major recommendations for the full-scale study design, based on field test findings. Materials used during the field test are provided as appendixes to the report and are cited in the text, where appropriate.

Unless otherwise indicated, a criterion probability level of .05 was used for all tests of significance conducted for the B&B:08/09 evaluations. Throughout this document, reported numbers of sample institutions and students have been rounded to ensure the confidentiality of individual student data. As a result, row and column entries in tables may not sum to their respective totals, and reported percentages may differ somewhat from those that would result from these rounded numbers.

## 1.1 Background and Objectives of B&B

NCES conducts several studies to respond to the need for a national, comprehensive database concerning fundamental postsecondary education (PSE) issues: access, choice, enrollment, persistence, progress, curriculum, attainment, continuation into graduate and professional schools, and the benefits of PSE to individuals and to society. B&B is one of several studies sponsored by NCES to address this need, specifically, studying bachelor’s degree recipients over time.

NCES is authorized to conduct B&B by the following legislation:

- Title I, Section 153(a)(1)(E) of the Education Sciences Reform Act of 2002, 20 U.S.C. § 9543;
- General Education Provisions Act, as amended, 20 U.S.C. § 1221 e-1 (2001);
- Higher Education Act of 1965, as amended by the Higher Education Amendments of 1986, Title XIII(a), Section 1303, and Title XIV, 20 U.S.C. § 1070 et seq. (1994);
- Higher Education Act of 1965, Augustus F. Hawkins–Robert T. Stafford Elementary and Secondary School Improvement Amendments of 1988, 20 U.S.C. § 2911 to 2976 (2001); and

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<sup>1</sup> RTI International is a trade name of Research Triangle Institute.

- Sections 404(a), 408(a), and 408(b) of the National Education Statistics Act of 1994, 20 U.S.C. 9001 et seq. (2002).

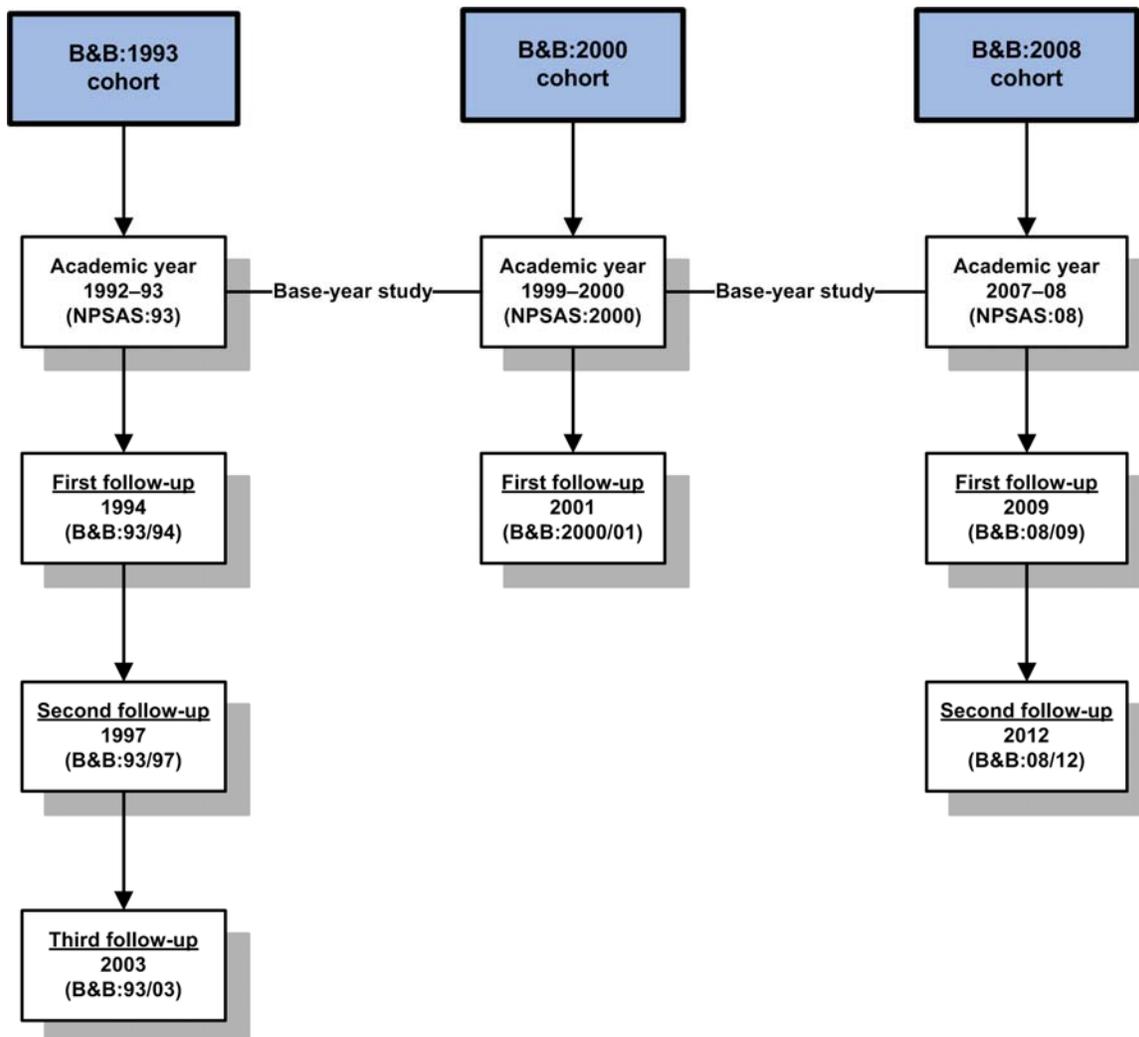
The B&B series provides a longitudinal study of the education, work, financial, and personal experiences of students who have completed a bachelor's degree at a given point in time. Three distinct B&B cohorts, each sampled almost a decade apart, have also allowed for the larger consideration of how baccalaureate degree recipients have fared at differing times in society.

Students are identified as bachelor's degree recipients through the B&B base year study, the National Postsecondary Student Aid Study (NPSAS), a recurring survey of nationally representative, cross-sectional samples of postsecondary students designed to determine how students and their families pay for postsecondary education. The first B&B cohort was identified in 1993, in the NPSAS study of that year (NPSAS:93), as students who received their bachelor's degree in academic year 1992–93. The B&B:93 cohort of approximately 11,000 students was subsequently interviewed in a B&B follow-up in 1994 (B&B:93/94) which included a collection of transcript data. The B&B:93 cohort was surveyed again in 1997 (B&B:93/97) and 2003 (B&B:93/03). A second B&B cohort of approximately 12,000 sample members began with NPSAS:2000 and involved only a 1-year follow-up in 2001 (B&B:2000/2001).

NPSAS:08 identified the third and current B&B cohort. B&B:08/09 is being conducted 1 year after the base-year NPSAS:08 data collection and includes a transcript collection. A second follow-up with the B&B:08 cohort will be conducted 4 years later in 2012 (B&B:08/12). This third cohort is larger than the two previous B&B cohorts with approximately 20,000 sample members in the full-scale study.

Figure 1 presents the timelines for data collection for the base-year and subsequent follow-up studies for each B&B in the series.

Figure 1. Chronology of the Baccalaureate and Beyond Longitudinal Study: 1993–2012



NOTE: NPSAS = National Postsecondary Student Aid Study.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

B&B covers a number of topics of interest to policymakers, educators, and researchers. The study allows for analysis of the participation and progress of bachelor's degree completers in the workforce and the relationship of employment to degree, income, and ability to repay debt. The study also collects data on entry into, persistence through, and completion of graduate-level education. A special emphasis of B&B is on examining the pathways and experiences of new elementary and secondary school teachers. Many issues related to teacher preparation, entry into the profession (e.g., timing and ease of entry), persistence in teaching, and career movement within education can be examined. The two B&B studies that have collected transcript data (B&B:93/94 and B&B:08/09) provide a unique opportunity for analysts to review what students are taking in college and compare that information to other factors in the respondents' lives (job, graduate school, etc.).

## 1.2 Overview of the Field Test Study Design

The B&B field test was conducted to plan, implement, and evaluate the quality and operational capacity of the data collection instruments, systems, and methodological procedures proposed for use in the full-scale study. Additionally, the B&B field test evaluated and refined the procedures used to collect and record student transcripts.

Several experiments were conducted during the field test, including:

- Three experiments were included to examine the impact of various data collection strategies on response rates:
  1. The first experiment involved a \$35 incentive for early completion offered to both base-year respondents and nonrespondents. Sample members were randomly assigned to one of three groups. The first group received a \$5 initial cash incentive, with a promise that \$30 would be paid on completion of the interview. The second group received a \$5 initial check incentive, with a promise that \$30 would be paid on completion of the interview. The third group received no prepaid incentive but was offered \$35 to be paid on completion of the interview.
  2. The second experiment involved mailout methods. The sample was divided into two groups. Fifty percent of the sample received their initial mailing in an oversized 9" x 12" envelope, and the remaining sample members received their initial mailing via Priority Mail.
  3. The third experiment involved offering \$20 or \$0 to respondents for interviews conducted during the production phase of the survey data collection period.
- A fourth experiment was conducted to evaluate the completeness and quality of data collected across three question response formats on a subset of items.

## 1.3 Schedule and Products of B&B:08/09

Table 1 summarizes the schedule for the field test and the proposed schedule for the full-scale study in 2008–09. Electronically documented, restricted-access data files (with associated electronic codebooks) and NCES Data Analysis Systems for public release will be constructed from the full-scale data and made available to a variety of organizations and researchers. B&B:08/09 will produce the following:

- *First Look* reports, which provide descriptive summaries of the B&B:08/09 cohort;
- a full-scale methodology report, 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;
- special tabulations of issues of interest to the higher education community, as determined by NCES; and
- a descriptive summary of significant findings for dissemination to a broad audience.

**Table 1. Schedule of major B&B:08/09 activities: 2008–11**

Activity	Start date	End date
<b>B&amp;B:08/09 field test</b>		
Finalize student sample	3/25/2008	4/18/2008
Conduct self-administered web/CATI data collection	7/8/2008	10/24/2008
Conduct field CAPI data collection	10/3/2008	10/24/2008
Process data, construct data files	7/8/2008	1/30/2009
Prepare methodology report	7/29/2008	10/2/2009
<b>B&amp;B:08/09 field test transcripts</b>		
Postsecondary catalogue/transcript collection	8/6/2007	8/1/2008
Transcript keying and coding	12/3/2007	11/7/2008
Transcript electronic data file production	7/28/2008	3/20/2009
<b>B&amp;B:08/09 full-scale</b>		
Finalize student sample	2/19/2009	3/4/2009
Conduct self-administered web/CATI data collection	7/7/2009	2/22/2010
Conduct field CAPI data collection	11/20/2009	2/19/2010
Process data, construct data files	7/8/2009	9/8/2010
Prepare methodology report	10/19/2009	4/11/2011
Prepare <i>First Look</i> report	12/21/2009	4/22/2011
Prepare descriptive report	6/2/2010	11/23/2011
<b>B&amp;B:08/09 full-scale transcripts</b>		
Postsecondary catalogue/transcript collection	7/1/2008	6/5/2009
Transcript keying and coding	11/1/2008	7/16/2009
Transcript electronic data file production	4/6/2009	11/20/2009

NOTE: CAPI = computer-assisted personal interviewing. CATI = computer-assisted telephone interviewing.  
 SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

# Chapter 2.

## Design and Method

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The purpose of the 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) field test was to fully test all procedures, methods, and systems of the study in a realistic operational environment prior to implementing them in the full-scale study. This chapter describes the design of the field test data collection. An overview of the sampling design, sample member locating and contacting activities, interview design, and transcript data collection procedures is presented, together with a description of the systems developed to support the field test data collection.

### 2.1 Sampling Design

The sampling design section describes the institution and student respondent universes. The steps used to select the institution and student samples for the base-year National Postsecondary Student Aid Study (NPSAS:08) field test, as well as the steps used in the NPSAS:08 field test to determine the B&B:08/09 field test sample, are presented.

#### 2.1.1 Respondent Universe

The respondent universe for the B&B:08/09 field test consisted of all students who completed requirements for their bachelor's degree during the 2006–07 academic year at any Title IV-eligible postsecondary institution in the United States or Puerto Rico. The sample members were identified from the NPSAS:08 field test. The NPSAS:08 field test institution and student universes are described in this section.

**Institution universe.** To be eligible for the NPSAS:08 field test, institutions had to meet the following conditions during the 2006–07 academic year:

- federal Title IV aid requirements:
  - offer an educational program designed for persons who have completed at least a high school education; and
  - offer at least one academic, occupational, or vocational program of study lasting at least 3 months or 300 clock hours;
- offer courses that were open to more than the employees or members of the company or group (e.g., union) that administers the institution;
- be located in the 50 states, the District of Columbia, or Puerto Rico; and
- not be a U.S. service academy.

Institutions providing only vocational, recreational, or remedial courses or only in-house courses for their own employees or members were excluded. U.S. service academies were excluded because of their unique funding and tuition base.

The above institutional eligibility conditions were consistent with all previous NPSAS studies. However, the requirement that an institution be eligible to distribute federal Title IV aid was

implemented beginning with NPSAS:2000.<sup>2</sup> Also, NPSAS:04 was the first NPSAS study to include institutions that offered only correspondence courses, provided these same institutions were also eligible to distribute federal Title IV student aid.

**Student universe.** To be eligible for the NPSAS:08 field test, students had to be enrolled in a NPSAS eligible institution in any term or course of instruction at any time from July 1, 2006 through June 30, 2007. Students also had to meet the following requirements:

- be enrolled in any of the following: (a) an academic program, (b) at least one course for credit that could be applied toward fulfilling the requirements for an academic degree, or (c) an occupational or vocational program that required at least 3 months or 300 clock hours of instruction to receive a degree, certificate, or other formal award;
- not be currently enrolled in high school; and
- not be enrolled solely in a General Educational Development (GED) or other high school completion program.

Students who were concurrently enrolled in high school were not eligible. Also excluded were students taking courses but not receiving credit such as those only auditing courses or taking courses only for leisure, rather than as part of an academic, occupational, or vocational program or course of instruction.

The NPSAS:08 study year covered the time period between July 1 and June 30 to coincide with the federal financial aid award year. However, to facilitate timely completion of data collection and data file preparation, institutions were asked to submit enrollment lists for all eligible students enrolled at that institution at any time between July 1 and April 30. Previous cycles of NPSAS have shown that the terms beginning in May or June add relatively little to enrollment and aid totals. Furthermore, to include the May or June starters would increase the complexity and difficulty of data collection because of the inherent delays in receiving enrollment lists and subsequent sampling, locating, interviewing, and file processing. Excluding May or June starters enables schools to provide enrollment lists earlier, therefore allowing the student interview process to begin earlier. Furthermore, it is unlikely that anyone eligible for B&B:08/09 would be a May or June starter.

## 2.1.2 Statistical Methodology

The B&B:08/09 field test student sample consisted of all NPSAS:08 field test interview respondents who completed requirements for the bachelor's degree at any time between July 1, 2006, and June 30, 2007. Also included in the B&B:08/09 field test sample were all NPSAS:08 field test interview nonrespondents with baccalaureate receipt either confirmed in a web-based computer-assisted data entry (CADE) software system used for the abstraction of students' institution records or identified as a potential baccalaureate recipient by institutions' student lists. The NPSAS:08 field test institution and student samples, as well as the B&B:08/09 field test student sample, are described in this section.

**NPSAS:08 field test institution sample.** The institutional sampling frame for the NPSAS:08 field test was constructed using the 2004–05 Integrated Postsecondary Education Data System (IPEDS) Header, Institutional Characteristics, Completions, and Fall Enrollment files. The institution samples for the field test and full-scale studies were selected simultaneously, prior to the field test study. For the field test, 300 institutions were selected from the pool of institutions that

<sup>2</sup> An indicator of Title IV eligibility was added to the analysis files from earlier NPSAS studies to facilitate comparable analyses.

were not selected to participate in the full-scale study. The 300 institutions sampled for the field test yielded 270 that provided the enrollment lists necessary for creating the student sample. This process minimized the possibility that an institution would be burdened with participation in both the field test and full-scale samples, yet maintained the representativeness of the full-scale sample.<sup>3</sup>

To the extent possible, the field test sample of institutions was selected to approximate the same distribution by institutional strata as used in the full-scale study. However, due to the limited size of the NPSAS:08 field test institutional sampling frame and the need to ensure sufficient baccalaureate recipients for the follow-up B&B field test, the NPSAS:08 field test sample included a higher percentage of 4-year institutions than the full-scale sample. However, public 4-year doctorate-granting institutions were designated as *certainty institutions* for the full-scale sample (i.e., they were certain to be selected for the full-scale sample) and were excluded from the field test sample.<sup>4</sup>

Table 2 displays the distribution of the frame and sampled institutions by institutional strata. In addition, it shows eligibility rates, rates of providing student enrollment lists, and past NPSAS participation, by stratum among the sampled institutions. Overall, about 99 percent of the sampled institutions met the eligibility requirements; of those, approximately 90 percent provided enrollment lists.

**Table 2. Unweighted percentage of sampled, eligible, and participating NPSAS:08 field test institutions, by sampling stratum: 2007**

Institutional sampling stratum	Frame	Sampled institutions	Eligible institutions		Provided lists		Past NPSAS participant	
			Number	Percent <sup>1</sup>	Number	Percent <sup>2</sup>	Number	Percent <sup>2</sup>
All institutions	6,780	300	300	99.3	270	89.7	200	65.2
Public								
Less-than-2-year	250	#	#	100.0	#	100.0	#	#
2-year	1,170	10	10	100.0	10	100.0	10	62.5
4-year non-doctorate-granting	360	100	100	100.0	100	93.3	80	76.0
4-year doctorate-granting <sup>3</sup>	290	#	#	#	#	#	#	#
Private not-for-profit								
Less-than-4-year	330	#	#	75.0	#	33.3	#	33.3
4-year non-doctorate-granting	1,020	140	130	99.3	120	91.8	80	59.0
4-year doctorate-granting	590	30	30	100.0	30	84.8	30	87.9
Private for-profit								
Less-than-2-year	1,480	10	10	100.0	#	57.1	#	#
2-year-or-more	1,310	10	10	100.0	10	66.7	#	44.4

# Rounds to zero.

<sup>1</sup>Percentage is based on number of sampled institutions within row.

<sup>3</sup> After the field test data collection was completed, the full-scale sample was augmented to provide state-level representation of students in selected states and sectors. Twenty of the institutions added to the full-scale sample were in the field test sample.

<sup>4</sup> On the basis of the NPSAS sample design and the number of public 4-year doctorate-granting institutions on the sampling frame, it was determined that all public 4-year doctorate-granting institutions should be selected for the full-scale sample; therefore, these institutions were selected with a probability of 1.0 and are referred to as *certainty institutions*.

<sup>2</sup>Percentage is based on number of eligible institutions within row.

<sup>3</sup>All institutions in this category are included in the full-scale sample with certainty and not included in the field test study.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008 National Postsecondary Student Aid Study (NPSAS:08) Field Test.

**NPSAS:08 field test student sample.** To create the student sampling frame for the NPSAS:08 field test, each participating institution was asked to submit a list of eligible students. The requests for student enrollment lists specifically indicated how institutions should handle special cases, such as students taking only correspondence or distance learning courses, foreign exchange students, continuing education students, extension division students, and nonmatriculated students. The data required for each enrollee included:

- the student's name;
- identification (ID);
- Social Security number (used for abstracting student records);
- date of birth;
- degree level during the last term of enrollment (undergraduate, master's, doctoral, other graduate, or first-professional);
- class level, if undergraduate (first year, second year, third year, fourth year, or fifth year or higher);
- major;
- corresponding Classification of Instruction Program (CIP) code for the major;
- and baccalaureate degree status.<sup>5</sup>

Contact information, such as local telephone number and address, permanent telephone number and address, campus e-mail address, and permanent e-mail address, was also requested.

The student sample size for the NPSAS:08 field test was formulated to obtain various types of students. Specifically, the sample included a large number of potential baccalaureate recipients to provide sufficient sample for the B&B:08/09 field test. As shown in table 3, the NPSAS:08 field test was designed to sample approximately 3,000 students, including about 2,400 potential baccalaureate students, 500 other undergraduate students, and 110 graduate and first-professional students. There were seven student sampling strata:

- three sampling strata for undergraduate students:
  - bachelor's business;<sup>6</sup>
  - bachelor's non-business; and

<sup>5</sup> Institutions were asked to identify students who received or were expected to receive their baccalaureate degree between July 1, 2006, and June 30, 2007.

<sup>6</sup> Because of the high proportion of business majors, students receiving a baccalaureate degree in business were placed in a separate stratum so that they would be selected at a lower sampling rate than other baccalaureate recipients. Sampling business majors at the same rate as other baccalaureate recipients would have resulted in inclusion of more business majors than desired.

- other undergraduate;
- three sampling strata for graduate students:
  - master’s;
  - doctorate; and
  - other graduate students; and
- one sampling stratum for first-professional students.

**Table 3. Expected and actual student samples for NPSAS:08 field test, by student type and level of institution: 2007**

Student type and level of institution	Student sample size	
	Expected <sup>1</sup>	Actual
Total	3,000	3,000
Potential bachelor’s recipient	2,400	2,460
Less-than-2-year	#	#
2-year	#	#
4-year	2,400	2,450
Other undergraduate	500	430
Less-than-2-year	120	80
2-year	40	50
4-year	340	300
Graduate	90	110
Master’s	50	80
Doctor’s	30	20
Other graduate	10	10
First-professional	20	10

# Rounds to zero.

<sup>1</sup> Based on sampling rates, using the 2004–05 Integrated Postsecondary Education Data System (IPEDS) Header, Fall Enrollment, and Completions files counts.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008 National Postsecondary Student Aid Study (NPSAS:08) Field Test.

To be eligible for the B&B field test, students had to complete requirements for their bachelor’s degree between July 1, 2006 and June 30, 2007. Given that institutions were asked to identify potential bachelor’s degree recipients before degree completion, the number of those who would actually complete their degree was expected to be lower. Therefore, the NPSAS sampling rates for those identified by the sample institutions as potential baccalaureate recipients and other undergraduate students were adjusted to determine the expected sample sizes after accounting for expected false positive rates. The false positive baccalaureate rate experienced in NPSAS:2000 (the

most recent NPSAS to include a B&B base-year cohort) was used to set appropriate sampling rates for the NPSAS:08 field test.<sup>7</sup>

The student sample for the NPSAS:08 field test was selected from the first 150 institutions that provided lists that passed quality control checks. The institution sample was larger than that required to select the student sample of 3,000. This was to ensure adequate testing of procedures related to institution contacting and sampling. Furthermore, the abbreviated schedule for the field test required that the student sample be selected early enough to allow sufficient time to locate and contact the student sample. To ensure that the student sample size per institution was large enough to test student record abstraction and interviewing procedures, the sample had to be limited to a smaller set of institutions. Otherwise, if the 3,000 expected sample students had been selected from all 300 participating institutions, then only a few students would have been selected from each institution. These 150 institutions provided sufficient variation and numbers of sample students for the field test. However, to allow for an adequate test of sampling procedures, samples were selected from among the remaining 120 institutions that provided enrollment lists but that were not used for data collection.

Table 4 presents the NPSAS:08 field test total and potential bachelor's samples, by institution type. About 79 percent of the potential bachelor's sample was enrolled in 4-year non-doctorate-granting institutions, and 21 percent was enrolled in 4-year doctorate-granting institutions. About 51 percent of the potential bachelor's sample was enrolled in public institutions, 47 percent was enrolled in private not-for-profit institutions, and 1 percent was enrolled in private for-profit institutions.

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<sup>7</sup> In NPSAS:2000, 13 percent of students identified by the sample institution as potential baccalaureate recipients at the time of sampling was later determined during the interview to be other undergraduate or graduate students. The false negative rate was 3 percent for those identified at the time of sampling as other undergraduate or graduate students but determined during the interview to be baccalaureate degree students. Given that potential baccalaureates were identified earlier in NPSAS:08 than in NPSAS:2000, a false positive rate of 15 percent was assumed for sampling purposes, and the false negative rate was ignored because it was expected to be minimal.

**Table 4. Initial classification of NPSAS:08 field test total and potential bachelor's samples, by institution: 2007**

Institution type	Total sample		Potential bachelor's	
	Number	Percent	Number	Percent
Total	3,000	100.0	2,460	100.0
Institutional level				
Less-than-2-year	90	2.9	#	#
2-year	50	1.6	#	#
4-year non-doctorate-granting	2,230	74.5	1,940	78.8
4-year doctorate-granting	630	21.1	520	21.1
Institutional control				
Public	1,480	49.4	1,260	51.3
Private not-for-profit	1,420	47.3	1,160	47.3
Private for-profit	100	3.3	30	1.4
Institutional sector				
Public				
Less-than-2-year	20	0.7	#	#
2-year	40	1.3	#	#
4-year non-doctorate-granting	1,420	47.3	1,260	51.2
4-year doctorate-granting <sup>1</sup>	†	†	†	†
Private not-for-profit				
2-year-or-less	10	0.2	#	#
4-year non-doctorate-granting	780	26.0	640	26.2
4-year doctorate-granting	630	21.1	520	21.1
Private for-profit				
Less-than-2-year	60	1.9	#	#
2-year-or-more	40	1.4	30	1.4

† Not applicable.

<sup>1</sup> All institutions in this category are included in the full-scale sample with certainty and not included in the field test study.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008 National Postsecondary Student Aid Study (NPSAS:08) Field Test.

**B&B:08/09 field test student sample.** The total field test sample size was 1,820. The NPSAS:08 field test yielded about 1,220 interview respondents who were confirmed to be bachelor's recipients. The base-year sample also included about 600 interview nonrespondents who were either classified as potential bachelor's recipients in the student institutional records obtained through CADE or were identified as such according to the initial classification by the NPSAS sample institution at the time of student sampling (prior to base-year data collection). Table 5 presents the distribution of the B&B sample, by NPSAS:08 interview response status and B&B eligibility.

**Table 5. Distribution of the B&B:08/09 field test sample, by NPSAS:08 field test interview response status and B&B eligibility: 2008**

NPSAS:08 field test interview status	B&B eligibility	Count
Total		1,820
Interview respondent	Bachelor's receipt confirmed in interview	1,220
Interview nonrespondent	Bachelor's receipt confirmed in CADE	410
Interview nonrespondent	Listed as potential bachelor's recipient	190

NOTE: Detail may not sum to totals because of rounding. CADE = computer-assisted data entry. NPSAS = National Postsecondary Student Aid Study.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

## 2.2 Data Collection Design

This section provides an overview of the procedures implemented for the B&B field test data collection. First, the content and design of the multimode survey instrument are outlined, followed by a summary of training for data collection staff and a description of the study website. The details of data collection procedures are also presented, including the steps taken to locate and contact sample members and procedures for conducting interviews. Experiments designed to evaluate the impact of various data collection strategies are described, as are interview data collection systems. Next, transcript data collection procedures are discussed, including details on the transcript website, training of transcript keyer-coder staff, transcript data collection systems, and quality control. Finally, the various administrative sources that provide data for the B&B cohort—in addition to the student interview and transcripts—are discussed.

### 2.2.1 Student Interview Data Collection

The multimodal interview approach of the B&B field test data collection is described below, including student instrument development, training of interview data collection staff, study website, locating and contacting, interviewing, data collection experiments, and data collection systems.

#### 2.2.1.1 Student Instrument Development

The field test interview was developed as a web-based instrument to be accessed by respondents through self-administration, by computer-assisted telephone interviewing (CATI), or by computer-assisted personal interviewing (CAPI). The interview questions and instrument design were planned to be flexible for, yet consistent among, respondents completing the interview in any of the three modes of administration. Following is a description of the interview content, mixed-mode instrument design, and instrumentation features for the B&B:08/09 field test student interview.

**Interview content.** The content of the interview was based on previous B&B student interviews created for the B&B:93 cohort, as well as on input from members of the B&B Technical Review Panel (TRP), who met on September 25, 2007, in Arlington, VA. (See appendix A for a list of TRP members and appendix B for a list of the final set of data elements.) The field test interview was designed to address current policy issues and topics relevant to researchers and consisted of seven sections grouped by topic (figure 2).

**Figure 2. Interview sections and primary topics: 2008**

<p><b>Eligibility</b></p> <ul style="list-style-type: none"> <li>• Completed bachelor's requirements between July 1, 2006 and June 30, 2007</li> <li>• Awarded bachelor's degree from NPSAS school by June 30, 2008</li> </ul>
<p><b>Undergraduate Education</b></p> <ul style="list-style-type: none"> <li>• Undergraduate schools/degrees</li> <li>• NPSAS school major/enrollment intensity/academic experiences</li> <li>• Reasons for multiple enrollments/stopouts</li> <li>• Financial aid</li> <li>• Satisfaction with undergraduate education</li> </ul>
<p><b>Postbachelor's Education/Training</b></p> <ul style="list-style-type: none"> <li>• Postbachelor's schools</li> <li>• Type of enrollment</li> <li>• Field(s) of study</li> <li>• Reasons for attendance</li> <li>• Plans for future enrollment</li> </ul>
<p><b>Postbachelor's Employment</b></p> <ul style="list-style-type: none"> <li>• Employment status</li> <li>• Occupation title/duties</li> <li>• Job relationship to undergrad education</li> <li>• Employer type, industry, benefits</li> <li>• Job search activities</li> </ul>
<p><b>K-12 Teaching</b></p> <ul style="list-style-type: none"> <li>• Teaching preparation/interest</li> <li>• Teacher/content area certifications</li> <li>• Teaching positions</li> <li>• School names</li> <li>• Grades and subjects taught</li> <li>• First-year teaching experiences</li> <li>• Plans for staying in teaching</li> <li>• Teacher loan forgiveness programs</li> </ul>
<p><b>Student Background</b></p> <ul style="list-style-type: none"> <li>• Citizenship/military/marital status</li> <li>• Household composition</li> <li>• Income/monthly obligations</li> <li>• Civic participation</li> </ul>
<p><b>Locating</b></p> <ul style="list-style-type: none"> <li>• Contact information for follow-up study</li> </ul>

NOTE: NPSAS = National Postsecondary Student Aid Study.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

Respondents were guided through each section of the interview according to skip logic that took into account previously provided information. A detailed outline of each section follows.

- **Eligibility.** This section determined respondents' eligibility to continue on with the survey, based on their date of completion of bachelor's degree requirements at the NPSAS institution. The flow of questions allowed respondents to confirm that they had either completed degree requirements at the NPSAS school and been awarded the bachelor's degree between July 1, 2006 and June 30, 2007, or that they had completed degree requirements at the NPSAS institution between July 1, 2006 and June 30, 2007, and been awarded the bachelor's degree by June 30, 2008. In both cases, bachelor's degrees had to have been awarded by the NPSAS institution. Respondents who failed to meet these conditions were routed to a final interview question asking them to provide a reason why they thought they may have been listed as receiving a bachelor's degree at the NPSAS institution within the specified timeframe. These "ineligible" cases were later tracked and matched with any available transcript data to determine actual eligibility for the follow-up field test survey in 2011.
- **Undergraduate Education.** Those respondents whose eligibility was confirmed were next routed to the Undergraduate Education section which collected the names of all colleges, universities, or trade schools attended by respondents prior to receiving the bachelor's degree from the NPSAS institution. For each institution, respondents were asked to provide dates of attendance, enrollment intensity (full-time vs. part-time), any periods of and reasons for breaks of more than 4 months, and degrees or certificates earned. Respondents were then asked to report information on their experiences at their NPSAS institution, including additional undergraduate degrees or certificates earned there, dates of attendance, any periods of and reasons for stopping out, final and any original declared majors, and educational experiences, such as withdrawing from courses or receiving academic honors. Respondents who reported attending multiple undergraduate institutions were asked questions about transferring credits and reasons for multiple enrollments. The next set of questions focused on undergraduate financial aid, including receipt of Pell Grants, National Science and Mathematics to Retain Talent (SMART) Grants, and any loans and their repayment status. Finally, all respondents were asked whether they felt satisfied with their choice of major, NPSAS school, and the relative value of their undergraduate education.
- **Postbaccalaureate Education/Training.** This section of the interview gathered information on respondents' current or intended participation in education beyond the bachelor's degree. If respondents attended any schools *after* receiving their bachelor's degree from the NPSAS school, they were asked to provide school name(s), type of enrollment (degree or otherwise), field(s) of study, enrollment intensity, degree(s) earned, reasons for attendance, and any financial aid received. Respondents who had not enrolled in any schools since the bachelor's degree were asked about their intentions for future enrollment, including whether they had taken a graduate or professional school entrance exam, proposed fields of study, projected timeframe for enrollment, reason(s) for delayed entry, and expected enrollment intensity and financial assistance. Respondents who had not enrolled since the NPSAS school and did not intend to enroll in further study were asked the reason(s) for their decision not to pursue additional education.
- **Postbaccalaureate Employment.** After providing all postsecondary education experiences, respondents were routed to the Postbaccalaureate Employment section of the interview. Respondents were asked whether they were currently working for pay.

Those not working for pay were asked about possible extenuating circumstances (e.g., volunteering, disabled, etc.), if they were seeking employment, and whether they had ever been employed since graduating with their bachelor's degree. Respondents who were employed were asked a series of questions about their occupation, including job title and duties, earnings, hours per week worked, activities used to find the current job, level of responsibility and autonomy at work, relationship of job to undergraduate major and bachelor's degree, flexibility and telecommuting opportunities, job internship or other training requirements, and level of satisfaction with the job. Respondents were also asked questions about their employer, including employer type (e.g., nonprofit, government, etc.), company size, industry, and employer-offered benefits. Employed respondents were also asked questions regarding any job search they had done since graduating with the bachelor's degree.

- **K-12 Teaching.** This section focused on respondents who taught in elementary and secondary schools. Respondents who had not reported being K-12 teachers in the employment section and who responded to early screening questions in the teaching section by saying they had no preparation for or interest in K-12 teaching were routed to the next interview section. Respondents with teaching preparation or interest but who were not currently teaching were asked to discuss any applications for teaching jobs or reasons why they had not applied to be teachers. The bulk of the section included questions for current K-12 teachers only, including teacher certification type and name, content area certifications, teaching positions held and number and name(s) of primary and secondary schools worked in since graduation with the bachelor's degree from the NPSAS school, grades and subjects taught, perception of level of preparation for teaching, first-year experiences as a K-12 teacher, earnings, hours per week worked, level of satisfaction with job, plans for staying in teaching and for moving into other education-related positions, and questions about teacher loan forgiveness programs.
- **Student Background.** In this section, respondents were asked to provide primarily demographic information, such as their citizenship; military, marital, and disability statuses; and number and age of any dependents, as well as household composition. A set of financial items prompted respondents for their incomes and outgoing monthly payments, including mortgage, car, and student loans. Finally, respondents were asked about civic participation behaviors through questions about voting and volunteering.
- **Locating.** The final section of the interview collected contact information from respondents so they may be reached for the follow-up B&B field test interview in 3 years' time (2011). On completion of this section, respondents were asked to complete a short interview debriefing that included items about the ease of completing the survey. The complete field test instrument facsimile can be found in appendix C.

**Mixed-mode instrument design.** Although the use of mixed-mode data collection provides many benefits, it also introduces certain issues that must be considered to minimize mode effects. The goal in developing a mixed-mode web-based instrument is to replicate the features that an interviewer would provide even when the interview is completed in the self-administered mode. The Web instrument was designed to account for the mixed-mode presentation, to ensure that high-quality data were obtained, and to make the interview process as efficient as possible. Key features of the mixed-mode design included the following:

- ensuring that question wording worked in both aural and visual presentations;

- creating on-screen instructions visible only to CATI or CAPI interviewers for proper and consistent oral administration of the various types of questions (e.g., whether the response options must be read aloud; when to probe, etc.);
- including help text to define key terms and clarify question intent;
- adding pop-up warning boxes to the instrument when out-of-range values were provided by the respondent;
- providing conversion text to encourage responses to critical items when left unanswered; and
- adding prompts if a respondent refused to answer (i.e., left blank) three consecutive screens. The prompting box reiterated the importance of the study and the need for completeness of data and requested that the respondent return to and answer the questions left blank.

**Instrumentation features.** Many features in the web-based instrument were created to make the interview effective and efficient for respondents, regardless of mode of administration. Most notably, skip logic, data coders, help text, range checks, and extensive testing of these features were implemented to streamline the interview and standardize the data collected.

Efficient skip logic (e.g., the routing of respondents past questions inapplicable to them) for this large, complex instrument was crucial. Sending respondents from one screen to another can add considerable transit time to web-based instruments, which increases both the burden on the respondent and the data collection costs incurred by interviewers as they wait for screens to load.

The field test student interview made use of coding systems to standardize the collection of particular data: postsecondary institutions attended, major or field of study, occupation, employer industry, and any primary or secondary schools where the respondent had taught. For the postsecondary institution coding system, a database was constructed with the set of institutions in the 2004–05 IPEDS, developed by NCES (<http://nces.ed.gov/ipeds/>). Respondents entered the institution’s city, state, and name into a text box. Once the information was submitted, the coder searched the database and returned a list of possible matches. The respondent then selected the correct institution. If the respondent found no matching institution, the entered text string was retained, but the respondent was asked to supply the level and control of the institution.

A coder (the “El/Sec” coder) that operated exactly as the one used to code postsecondary institutions was used to code any elementary or secondary schools where respondents had taught. The NCES data sources used for schools in the El/Sec coder were the Private School Universe Survey for private schools (<http://nces.ed.gov/surveys/pss/>) and the Common Core of Data for public schools (<http://nces.ed.gov/ccd/>). For schools not identified within the El/Sec coder, the entered text string was retained, and respondents were asked to supply the school type (public, private, etc.); the names of the school’s district, county, or both; and the lowest and highest grade levels that were taught at the school.

Like the El/Sec coding system, the major/field-of-study coding system used a database constructed from the 2000 Classification of Instructional Programs taxonomy developed by NCES (<http://nces.ed.gov/pubs2002/cip2000>). The respondent entered his or her major or field of study into a text box. The coder then conducted a database search according to the keywords entered and provided a list of possible matches. The respondent then selected the correct major or field of study. If no areas matched, the respondent manually coded the major by using two dropdown boxes,

selecting a general major category from the first dropdown box and then a specific major category from the second one.

Similarly, the occupation coder used text strings entered for job title and job duties to return a possible match for occupation. The database used in the occupation coder was derived from the U.S. Department of Labor's Occupational Information Network (O\*NET) database of U.S. occupations and their characteristics (<http://online.onetcenter.org>). Whenever respondents were unsatisfied with the occupations returned, they were able to code their majors manually by using three dropdown boxes. Respondents selected the general area for their occupation from the first dropdown box, the specific area from a second dropdown box, and, when applicable, the detailed occupation classification from a third dropdown box.

A fifth coder obtained information from each respondent about his or her employer's industry, but the format of this coder differed from the others. On an initial screen, the respondent was asked to enter a text string giving his or her employer's industry. A follow-up form displayed the previously entered text string at the top and asked the respondent to choose from a list of radio-button industry categories that most closely matched the industry entered on the previous screen. "None Listed" was one option. The industry classifications were based on the North American Industry Classification System (<http://www.census.gov/epcd/www/naics>).

In addition to effective skip logic and these five coders, help text aided in the standardization of the data collected. Every web screen (i.e., form) in the student instrument included access to help text, which provided the respondent further details about the interview questions and often definitions of unfamiliar terms in questions or response options. Also included was a link for basic B&B:08/09 student interview help, which explained how to use the various question formats (e.g., radio button, text boxes). Respondents could access help text by clicking on the "Help" link in the lower right-hand corner of each screen. Pop-up messages were used to clarify any inconsistent or out-of-range values the respondents entered.

Once the instrument was developed and programmed, rigorous testing was conducted. Project staff and NCES staff used mock scenarios to test the skip logic, question wording, screen layout, and overall efficiency of the instrument. To identify any potential problems, this testing was done from a variety of locations, using a range of connection options, and at various times of day. The entire instrument development process was facilitated by the use of RTI's Hatteras system, which is described in detail in section 2.2.1.7. The use of Hatteras allowed project staff to coordinate testing efforts with NCES.

### **2.2.1.2 Training of Interview Data Collection Staff**

The mixed-mode design of B&B study data collection required the development of training programs for help desk agents, telephone interviewing staff, and field interviewing staff. Separate training sessions were held for each of these groups.

Training programs included a review of confidentiality requirements; coverage of administrative procedures for case management; quality control of interactions with sample members, parents, and other contacts; the specific purposes of B&B:08/09 and the uses of the data; and in-depth review and hands-on practice with the organization and operation of the Web-based student instrument. Additional training topics were covered as a result of questions initiated during Quality Circle meetings conducted with interviewers and project staff throughout the duration of data collection. (See appendix D for a copy of the telephone interviewer training agenda, the field interviewer training agenda, and the training manual's table of contents.)

**Telephone interviewers.** The primary functions of the telephone interviewers were to gain cooperation from and conduct interviews with respondents by using techniques to avoid refusals and to address the concerns of reluctant sample members. All of the telephone interviewers trained for the B&B:08/09 field test had worked on the NPSAS:08 full-scale study (which was being conducted at the same time as the B&B field test interview). As part of NPSAS, the telephone interviewers received 8 hours of general training, followed by 12 hours of project-specific training. The B&B training incorporated 4 additional hours of project-specific training on the follow-up interview. Training materials included a training guide, an interviewing manual, and a list of frequently asked questions (FAQs). Interviewer training sessions consisted of lectures, demonstrations, and hands-on practice with the student instrument and coders. Additionally, interviewers were trained to understand and use the Case Management System (CMS) and were given opportunities to practice in CATI mode.

**Help desk agents.** Help desk agents were made available to assist sample members with any problems encountered while completing the self-administered interview and to document thoroughly all calls to the help desk. Help desk agents were also available to complete telephone interviews during the early response period with any respondent who preferred to complete the interview over the telephone. During the early response period, help desk agents made prompting calls to remind sample members about the study, and placed outbound calls once telephone interviewing began. Help desk training, appended to B&B project training, included further instruction on FAQs regarding the instrument, technical issues related to completion of the instrument via the Web, and solutions to common problems. Additionally, help desk agents received specialized training in the project-specific help desk application designed to log reasons for calls to the Help desk and their resolutions.

**Tracing staff.** The primary function of the tracing staff was to use intensive measures to locate sample members once all available contact information was determined to be obsolete. Four staff members were trained to conduct intensive tracing activities. The tracers received additional background on the study, characteristics of the sample population, and additional training on frequently asked questions so that they would be very knowledgeable about the study and thus could answer questions from sample members and contacts.

**CAPI field interviewer training.** The field test trained field interviewers to conduct interviews with respondents either in person or by telephone. A training session for field interviewers was held over 3 days in Research Triangle Park, NC. Six interviewers, hired to cover six geographic areas where larger clusters of respondents lived, attended the training. Interviewers received extensive training on the B&B instrument, with several opportunities for practice in administering the interview. In addition, training topics included the background of the study, active listening techniques, confidentiality procedures, field tracing techniques, case management using the Case Assignment Folders (CAF) and CMS, and proper use and care of the laptops assigned to them.

### 2.2.1.3 Study Website

A study website, developed for use by the field test sample members, provided general information about the B&B set of studies, including descriptions of interview content, uses of the data, and selected findings from earlier studies. In addition, sample members could learn about confidentiality assurances and the study sponsor and contractor, obtain contact information for the study help desk and project staff at RTI, and access links to the NCES and RTI websites. Sample members were also able to log in to the secure portion of the website to update personal contact information and complete the online survey once it was available.

The B&B website was designed according to NCEES web polices, using a three-tier security approach to protect all data collected. At the first tier, sample members could log in to the secure areas of the website using a unique study ID and password provided to them prior to the start of data collection. As a security measure, sample members were provided with strong passwords that were a minimum of eight characters and contained at least one uppercase letter, one lowercase letter, one number, and one special character. At the second tier, data entered on the website were protected with Secure Sockets Layer (SSL) technology, which allowed only encrypted data to be transmitted over the Internet. At the third tier, collected data were stored in a secured Structured Query Language (SQL) server database located on a server machine that was physically separate from the Web server. Figure 3 shows the home page for the field test website.

**Figure 3. B&B:08/09 field test website home page: 2008**

**BB** BACCALAUREATE AND BEYOND  
LONGITUDINAL STUDY

ies NATIONAL CENTER FOR EDUCATION STATISTICS  
U.S. DEPARTMENT OF EDUCATION

Sponsored By: National Center for Education Statistics, U.S. Department of Education

[Home](#)  
[About B&B](#)  
[FAQs](#)  
[Confidentiality](#)  
[Contact Us](#)  
[Login to the Interview](#)

## Home / Login

OMB Clearance No.: 1850-0729  
Expiration Date: 02/28/2011  
[Burden Statement](#)

Welcome to the Baccalaureate and Beyond Longitudinal Study Website!

The Baccalaureate and Beyond Longitudinal Study (B&B) surveys approximately 1,800 bachelor's degree recipients from 140 U.S. colleges and universities to better understand the experience of graduates one year after earning a bachelor's degree. The survey collects information about respondents' experiences in the workforce; experiences in and plans for graduate school; earnings and expenses; family status; participation in civic activities and personal and professional goals. Data collected from B&B will help educators, researchers and policymakers at the local, state and national levels better understand the experiences of recent college graduates and what can be done to help them.

**The 2008 Data collection for B&B has ended.**

You can obtain additional information about the B&B study by using the links at the left-hand side of this page. If you need additional assistance, send an e-mail to [bbemail@rti.org](mailto:bbemail@rti.org) or call the Help Desk toll-free at 1-877-262-4440.



National Center for Education Statistics, Institute of Education Sciences  
U.S. Department of Education  
1990 K Street, NW, Washington, DC 20006 USA

**BB**

SOURCE: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Study 2008/09 (B&B:08/09) Field Test.

#### 2.2.1.4 Locating and Contacting

Before sample members could be contacted to complete the field test interview, up-to-date contact information needed to be collected. Four separate methods of locating sample members were used for this study. The process by which sample members were located began with batch

searches of national databases. Prior to the start of data collection, address update mailings were sent to sample members and their parents. The final two stages of locating sample members for the B&B study involved CATI locating and intensive tracing. These methods are described in detail below, and data collection materials are attached in appendix E.

**Batch searches.** The first step in locating field test sample members was to conduct tracing activities. Before mailout activities began, batch searches using ED's Central Processing System (CPS) and the National Change of Address (NCOA) database were conducted to obtain updates on contact information and, immediately prior to the start of data collection, all address information for sample members was sent to Telematch to obtain new telephone numbers or to update existing numbers.

**Mailings.** In May 2008, approximately 2 months before data collection, an informational packet was sent to the parents of sample members under age 30 to describe the study and request parents' assistance in locating sample members. The packet included a study brochure and a letter introducing the B&B:08/09 study. RTI's experience in conducting surveys with postsecondary students, especially longitudinal studies, has shown that contact with the parents of sample members is beneficial for locating them and encouraging their participation.

In June 2008, a mailing was sent to students at the best known address; the mailing included a letter announcing the upcoming data collection, a study brochure, an address update sheet, and a business reply envelope. The study website address was provided so that sample members could update their address directly, if desired.

Immediately prior to the start of data collection on July 10, 2008, a letter announcing the availability of the self-administered web-based interview was sent to each sample member. The letter provided a unique study ID and password and informed sample members that, by completing the interview within 4 weeks of the initial mailing, they would receive an incentive. The letter was enclosed in either a 9" x 12" envelope or a Priority Mail envelope. The envelope type was part of a data collection experiment (see section 2.2.16 for a detailed description of the data collection experiments). At the same time as the letter mailing, a comparable mailing was sent via e-mail to those sample members for whom a working e-mail address was available. A postcard reminder, not containing personal identifying information, was sent approximately 10 days after the initial mailing. Additional e-mail prompts were sent to nonrespondents throughout the course of data collection to encourage their participation.

**Locating during interviewing.** Once telephone interviewing began, telephone interviewers conducted limited tracing and locating activities, as needed. These activities included calling all telephone numbers and contacts for a sample member or speaking with persons answering the telephone to determine how to contact the sample member. When a sample member could not be located at a known telephone number, cases were sent to FastData location services for additional information. Cases that could not be located using any of the existing address information were identified for intensive tracing by RTI's Tracing Operations Unit (TOPS), housed within Call Center Services (CCS). Cases that failed to be located during intensive tracing were either sent to the field for locating and interviewing or returned to TOPS for additional intensive tracing.

**Intensive tracing.** The most difficult locating cases were traced by TOPS using a number of online sources. For those cases with a Social Security number (SSN), the credit bureau services Experian and TransUnion were searched. Any new information obtained was processed immediately, and the case was then returned to production interviewing. Remaining cases underwent a more intensive level of tracing, which included calls to directory assistance, alumni offices, and

contacts with neighbors or landlords. Each case was handled individually, based on the extent of information already available, the age of the locating data, and the presence of an SSN.

**Field tracing.** During the field test, 110 cases were sent to field interviewers for tracing and interviewing. Field interviewers received all address information available for an assigned case, the results of any tracing conducted to date, and the results of efforts made by telephone interviewers to reach the sample member. Field interviewers used all tracing resources available to them, including many local resources not available outside the geographic area, contacts with USPS, and searches of public records. Additionally, field interviewers called from their own telephones, which had familiar area codes, in an effort to increase the chance that the sample members would respond to the telephone calls.

### 2.2.1.5 Interviewing

The data collection design for the field test interview consisted of the following three phases:

1. The first, the *early response phase*, allowed sample members to complete the student interview over the Web. This phase lasted approximately 4 weeks (July 10–August 6, 2008) from the time that sample members were informed that data collection had begun. Sample members who completed the interview during this phase were offered a \$35 incentive as part of a data collection experiment. (For more details on this experiment, see section 2.2.1.6.) Base-year nonrespondents were eligible to receive prompting calls during the early response phase in an effort to increase response rates. The purpose of the prompting call was to remind sample members that they had been selected to participate in the B&B study and to encourage them to log in to the study website to complete the self-administered interview.
2. The second phase of data collection was the *production phase*. During this phase, interviewers called sample members to complete the interview over the telephone. An incentive was offered to some sample members who completed during this phase. (For more details on this experiment, see section 2.2.1.6.)
3. The final phase of data collection was the *nonresponse conversion phase*. Once sample members were classified as a refusal or as hard to reach (i.e., they were called at least eight times with minimal or no contact or were not locatable in TOPS), they became eligible for a nonresponse conversion incentive. Sample members who completed the interview during this phase were offered an incentive of \$35.

Sample members could complete an interview on the Web or over the telephone. A description of the different interview modes is provided below.

**Self-administered web-based interview.** The self-administered web-based interview was introduced to sample members in the lead letter packet, and remained available from the first day of data collection (July 10, 2008), giving sample members the option to complete interviews online at any time. During the early response period, only self-administered interviews were completed unless sample members called the help desk to complete the telephone interview.

**Help desk operations.** The B&B:08/09 help desk opened on the first day of data collection with staff available to assist sample members who had questions or problems accessing and completing the self-administered interview. A toll-free telephone line was set up to accept incoming help desk calls. If technical difficulties prevented sample members from completing the self-

administered interview, help desk agents, who were also trained to conduct telephone interviews, would encourage sample members to complete a telephone interview.

An application designed for the help desk documented all calls from sample members and provided the following:

- information needed to verify a sample member's identity;
- login information allowing a sample member to access the Web interview;
- systematic documentation of each call; and
- a method for tracking calls that could not be resolved immediately.

The help desk application also provided project staff with reports on the types and frequencies of problems experienced by sample members and a means to monitor the resolution status of all help desk inquiries.

**Computer-assisted telephone interviewing (CATI).** Locating and production interviewing began after the 4-week early response period expired on August 7, 2008. CATI procedures included attempts to locate, gain cooperation from, and interview sample members who had not already completed the online interview. On reaching sample members, the interviewer encouraged them to complete the interview by telephone; however, the interviewer did inform reluctant sample members that they could still complete the interview online if that was their preference.

The CMS included an automated call scheduler that assigned cases to interviewers by case priority and time of day. Case assignment was designed to maximize the likelihood of contacting and interviewing sample members according to when the sample member was likely to be available. For each case, a call roster prioritized sample member names and telephone numbers for the interviewers. New roster lines were added as needed based on the results of CATI tracing and intensive tracing efforts.

**Computer-assisted personal interviewing (CAPI).** Difficult cases of sample members who had not yet completed an online or telephone interview and were near predetermined geographic clusters were sent to the field near the end of data collection. CAPI, or field interviewing, began October 4, 2008 (CATI interviewing continued for cases not assigned to the field through the CAPI phase). Local field interviewers were assigned to one of six geographic clusters in five states, based on the last known address for the sample member. Cases assigned to the field could also be accessed by help desk staff in the event that a sample member called for assistance with the Web interview or to complete the interview by telephone. Like the CATI interview, the CAPI interview presented interviewer instructions at the top of each screen, and CAPI interviewers adhered to the same interviewing conventions as CATI interviewers.

### 2.2.1.6 Experiments

Three B&B:08/09 field test experiments were designed to evaluate the effectiveness of data collection strategies in increasing response rates. Figure 4 illustrates the three experiments by the three phases of interview completion. The first experiment evaluated the effectiveness of varying types of prepaid incentives. The second evaluated the impact of the type of envelope used to mail the initial study materials. The sample was randomly assigned prior to data collection to each of the conditions, and response rates at the end of data collection were compared. Results of the three experiments can be found in section 3.3.

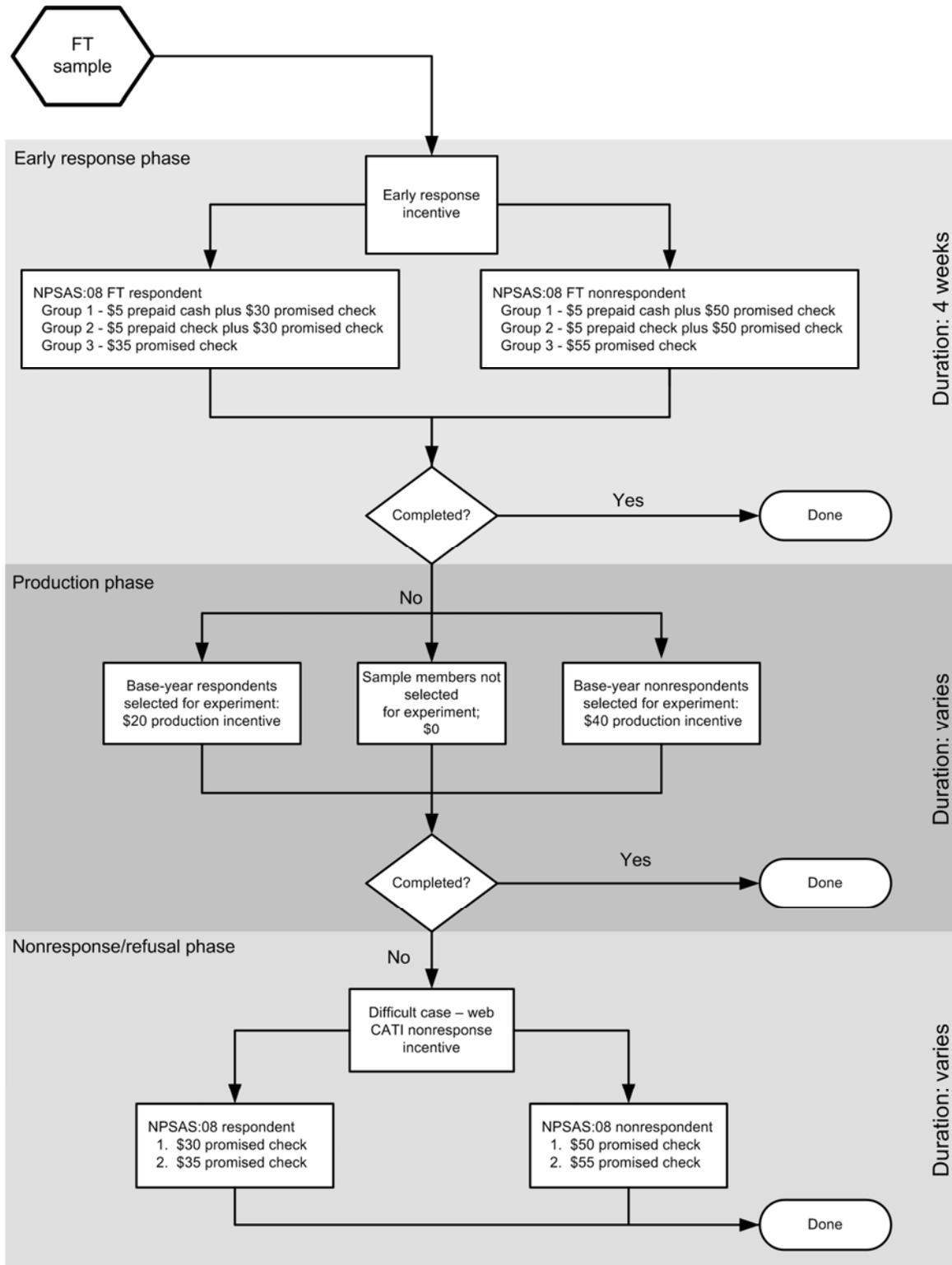
- **Prepaid incentives.** The first experiment involved a \$35 incentive for all interviews completed during the early response period. Sample members were randomly assigned to one of three groups. The first group received a \$5 initial cash incentive, with a promise to be paid \$30<sup>8</sup> on completion of the interview. The second group received a \$5 initial check incentive, with a promise to be paid \$30 on completion of the interview. The third group received no prepaid incentive but was offered \$35, to be paid on the completion of the interview.
- **Mailout materials.** The second experiment involved mailout methods. The sample was divided into two groups. Fifty percent of the sample received their initial mailing in a 9” x 12” envelope, and the remaining sample members received their initial mailing via Priority Mail.
- **Production phase incentive.** The third experiment involved offering a production phase incentive to one-half of the B&B sample. Half of the sample members in the base-year respondent group were selected to receive \$20 if they completed the interview during the production phase, while the other half would receive \$0 for completion during the production phase. For base-year nonrespondents, half were selected to receive \$40 if they completed the interview during the production phase, and the other half would receive \$0 for completion during the production phase.<sup>9</sup>

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<sup>8</sup> A \$20 differential was offered to base-year nonrespondents to encourage participation among this groups that typically has lower rates of participation than those who responded to the NPSAS:08 field test survey. The \$20 differential was not experimental – it was offered to all NPSAS:08 field test nonrespondents during all phases of interview completion.

<sup>9</sup> The \$40 offered to half of the base-year nonrespondent sample was a result of the \$20 differential offered during all phases of interview completion to base-year nonrespondents. The \$20 differential was not offered, however, to the half of the base-year nonrespondent sample selected not to receive an incentive during the production phase, the \$0 group.

Figure 4. Field test incentive experiments: 2008



NOTE: There were no experiments in the Nonresponse/refusal phase. CATI = computer assisted telephone interviewing. FT = field test. NPSAS = National Postsecondary Student Aid Study.  
 SOURCE: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Study 2008/09 (B&B:08/09) Field Test.

**Question response format experiment.** Because the field test instrument was administered in both a self-administered and interviewer-administered mode, item design and wording needed to be developed across modes to ensure comparability of the data. Questions with multiple response options could have been problematic because the experience of reading a list of possible options on the self-administered web interview was not the same as an interviewer reading the list over the telephone. Besides the well-documented issues of recency (interview respondents selecting what is heard last) and primacy (web respondents selecting what appears first in the list), there is also the potential response bias that can be caused by either hearing or reading possible responses to what would optimally be an open-ended question.

In the B&B:08/09 field test, five items were chosen to test the response formats. Three different format conditions were randomly assigned to respondents for each of the five items independently. Response distributions were then compared for completeness of responses, data quality, and time to administer. The first format, a radio button design, presented the question and a list of response options on the same screen and required a yes-or-no answer to each option. The second format, a check-all design, presented the question and the same list of response options that were presented to respondents in the radio button group, except that only those options that applied to the respondent required a response. An unchecked box was assumed to be the same as a “no” in the radio button format. The third format required two screens to administer. The first screen asked the same question of respondents but presented a text box for respondents to provide their open-ended responses. A button was provided to add boxes, as needed. On the second screen, respondents were presented with their original text string(s) and asked to find, from a dropdown list, the response option that best described their answer. The list of options was the same list presented in the radio button and check-all formats. The five questions used for the experiment are shown in table 6.

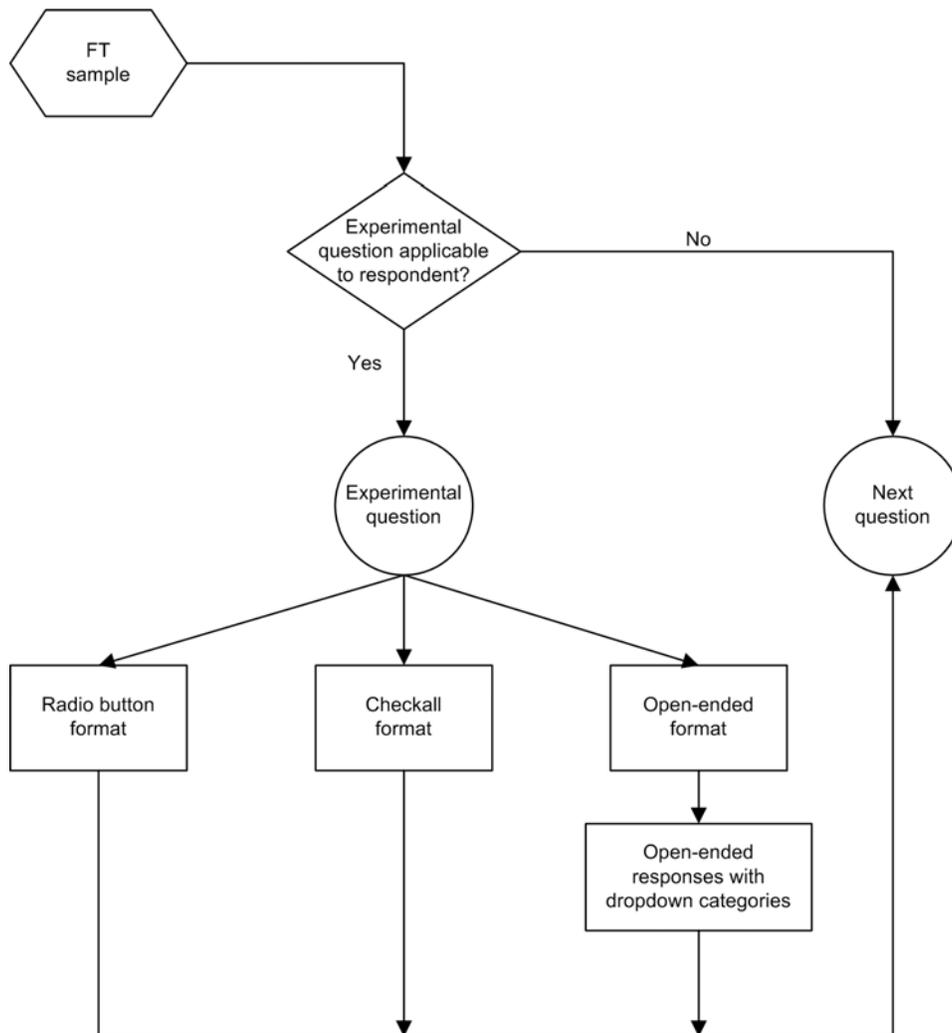
**Table 6. Question wording for items tested, by interview section: 2008**

Interview section	Question wording
Undergraduate Education	Why did you decide to enroll at more than one school at the same time?
Postbaccalaureate Education/Training	Why did you decide to postpone your continued education?
Postbaccalaureate Employment	What job search strategies are you currently using to look for a job?
K-12 Teaching	What are the reasons you did not apply for a teaching position?
Student Background	Why did you become involved in your community service or volunteer work?

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

Figure 5 presents the design of the field test question format experiment. Results comparing the response rates for each of the formats are described in chapter 5. Chapter 6 describes the instrumentation suggestions for the full-scale study, based on the results of the experiment.

Figure 5. Field test question format experiment: 2008



NOTE: FT= field test.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

### 2.2.1.7 Interview Data Collection Systems

The data collection systems used for the B&B:08/09 field test data collection included the Hatteras Survey Engine and Survey Editor (RTI's proprietary Web-based computer-assisted interviewing software), the Instrument Development and Documentation System (IDADS), and the Integrated Management System (IMS).

**Hatteras survey engine and survey editor.** The B&B survey instruments were developed with Hatteras, a web-based system in which project staff developed, reviewed, tested, modified, and communicated changes to specifications and code for the B&B:08/09 field test instrument. All information relating to the instrument was stored in a Structured Query Language (SQL) server database and was made accessible through web browser interfaces. Hatteras provided specification, programming, and testing interfaces for the B&B instrument as described below.

**Specifications.** Hatteras includes the tools and user interface needed for developing interview specifications. Specification content included wording at the form, question, item, and response-option levels; help text content; item-level data documentation; and form-level question administration documentation.

Specific capabilities of the Hatteras system allowed users to review skip logic and item documentation and to search a library of survey items. Users were able to take advantage of a comprehensive comment tracking system to communicate and test necessary instrument changes between testers and programmers. Hatteras also facilitated importing and exporting information associated with instrument development.

- **Programming code.** For simple instrument questions and items, Hatteras automatically translated specifications into web page scripts when the web page was accessed. For questions involving complex routing, varying question and response content, or unusual page layout or behavior, programmers entered custom programming code (hypertext transfer markup language [HTML], JavaScript, and C#.NET script) into the Hatteras custom code interface. Programming code was stored in the SQL server database along with the instrument specifications for compilation by the instrument execution instrument.
- **Instrument testing and execution.** The Hatteras system's survey execution engine allowed immediate testing of specifications and programming code as they were entered and updated, displaying instrument content as respondents would see it. The execution engine automatically handled such web instrument functions as backing up and moving forward, recording instrument timing data, and linking to context-specific help text.

**Instrument Development and Documentation Systems (IDADS).** The Web-based IDADS documentation module was used to generate the instrument facsimiles and the deliverable Electronic Codebook (ECB) input files. It contained the finalized version of all instrument items, their screen wording, and variable and value labels. Also included were the more technical descriptions of items, such as variable types (alpha or numeric), to whom the item was administered, and frequency distributions for response categories based on completed interview data.

**Integrated Management System (IMS).** All aspects of the study were monitored using the IMS, a comprehensive set of desktop tools designed to provide access to a centralized, easily accessible repository of project data and documents. The B&B:08/09 IMS consisted of several components: the management module, the Receipt Control System (RCS) module, and the instrumentation module.

- **Management module.** The management module of the IMS included tools to assist management of the field test data collection via the Web and protected by SSL encryption and a password-protected login. The IMS contained the current project schedule, monthly progress reports, daily data collection reports and status reports (generated by the RCS described below), project plans and specifications, project deliverables, instrument specifications, a link to the Hatteras system, staff contacts, the project bibliography, and a document archive. The IMS also included a download area from which files could be retrieved, as necessary.

- **Receipt Control System (RCS).** The RCS is an integrated set of systems that is used to monitor all activities related to data collection, including tracing and locating. Through the RCS, project staff were able to perform stage-specific activities, track case statuses, identify problems early, and implement solutions effectively. The RCS's locator data were used for a number of daily tasks related to sample maintenance such as producing mailings to sample members. The RCS also interacted with the Case Control System database, sending locator data between the two systems, as necessary.

## 2.2.2 Transcript Data Collection

This section describes the field test procedures for collecting and reviewing transcripts and related institutional materials from the NPSAS institutions of the B&B:08/09 field test sample, as well as for keying and coding the transcript data.

### 2.2.2.1 Transcript Collection and Website

Transcripts were collected from institutions where field test B&B sample members completed their bachelor's degree requirements during the 2006–07 academic year. For each student, a complete transcript was requested from the NPSAS institution. If the NPSAS institution had transcripts for any transfer schools attended prior to the NPSAS institution, the transfer transcripts were requested as well.

In late April 2008, a transcript request packet was sent to the director of the institutional research office at each institution.<sup>10</sup> The packet contained several documents (attached in appendix C), including the following:

- a letter from RTI providing an introduction to the B&B:08/09 study;
- an introductory letter from NCES on ED letterhead;
- a letter of endorsement from the American Association of Collegiate Registrars and Admission Officers (AACRAO);
- a list of other endorsing agencies;
- information regarding how to log on to the study's secure website to access the list of students for which transcripts were requested and obtain other relevant study information;
- descriptions of and instructions for the various methods of providing transcripts; and
- excerpts from the Family Educational Rights and Privacy Act (FERPA) that illustrate the 2009 Postsecondary Education Transcript Study (PETS:09) compliance with the legislation.

Follow-up calls by trained institutional contactors were placed 2 days after the initial mailing to ensure receipt of the packet and to answer any questions about the study. Prompting calls were made as well, and reminder e-mails were sent, as needed, from May through July of 2008.

<sup>10</sup>In the absence of an office of institutional research at a particular institution, packets were sent to the registrar's office for that institution.

Institutions had several options for submitting transcripts, including (1) an upload of transcript files to the secure study website; (2) transmission of transcript files by a secure file transfer protocol (FTP) server; (3) transmission of transcript files as encrypted attachments in e-mail; (4) transmission of transcript files via a dedicated server at the University of Texas at Austin; and (5) transmission of hard-copy transcripts via a secure fax at RTI. Each method is described below:

1. **File upload to the study website.** Institutions were asked to submit electronic transcript files, preferably in an extensible markup language (XML) or electronic data interchange (EDI) format that conforms to the Postsecondary Electronic Standards Council standard, directly to the secure study website using file specifications provided on the website. If the transcript data were not already in one of the two preferred formats, the institution was asked to convert the files before loading, although the file was accepted in whatever format was possible.

The latest technology systems were incorporated into the transcript website application to ensure strict adherence to NCES confidentiality guidelines. The Web server included an SSL Certificate and was configured to force encrypted data transmission over the Internet. Also, all of the data entry modules on the site were password protected, and the user was automatically logged out of the system after 20 minutes of inactivity. Files uploaded to the secure website were immediately moved to a secure project folder accessible only to a subset of project staff.

2. **Submission of electronic transcripts by secure FTP server.** Transcript files could be submitted to RTI using an FTP server, which ensures an encrypted control session. As with the file upload, it was preferable for files to be submitted using an XML or EDI format, but files could be submitted in virtually any format with a file layout. Files transmitted via the FTP server were copied to a secure project folder only accessible to specific staff members. After being copied, the files were immediately deleted from the FTP server.
3. **Submission of transcript files as encrypted attachments to e-mail.** Electronic transcript files could be submitted to RTI as an attachment that was e-mailed to the project e-mail account. RTI provided guidelines on encryption and creating strong passwords for the attachments prior to mailing. Encrypted transcript files were moved to a secure project folder and deleted from the e-mail folder immediately.
4. **Submission of transcripts via secure fax.** Faxed transcripts were accepted as a last resort. To safeguard against information being misdirected or intercepted by individuals to whom access was not intended or authorized, RTI protocol only allowed for transcripts to be faxed to a machine housed in a locked room. To ensure that the fax transmission was sent to the appropriate machine, a test fax between machines was performed with nonsensitive data. Because individually identifiable information was being transmitted, a specific fax transmittal sheet that included a confidentiality statement was made available to institutions via the project website. Paper transcripts were kept in a locked file cabinet in RTI's secure data receipt facility, to which only a limited number of B&B:08/09 transcript staff had access.
5. **Submission of transcript files through a dedicated server at the University of Texas at Austin.** An experimental method for collecting transcripts electronically used a dedicated server at the University of Texas at Austin that was developed to allow transcript exchange among institutions. The server supports both XML and EDI

formats. Only about 200 institutions nationally could send and receive academic transcripts in standardized electronic formats.

Course catalogs and institution-level data on the term and grading systems were needed to facilitate keying and coding of the transcript data. Before a request for catalogs was submitted to an institution, RTI first attempted to obtain the catalogs through online sources, including the institution's website. An institution was asked to provide catalogs only if they could not be obtained through other means. Institution-level data could be submitted using a data collection page on the study website but was obtained from the institution's NPSAS data and course catalogs, as required. Every attempt was made to minimize the burden of these requests on institutions.

### 2.2.2.2 Transcript Keying and Coding

Transcripts were keyed and coded using a web-based keying and coding system (KCS) modeled after the system developed for the postsecondary transcript collection conducted for the National Education Longitudinal Study of 1988 (NELS\_88) and the 1993/94 Baccalaureate and Beyond Longitudinal Study (B&B:93/94). The KCS was programmed in a .NET framework and included multiple pages for collecting institution-level, student-level, and course-level data. A list of the data elements keyed and coded in each section is included in appendix B.

A Transcript Control System (TCS) was used to track collection, data receipt, and keying and coding of each transcript as it arrived. The TCS was comprised of three subsystems: the Institution Contacting System (ICS), the Data Receipt System (DRS), and the KCS. Each subsystem contained reports for tracking the progress of that component of the study.

Because transcripts contained institution-specific majors and courses, separate coding systems were developed for inclusion in the KCS and used to code both majors and courses into a standard taxonomy. Majors were coded using a coding system developed from the NCES CIP, which categorizes fields of study into 1 of more than 2,000 categories (<http://nces.ed.gov/pubs2002/cip2000/>). The courses taken were coded into the PETS Course Code, which was developed by RTI by combining the CIP and the College Course Map (Adelman 1999).

Keyer-coders were required to have earned a bachelor's degree to ensure that they had firsthand knowledge of college courses, credits, and grade point averages. Keyer-coder staff were trained over a 5-day period. The training included lectures, practice with the KCS, and a certification exercise. Sample transcripts were provided so that keyer-coders could become familiar with different transcript formats and how to locate data.

On receipt at RTI, the course catalogs and transcripts were reviewed by data processing staff to identify missing, incomplete, or indecipherable transcripts. Institution contactors followed up with institutions to resolve issues. Project staff used daily monitoring reports to review transcript problems and identify approaches for problem resolution.

Keyer-coders were expected to reference transcript-related documents available for an institution, specifically, course catalogs and other information provided by the institution. Keyer-coders were assigned transcripts by institution so that familiarity with the institution's transcript format and catalogs could gain keying and coding efficiencies. The KCS was designed with validations for data type, length, and values ranges, and a percentage of the data keyed was subsequently keyed by another keyer-coder and compared. In addition, expert keyer-coders recoded all uncodable courses, all courses coded with "Other," and a 10 percent subsample of all other

courses. Meetings were held weekly to ensure consistent keying and coding across keyer-coders and to provide additional guidance.

### **2.2.3 Administrative Data Sources**

A portion of the data for the field test was obtained from two ED databases: the CPS and the National Student Loan Data System (NSLDS). These additional data sources were useful in several ways. First, they provided some information that could not be collected from institutions or students. Second, they enabled project staff to obtain certain data items that were usually obtained from institutional record abstraction or the student interview but were missing for individual sample members (e.g., demographics).

To reduce institutional burden, information related to student applications for federal financial aid was obtained from the CPS. As in NPSAS:08, RTI was assigned a special designation code by CPS that allowed access to Free Application for Federal Student Aid (FAFSA) data. Under this procedure, FAFSA data were requested through a standard Institutional Student Information Record (ISIR) Request process. The CPS was accessed twice throughout the data collection period to collect the requested data.

Student-level data on the nature and amount of Pell Grants and federal student loans received were obtained from the NSLDS database. NSLDS files also contained information for recipients of SMART Grants. The electronic data interchange with NSLDS was performed once during the data collection period to submit the most up-to-date data possible for matching. A successful match with the NSLDS database required that the student have a valid application record within the database. The accessed NSLDS Pell Grant, SMART Grant, and federal student loan files included both information for the year of interest and a complete federal grant or loan history for each student. The data transfer was secured through an NCES system that used the NCES member site and SSL technology.

# Chapter 3.

## Student Interview Data Collection Outcomes

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This chapter reports the data collection outcomes of the 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) field test. The response rates are reported first, including an overall summary of results, a discussion of interview response by mode of completion, and a discussion of locating and contacting results. The second section discusses the burden associated with conducting the field test interview, with a focus on interview completion times overall, by mode, and by respondent type. This section also discusses the total interviewer hours and the average number of calls made to sample members. The chapter concludes with a presentation of results from the field test experiments.

### 3.1 Student Interview Response Rates

This section presents overall results and response rates from the field test. Also discussed are response rates by key characteristics, such as interview completion mode and response status in previous rounds of the study, as well as locating and contacting results.

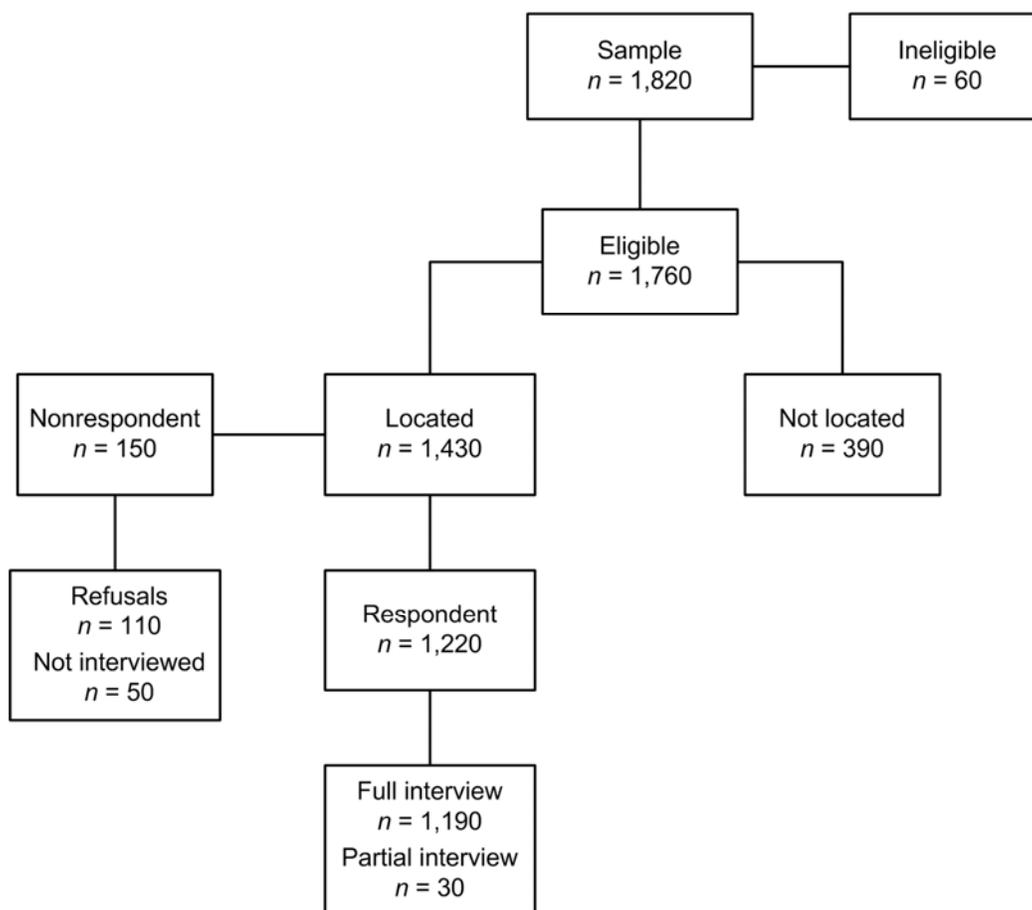
#### 3.1.1 Overall Summary of Interview Results

Figure 6 represents the overall eligibility, locating and response rates for the field test data collection. Of the 1,820 sample members, about 1,760 (97 percent) were confirmed eligible for the study,<sup>11</sup> and 1,430 (79 percent) were located.<sup>12</sup> The overall response rate among the eligible sample was 69 percent. However, among the located eligible sample members, nearly 90 percent (1,220 sample members) completed the survey. About 150 sample members were located but either refused to participate, or did not complete an interview before data collection attempts ended. Of the sample of 1,820, about 390 were not located for B&B:08/09. Of the 1,220 interviews, only 30 were partial (completed at least through Section B – Undergraduate Education) and the vast majority were full completes.

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<sup>11</sup> In the full-scale study, the eligibility status of interview nonrespondents will be modeled statistically. For the field test, eligibility is assumed for nonrespondents.

<sup>12</sup> Sample members were classified as located if the respondent had actually been contacted or status codes at the end of data collection indicated that good address or telephone information for the respondent had been obtained. Cases that were not successfully contacted were also considered located as long as the contact attempts did not cast doubt on the telephone or address information used, such as returned letters or disconnected phone numbers.

**Figure 6. Overall locating and interviewing results: 2008**

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09).

**Results by NPSAS:08 field test response status.** Locate and response rates for the field test by NPSAS:08 field test response status are shown in table 7. Approximately 87 percent of base-year respondents were located. Among located eligible base-year respondents, 93 percent completed the interview. Of base-year nonrespondents, 59 percent were located, and 75 percent of the located cases completed the interview.

**Table 7. Locate and response rate, by NPSAS:08 field test response status: 2008**

NPSAS:08 field test response status	Eligible sample	Located		Responding students		
		Number	Percent of total	Number	Percent of located	Percent of total
Total	1,760	1,370	78.0	1,220	88.8	69.3
NPSAS:08 field test respondent	1,200	1,050	87.0	970	92.9	80.9
NPSAS:08 field test nonrespondent	550	320	58.5	240	75.3	44.0

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008 National Postsecondary Student Aid Study (NPSAS:08) and 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09).

**Results by institution sector.** Locate and response rates for the field test varied by institution sector and are presented in table 8. Ninety percent of located eligible sample members who graduated from a public 4-year non-doctorate-granting institution and 89 percent of those who graduated from private not-for-profit 4-year non-doctorate-granting institutions during the base-year round completed the field test interview. Eighty-seven percent of located sample members from private not-for-profit 4-year doctorate-granting institutions and 63 percent of located sample members from private for-profit 2-year-or-more institutions during the base-year round completed the field test interview.

**Table 8. Locate and response rate, by institution type: 2008**

Type of institution	Eligible sample	Located		Responding students		
		Number	Percent of total	Number	Percent of located	Percent of total
Total	1,760	1,370	78.0	1,220	88.8	69.3
Public 4-year non-doctorate-granting	830	660	80.4	600	89.9	72.3
Private not-for-profit 4-year non-doctorate-granting	520	400	76.2	350	88.6	67.5
Private not-for-profit 4-year doctorate-granting	400	300	76.7	260	87.1	66.8
Private for-profit 2-year-or-more	20	10	50.0	10	62.5	31.3

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09).

**Results of field interviews.** A set of cases was purposefully selected for field interviewing to test procedures prior to full-scale implementation. In the B&B field test, field interviewers were hired in densely populated areas with high concentrations of sample members who had not yet responded or had been difficult to contact. Table 9 shows locate and response rates among the 140 cases selected for computer-assisted personal interviewing (CAPI), or field interviewing. Of the eligible cases selected, 56 percent were located, and 28 percent completed an interview with a field interviewer. However, not all interviews assigned to the field were conducted by the local field interviewers. In addition to the 28 percent of cases selected for field interviewing that completed the interview with a field interviewer, another 20 percent called the help desk and completed a telephone interview or did a self-administered interview. Overall, 48 percent of cases assigned to the field ultimately completed an interview either with a field interviewer, a telephone interviewer, or on the web.

CAPI response rates are provided by both NPSAS:08 field test response status and by institution type. Nearly sixty percent of base-year respondents completed an interview while 43 percent of base-year nonrespondents completed an interview. Based on the type of institution, response rates ranged from 53 percent for private not-for-profit 4-year non-doctorate-granting institutions to 9 percent for private for-profit 2-year-or-more institutions. Among located cases, however, the overall response rate was 85 percent, and response rates were above 85 percent except for all sectors except private for-profit 2-year-or-more institutions.

**Table 9. Locate and response rates for field cases, by NPSAS:08 field test response status and institution type: 2008**

NPSAS:08 field test response status and institution type	Cases selected for field	Located		Number Complete			Percent Complete			
		Number	Percent	Via CAPI	Via Web or CATI	All modes	Via CAPI	Via Web or CATI	All modes	Of located
Total	140	80	56.4	40	30	70	27.9	20.0	47.9	84.8
NPSAS:08 field test response status										
NPSAS:08 respondent	70	50	68.6	20	20	40	32.9	25.7	58.6	85.4
NPSAS:08 nonrespondent	70	30	44.3	20	10	30	22.9	14.3	42.9	83.9
Type of institution										
Public 4-year non-doctorate-granting	70	40	58.1	20	20	40	24.3	25.7	50.0	86.0
Private not-for-profit 4-year non-doctorate-granting	30	20	60.0	10	#	20	40.0	13.3	53.3	88.9
Private not-for-profit 4-year doctorate-granting	30	20	60.0	10	10	10	32.0	20.0	52.0	86.7
Private for-profit 2-year-or-more	10	#	27.3	#	#		9.1	#	9.1	33.3

# Rounds to zero.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008 National Postsecondary Student Aid Study (NPSAS:08) and 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09).

# Rounds to zero.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008 National Postsecondary Student Aid Study (NPSAS:08) and 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09).

**Interview completeness.** Table 10 presents the distribution of response rates by interview completion status and NPSAS:08 field test response status. Of the 970 field test respondents from the 2008 National Postsecondary Student Aid Study (NPSAS:08) who completed the B&B:08/09 field test interview, 98 percent completed the full B&B:08/09 field test interview. Of the 240 NPSAS:08 nonrespondents who completed the B&B:08/09 field test interview, 94 percent completed the full interview. Only 30 interviews were partially completed. Of the partial interviews, 20 were completed by base-year respondents, and 10 were completed by base-year nonrespondents.

**Table 10. Interview completeness, by NPSAS:08 field test response status: 2008**

B&B:08/09 FT response status	Total	NPSAS:08 respondents		NPSAS:08 nonrespondents	
		Number	Percent	Number	Percent
Total	1,220	970	100.0	240	100.0
Full interview	1,190	960	98.2	230	94.3
Partial interview	30	20	1.8	10	5.7

NOTE: Detail may not sum to totals because of rounding. FT = field test.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008 National Postsecondary Student Aid Study (NPSAS:08) and 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09).

### 3.1.2 Locating and Interviewing Outcomes

For the B&B:08/09 field test, tracing began in spring 2008 by updating address and other contact information collected during the NPSAS:08 field test interview. Several tracing resources were used, including the Central Processing System (CPS), which contains federal financial aid application information and databases from Telematch, Accurint, and the National Change of Address (NCOA) file. Table 11 shows the record match rate for each method of batch tracing employed. Match rates are based on the number of records either confirmed or updated with new information. The match rates for the B&B:08/09 field test ranged from 15 percent for CPS 2008–09 tracing to 32 percent for Telematch.

**Table 11. Batch processing record match rates, by tracing source: 2008**

Tracing source	Number of records sent	Number of records matched	Percent matched <sup>1,2</sup>
NCOA	1,820	450	25.0
CPS 2007–08	1,790	360	20.3
CPS 2008–09	1,800	260	14.6
Telematch	1,820	580	31.7
Accurint	210	20	8.1

<sup>1</sup> Match rate includes instances when sample member contact information was confirmed and when new information was provided.

<sup>2</sup> Percentage is based on the number of records sent for batch tracing within each row. Because records were sent to multiple tracing sources, record matches to multiple sources were possible.

NOTE: Detail may not sum to totals because of rounding. CPS = Central Processing System. NCOA = National Change of Address.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09).

**Address update results.** As part of the initial notification mailing to sample members and their parents, an address update form was included with each letter. Sample members also had the option to update locating information through the secure study website, which was indicated on the sample member letter. Table 12 presents the located and interview rates for those who returned some form of address update sheet. Of the sample members who provided updated address information, 97 percent were located, and 95 percent of those completed an interview.

**Table 12. Interview completion rates, by address update reply: 2008**

Type of address update	Provided update		Located		Interviewed	
	Number	Percent	Number	Percent <sup>1</sup>	Number	Percent <sup>2</sup>
Total	420	100.0	410	97.4	400	94.5
Parent mailing	130	29.8	120	96.8	120	92.8
Sample member mailing	100	23.2	100	97.9	90	95.9
Website reply	200	47.0	190	97.5	190	94.9

<sup>1</sup> Percentage is based on the number of cases providing address updates within the row under consideration.

<sup>2</sup> Percentage is based on the number of located cases within the row under consideration.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09).

**Intensive tracing results.** Locating and interview rates for cases sent to intensive tracing are shown in table 13. Of these cases, 31 percent were located, and 75 percent of those completed an interview.

**Table 13. Interview completion rates for cases sent to intensive tracing, by tracing status: 2008**

Intensive tracing status	Number	Percent
Sent to CCS	170	100.0
Located <sup>1</sup>	50	30.9
Interviewed <sup>2</sup>	40	74.5

<sup>1</sup> Percentage is based on the number of cases sent to CCS.

<sup>2</sup> Percentage is based on the number of cases located.

NOTE: Detail may not sum to totals because of rounding. CCS = RTI's Call Center Services.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09).

### 3.1.3 Interview Outcomes, by Mode

B&B:08/09 offered three options for interview administration during the data collection period, July 10 through October 24, 2008. The early response period, during which self-administered interviews, and telephone interviews conducted on request by Help Desk staff, occurred during the first 4 weeks of data collection. At the end of the 4 weeks, computer-assisted telephone interviewing (CATI) began, during which telephone interviewers made outbound calls to obtain completed interviews. Computer-assisted personal interviewing (CAPI) began near the end of data collection when remaining cases were most difficult to locate or reach by telephone.

Table 14 presents interview completions, by mode of administration. Self-administered interviewing was the preferred method of interviewing ( $\chi = 14.53, p < .0001$ ) with 73 percent of

completed interviews self-administered compared to 24 percent for CATI and 3 percent for CAPI.<sup>13</sup> About two-thirds of self-administered respondents (65 percent) completed the survey during the early response period.

**Table 14. Distribution of interview completions, by mode of administration: 2008**

Mode of administration	Interview completions	Percent
All respondents	1,220	100.0
Self-administered	890	72.9
Interviewer-administered	330	27.1
CATI	290	88.2
CAPI	40	11.8

NOTE: Detail may not sum to totals because of rounding. CAPI = computer-assisted personal interviewing.

CATI = computer-assisted telephone interviewing.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09).

## 3.2 Interview Burden

This section describes the time burden associated with responding to and conducting the field test interview. Interview completion times are discussed overall, by interview section, by mode of administration, and by particular respondent characteristics. Also presented are the number of hours worked by telephone interviewers and a summary of call counts.

### 3.2.1 Student Interview Completion Times

To ensure that the burden associated with completing the field test interview is kept to a minimum, interview timing is monitored closely. The amount of time it took respondents to complete the interview was examined, with special attention paid to different completion modes and interview paths. Field test timing will be considered in full-scale instrument development to remove or revise any unnecessary or time-consuming items.

To calculate the time needed to complete the field test student interview, the student instrument was developed with two time stamps embedded on each screen. The first, the start timer, recorded the clock time on the respondent's or interviewer's computer at the time the web page was displayed on the screen. The second time stamp, the end timer, recorded the clock time when the respondent or interviewer clicked the "Next" button to submit the answers from that page. From the two time stamp variables, an on-screen time and transit time were calculated. The on-screen time was calculated by subtracting the start time from the end time for each web page that the respondent received. The transit time was calculated by subtracting the end time of the preceding page from the start time of the current page.

The timing analysis includes cases that completed the field test interview in one session. Partially completed interviews and those completed in multiple sessions (e.g., those that broke off and later resumed) are excluded from the analysis.

<sup>13</sup> Field interviewing was used on a small set of sample members for the field test to test procedures for the full-scale study.

Table 15 presents the average interview time for each section, both overall and by interview mode. The average interview time was calculated by adding each respondent's total interview completion time and dividing it by the total number of respondents. The total interview time includes the Front End, Eligibility, Undergraduate Education, Postbaccalaureate Education/Training, Postbaccalaureate Employment, K-12 Teaching, and Student Background sections of the field test interview.

**Table 15. Average time to complete field test interview, by interview section and mode of administration: 2008**

Interview section	All respondents		Self-administered		Interviewer-administered	
	Number of cases	Average time (minutes)	Number of cases	Average time (minutes)	Number of cases	Average time (minutes)
Total interview	880	38.3	650	34.9	230	47.7
Front End	890	1.6	650	0.9	240	3.3
Eligibility	870	1.1	640	1.1	240	1.2
Undergraduate Education	860	9.9	630	9.3	230	11.5
Postbaccalaureate Education/Training	860	3.3	640	3.1	230	4.1
Postbaccalaureate Employment	860	9.0	630	8.3	220	10.8
K-12 Teaching	840	1.4	630	1.4	210	1.3
Student Background	860	5.2	630	4.9	220	6.1

NOTE: Interview times are presented only for completed interviews; partial interviews and multisession completions are excluded. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

On average, the B&B:08/09 field test instrument took 38 minutes to complete. Overall, self-administered interviews were significantly shorter (35 minutes) than interviewer-administered interviews (48 minutes [ $t = 13.59, p < .0001$ ]). The amount of time spent on-screen and in-transit was significantly different, depending on the mode. Self-administered interviews had a shorter average on-screen time than interviewer-administered interviews (29 minutes and 39 minutes, respectively [ $t = 12.6, p < .0001$ ]). Conversely, interviewer-administered interviews had a shorter average transit time than self-administered interviews (5.1 minutes and 5.5 minutes, respectively [ $t = 2.09, p = .0369$ ]).

The Eligibility section determined respondents' eligibility for inclusion in the B&B cohort, based on respondents' date of completion of a bachelor's degree from the NPSAS school. This section was administered to all respondents. The eligibility section took an average of 1 minute to complete.

The Undergraduate Education section collected information about all colleges, universities, or trade schools attended by the respondent *prior* to receiving a bachelor's degree from the NPSAS school, as well as information about the respondent's NPSAS school and any undergraduate financial aid information. Overall, the Undergraduate Education section took an average of 10 minutes to complete. However, the amount of time spent in this section varied, depending on how many schools the respondent reported attending. Table 16 presents the average interview times, by number of schools reported. For respondents who did not attend any schools other than the

NPSAS school, this section took about 7 minutes. Respondents who reported one additional school averaged about 11 minutes, and the average section time was 15 minutes for those who reported attending two or more additional schools ( $F = 310.2, p < .0001$ ).

**Table 16. Average time to complete field test interview, by number of schools reported in Undergraduate Education section: 2008**

Number of other schools reported in Undergraduate Education section	Number of respondents	Average time (minutes)
Total	860	9.9
Zero	410	6.8
One	310	11.4
Two or more	150	15.2

NOTE: Interview times are presented only for completed interviews; partial interviews and multisession completions are excluded. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

The Postbaccalaureate Education/Training section collected information about any colleges, universities, or trade schools the respondent attended in the year following receipt of a bachelor's degree from the NPSAS school. The Postbaccalaureate Education/Training section took an average of 3 minutes to complete. As shown in table 17, respondents with more schools had longer times in this section (3 minutes for zero schools, 5 minutes for one school, and 7 minutes for two or more schools [ $F = 312.4, p < .0001$ ]).

**Table 17. Average time to complete field test interview, by number of schools reported in Postbaccalaureate Education/Training section: 2008**

Number of other schools reported in Postbaccalaureate Education/Training section	Number of respondents	Average time (minutes)
Total	860	3.3
Zero	620	2.5
One	220	5.2
Two or more	30	6.6

NOTE: Interview times are presented only for completed interviews; partial interviews and multisession completions are excluded. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

The Postbaccalaureate Employment section focused on the job(s) held in the year after completing a bachelor's degree. This section collected information regarding current job duties, benefits and requirements, and periods of unemployment, if applicable. On average, the Postbaccalaureate Employment section took about 9 minutes to complete. Table 18 shows that respondents who were employed spent longer in the employment section (10 minutes) compared to those respondents who were not employed (3 minutes [ $t = 43.6, p < .0001$ ]).

**Table 18. Average time to complete field test interview, by employment status: 2008**

Employment status	Number of respondents	Average time (minutes)
Total	860	9.0
Not employed	130	2.7
Employed	730	10.1

NOTE: Interview times are presented only for completed interviews; partial interviews and multisession completions are excluded. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

The K-12 Teaching section collected information about the respondent's experiences with or interest in teaching kindergarten through the 12th grade. The K-12 Teaching section took an average of 1 minute to complete. Table 19 shows respondents who have never been a teacher and are not planning or preparing to become a teacher took an average of 30 seconds to complete the section. Respondents who are current or former teachers, and those who are either considering or preparing for teaching, took 4 minutes ( $t = 17.1, p < .0001$ ). The latter group was divided even further in table 20 between current teachers (7 minutes), former teachers (5 minutes), respondents preparing to become teachers (3 minutes), and respondents considering becoming teachers (2 minutes [ $F = 76.2, p < .0001$ ]).

**Table 19. Average time to complete field test interview, by teacher status: 2008**

Teacher status	Number of respondents	Average time (minutes)
Total	840	1.4
Not a teacher and not planning or preparing to teach	630	0.5
Currently, formerly, preparing to, or considering teaching	210	4.0

NOTE: Interview times are presented only for completed interviews; partial interviews and multisession completions are excluded. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

**Table 20. Average time to complete field test interview, by teacher status: 2008**

Teacher status	Number of respondents	Average time (minutes)
Total	210	4.0
Currently teaching	70	6.7
Formerly teaching	30	4.6
Preparing to teach	50	2.5
Considering teaching	60	1.7

NOTE: Interview times are presented only for completed interviews; partial interviews and multisession completions are excluded. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

The Background section collected demographic, financial, and some civic participation information about the respondent. It also contained items related to personal finance, number of dependents, parent education, disability status, citizenship status, and community service work. A majority of the items in this section applied to all respondents and certain subgroups of respondents based on age and student status. The Background section took an average of 5 minutes to complete.

Because the overall interview time was longer than desired, item-level timing, content, and wording were carefully reviewed to determine how to reduce the burden for the full-scale interview. Based on this review, recommendations were made to NCES and the Technical Review Panel (TRP) for revisions to the full-scale interview.

### 3.2.2 Telephone Interviewer Hours

The CATI component of data collection required considerable effort on the part of telephone interviewers and RTI Call Center Services (CCS) supervisory staff. Telephone interviewer hours for B&B:08/09 totaled about 1,370 hours, with an average of 6 hours spent per completed telephone interview, and an average of 0.9 hours per completed interview (across all modes).

Given the average telephone interview completion time of 48 minutes, the remaining time was spent in activities outside the actual interview, including prompting sample members to complete web interviews and responding to incoming calls. Much of this time was dedicated to locating and contacting each sample member. Multiple interview attempts were made with each sample member for whom contact information was available. When necessary, contacts with all available locating sources were attempted in an effort to interview a sample member. The balance of interviewer time was spent on case maintenance, such as opening a case and reviewing its call history, scheduling callbacks, providing comments, and updating cases' statuses.

### 3.2.3 Number of Calls and Call Screening

Table 21 presents the average number of telephone calls overall, by current and prior response status, by mode of administration, and by phase of data collection. Overall, an average of 11 calls was made per sample member. Significant differences in call counts were found between the response statuses for both the current and base-year studies. B&B:08/09 respondents were called, on average, 7 times, compared with an average of 20 calls to nonrespondents ( $t = 23.65$ ,  $p < .0001$ ). In the first follow-up interview, base-year respondents received 6 fewer calls than NPSAS:08 nonrespondents (9 and 15, respectively [ $t = 8.88$ ,  $p < .0001$ ]).

The number of calls placed to sample members also varied by the mode of administration. Cases that were assigned to the field required an average of 17 calls, compared with 8 calls for cases not assigned to the field ( $t = 11.43$ ,  $p < .0001$ ).

**Table 21. Call counts, by interview status and completion mode: 2008**

Interview status and completion mode	Number of cases	Number of calls	Average calls per case
Total sample members	1,820	20,050	11.0
By current-round response status			
B&B:08/09 respondent	1,220	7,920	6.5
B&B:08/09 nonrespondent	600	12,130	20.1
By prior-round response status			
NPSAS:08 respondent	1,220	11,240	9.2
NPSAS:08 nonrespondent	600	8,810	14.7
By administration mode			
Self-administration, with telephone follow-up	230	4,050	17.8
CATI	290	3,040	10.4
CAPI	40	840	21.4
By field assignment			
Assigned to field interviewing	140	2,185	17.0
Not assigned to field interviewing	1,680	11,869	7.5
By phase of data collection			
Production interviewing	150	570	3.9
Nonresponse conversion	330	6,390	19.3

NOTE: Detail may not sum to totals because of rounding. Call counts do not include experimental prompting calls.

CAPI = computer-assisted personal interviewing. CATI = computer-assisted telephone interviewing.

NPSAS = National Postsecondary Student Aid Survey.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

Call counts varied significantly by phase of data collection. Sample members who completed an interview during the production interviewing phase were called approximately 4 times, while those who were called during the nonresponse conversion phase were called an average of 19 times ( $t = -30.22, p < .0001$ ). As expected, sample members in the nonresponse conversion phase required more calls because they had not participated in the prior two phases. (During early data collection, help desk agents placed calls as needed to respond to sample member inquiries, such as password requests and technical assistance, and therefore have been removed from this comparison.)

As mentioned above, both B&B:08/09 nonrespondents and those sample members who completed an interview during the nonresponse conversion phase had high call counts. As in other survey studies, B&B sample members used various devices, such as answering machines, caller ID, call blocking, call filtering, and privacy managers to be selective about incoming calls. Outbound calls were made to about 1,070 cases (59 percent of the sample), and an answering machine was reached at least once for 90 percent of the cases called. B&B:08/09 respondents had an average of 11 answering machine events, compared with 15 for nonrespondents ( $t = 8.18, p < .0001$ ). Sample members who had at least one answering machine event received an average of 20 calls. On average,

sample members who did not have an answering machine event were called 7 times ( $t = -11.76, p < .0001$ ).

### 3.3 Results of Data Collection Experiments

Three experiments were conducted during the B&B:08/09 field test. These experiments assessed the following questions:

1. Would study materials sent via Priority Mail produce higher participation rates during the early response period than materials sent via regular mail?
2. Would a \$5 prepaid cash or check incentive (\$5 up front, followed by a promise of \$30 for NPSAS:08 interview respondents or \$50 for NPSAS:08 interview nonrespondents on interview completion) produce higher participation rates during the early response period than for those who were offered the promise of a \$35 or \$55 incentive on interview completion?
3. Would a \$20 production incentive (or \$40 for NPSAS:08 interview nonrespondents) produce higher participation rates during the production phase than no production incentive?

#### 3.3.1 Analysis of Priority Mail

To test the impact of the visibility of mailout materials on participation rates,<sup>14</sup> the field test sample was randomly assigned to two groups prior to the start of data collection: one group received the initial study materials via regular mail in a large envelope, and the other group received the same materials, also delivered in a large envelope, via Priority Mail.

Table 22 presents the results of the Priority Mail experiment. Overall, those who received the study materials via Priority Mail envelope had an early participation rate of 43 percent, compared with a participation rate of 41 percent for those who received their materials via regular mail. There was no statistically significant difference in the early participation rate between the two types of mailing materials.

**Table 22. Early participation rates, by type of mailing: 2008**

Type of initial mailing	Eligible sample	Participated	
		Number	Percent
All cases	1,820	760	41.6
Priority Mail	910	390	42.6
Regular Mail	910	370	40.8

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

<sup>14</sup> Participation—rather than response rates—was measured as the outcome. The participation rate includes those cases that initiated the interview but that were determined to be ineligible. Ineligible cases were not counted as completes and thus are not represented in the response rates. However, it was the response to different data collection strategies that is of primary interest for these analyses. There was little difference in the numbers that participated and that completed (e.g., there were very few ineligibles).

### 3.3.2 Analysis of Prepaid Incentives

The effectiveness of a prepaid incentive was also examined in the field test. Prior to the start of data collection, the field test sample was randomly assigned to one of three groups: one group received \$5 prepaid cash with the promise of a \$30 check, one group received a \$5 prepaid check with the promise of a \$30 check, and a third group received only the promise of a \$35 check. Sample members had to complete the interview during the early response period to receive their promised checks. In addition, all NPSAS:08 interview nonrespondents were offered an additional \$20 to complete the interview during the early response period. That is, if they were assigned to the \$5 prepaid cash or check incentive group, they were offered a \$50 check on interview completion. If they were assigned to the nonprepaid group and completed the interview within the early response period, they were offered a \$55 check on interview completion.

Table 23 presents the results of the prepaid incentive experiment. Overall, the \$5 cash group had a significantly higher participation rate (49 percent) during the early response period than did either the \$5 check group (37 percent [ $\chi = 3.54, p < .01$ ]) or the promised group (41 percent [ $\chi = 2.81, p < .01$ ]). For NPSAS:08 interview respondents, the participation rates were also significantly higher for the \$5 cash incentive (61 percent) than for the \$5 check incentive (47 percent [ $\chi = 3.30, p < .01$ ]) or the promised incentive (52 percent [ $\chi = 2.49, p < .01$ ]). Participation rates followed this same trend for NPSAS:08 interview nonrespondents, but the differences were not significant.

**Table 23. Early participation rates, by prepaid incentive status: 2008**

Incentive	Overall			NPSAS interview respondents			NPSAS interview nonrespondents		
	Eligible	Participated	Percent	Eligible	Participated	Percent	Eligible	Participated	Percent
\$5 cash	450	220	48.5	310	190	60.5	150	40	23.6
\$5 check	460	170	36.9	310	140	47.2	150	20	16.0
Promised	910	370	40.5	610	320	51.8	300	50	17.7

NOTE: Detail may not sum to totals because of rounding. NPSAS = National Postsecondary Student Aid Survey.  
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

Another result of interest is that the participation rate for those offered the \$5 prepaid check was actually lower than the participation rate for those not offered a prepaid incentive. Though the difference was not statistically significant, the result was not in the expected direction. This trend was observed for both NPSAS field test respondents and nonrespondents.

### 3.3.3 Analysis of Production Incentives

Prior results from other studies (e.g., the 2004/06 Beginning Postsecondary Students Longitudinal Study [BPS:04/06] field test) suggested that paying an incentive during the production interviewing phase of data collection does increase the likelihood that sample members will participate. The effect, however, was not robust. Consequently, the experiment was conducted again for the B&B:08/09 field test. Prior to data collection, the field test sample was randomly assigned to a production incentive group. As with the other incentives, base year nonrespondents were offered an additional \$20. NPSAS respondents were randomly assigned a \$20 production incentive or no incentive, while NPSAS nonrespondents were randomly assigned a \$40 production incentive or no incentive. Once the early response period ended, interviewers began contacting the remaining sample members to complete the interview over the telephone. Sample members were notified of

the production incentive, if one was assigned to them, by the interviewer or through an e-mail or letter.

Table 24 presents the results of the production incentive experiment. No significant differences were found between the \$0 and \$20 groups for NPSAS respondents or the \$0 and \$40 groups for NPSAS nonrespondents.

**Table 24. Interview participation rates, by production incentive status: 2008**

Type of production incentive	Eligible sample	Participated	
		Number	Percent
NPSAS interview respondents			
\$0	610	70	11.0
\$20	610	70	10.7
NPSAS interview nonrespondents			
\$0	300	20	7.1
\$40	300	20	7.4

NOTE: Detail may not sum to totals because of rounding. NPSAS = National Postsecondary Student Aid Survey.  
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

# Chapter 4.

## Transcript Data Collection Outcomes

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This chapter presents the results of the 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) field test transcript data collection and keying and coding. Results of the transcript collection will be presented, including transcript receipt from institutions, student-level transcript rates, transcript review and quality control procedures, and evaluations of keying and coding procedures.

### 4.1 Institution Response Rates

Of 140 institutions in the transcript sample, 99 percent were determined to be eligible (i.e., they were confirmed as awarding baccalaureate degrees during the 2008 National Postsecondary Student Aid Study [NPSAS:08] field test academic year). Of these eligible institutions, 120 (87 percent) provided transcripts for the sampled students. Seventy percent of the institutions provided the data within 2 weeks of the requested due date.

Table 25 illustrates institution participation by institution type. Across the four institution types represented in the B&B:08/09 field test sample, participation ranged from 83 percent to 100 percent. The field test participation rates were somewhat limited by the data collection time period, which was abbreviated to allow sufficient time to prepare for full-scale data collection. There was less time available in the field test than there will be in the full-scale study to allow for institutions to respond and the time needed for prompting and follow-up efforts. The most common reasons cited by institutions for not participating included lacking the available staff to fulfill the request and the timing of the transcript request.

**Table 25. Eligible institution participation, by institution type: 2008**

Institution type	Eligible institutions	Institution-level participation <sup>1</sup>	
		Number	Percent
Total	140	120	87.1
Public			
4-year non-doctorate-granting	50	50	88.9
Private not-for-profit			
4-year doctorate-granting	20	20	83.3
4-year non-doctorate-granting	70	60	86.6
Private for-profit			
2-year-or-more	#	#	100.0

# Rounds to zero.

<sup>1</sup> An institution was considered a participant if it provided a transcript for at least one student.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008 National Postsecondary Student Aid Study (NPSAS:08) and 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09).

Public 4-year doctorate-granting universities were not included in the NPSAS:08 field test because they were sampled for the full-scale NPSAS study; thus, none were included in the

B&B:08/09 field test. It is anticipated that, in the full-scale transcript collection, the electronic transmission methods will be used more frequently by public 4-year institutions due to larger sample sizes and greater programming capability and resources.

Table 26 presents the distribution of transmission methods selected by the institutions. Providing transcripts via secure fax was the choice of the majority of the institutions: approximately three-quarters of the institutions used the secure fax option. This was the most convenient option for most institutions that routinely generate and send out hard-copy transcripts. The next most common method was to upload transcripts via the institution website, accounting for about 12 percent of institutions. About 6 percent of institutions sent transcripts as encrypted attachments via e-mail. Federal Express and a secure file transfer protocol (FTP) server were used by less than 5 percent of institutions for each method.

**Table 26. Institution transmission mode for transcript data: 2008**

Transmission mode	Number of institutions	Percent of institutions
Total	120	100.0
Secure fax	90	73.8
NCES upload	20	12.3
E-mail	10	5.7
Federal Express	10	4.1
Secure FTP server	10	4.1

NOTE: Detail may not sum to totals because of rounding. FTP = file transfer protocol. NCES = National Center for Education Statistics.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008 National Postsecondary Student Aid Study (NPSAS:08) and 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09).

Transcripts were requested for each of the 1,820 sample members from the degree-granting institutions. Transcript data were received for 1,600 students (88 percent). Table 27 shows the transcript collection results and transcript eligibility at the student level. The transcript collection was scheduled for an abbreviated time period (3 months) to allow sufficient time to prepare for full-scale data collection. Thus student-level transcript response rates are expected to be higher in the full-scale study.

**Table 27. Student-level transcript collection results: 2008**

Student Sample	Number	Percent
Total	1,820	100.0
Transcript respondents	1,600	88.0
Transcript nonrespondents	220	12.0

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008 National Postsecondary Student Aid Study (NPSAS:08) and 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09).

## 4.2 Transcript Eligibility Rates

Once transcripts were received, they were reviewed for study eligibility to ensure that students had completed the requirements for the baccalaureate degree during the NPSAS:08 field test academic year (i.e., between July 1, 2006, and June 30, 2007). If eligibility could not be

determined from the transcripts, institutional contactors clarified eligibility with the institutions. Of the 1,600 students whose transcripts were collected, 210 (13 percent) were determined ineligible. The primary reason for student ineligibility was that the baccalaureate degree was not earned within the NPSAS:08 field test academic year. Other reasons for ineligibility included earning a degree other than a baccalaureate degree in the time frame or the student still being enrolled and not having yet earned a baccalaureate degree.

### 4.3 Transcript Keying and Coding Outcomes

Once transcripts had been collected and reviewed, 1,360 eligible students' transcripts were sent on to the next stage, keying and coding. Approximately 30 transcripts were not processed due to problems such as illegibility. The 1,360 transcripts were keyed and coded into a web-based keying and coding system (KCS). Keying involved entering student- and course-level information, including degree awarded, course-taking data, and test scores. The next step assigned majors and courses into the PETS coding system—a standardized code list that was developed from the 2000 Classification of Instructional Programs (CIP; <http://nces.ed.gov/pubs2002/cip2000/>) and Adelman's College Course Map (Adelman 1999).

Table 28 displays the results of course coding. Course coding resulted in coding of 60,030 courses (99 percent) to the code list developed for this effort. The remaining 810 courses on the transcripts could not be coded, primarily due to insufficient information (e.g., a transfer course on a transcript with a cryptic course name). Of the coded courses, 9,930 (17 percent) were coded using a “general” code, and 4,050 (7 percent) were coded using an “other” code in the code list. “General” codes were for courses that were undifferentiated, unspecified, generalized, and often introductory. “Other” codes were for courses that were specific and differentiated but did not conceptually belong with the codes available elsewhere in the series. The prevalence of “general” courses was expected because large numbers of students enroll in introductory- or general-level courses in a topic (e.g., freshman biology). Only 7 percent of the courses were coded as “other,” demonstrating that the great majority (93 percent) of courses were able to be coded in specialized codes corresponding to the course topic.

**Table 28. Course coding results: 2008**

Final coding status of transcript courses	Number	Percent
Total	60,840	100.0
Coded	60,030	98.7
6-digit category <sup>1</sup>	46,040	76.7
“General” code <sup>1</sup>	9,930	16.5
“Other” code <sup>1</sup>	4,050	6.8
Uncodable (illegible, not enough information)	810	1.3

<sup>1</sup> Percentage is based on total number of courses coded.

NOTE: Detail may not sum to totals because of rounding.

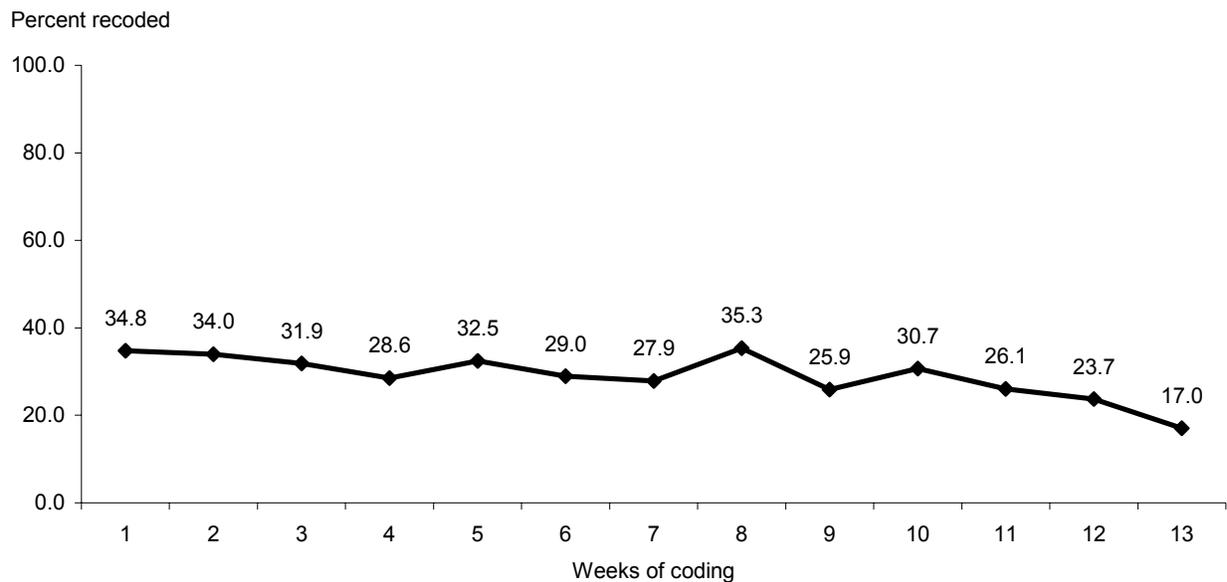
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008 National Postsecondary Student Aid Study (NPSAS:08) and 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09).

For 10 percent of the transcripts, the data that had been keyed were re-keyed by another keyer-coder. The results were then reviewed to ensure the accuracy of the keying efforts. Based on this review, supervisory staff provided feedback to the keyer-coders to improve the quality and

accuracy of the keying. Furthermore, expert coders reviewed a sample of the course coding and recoded courses, as needed. Feedback from this process was conveyed to the keyer-coders to ensure consistent coding across staff. Specifically, expert coders reviewed a random sample of 10 percent of the coded courses that were not coded using an “other” code. Additional review was conducted for all courses that could not be coded, courses coded using an “other” code, and courses marked by the keyer-coder as needing review. This resulted in the review of 17,010 courses overall and the recoding of 4,950 courses (29 percent).

Figure 7 presents the recode rates over time. The recode rate declined over the keying and coding period as feedback was provided to the keyer-coders and their performance subsequently improved. Noteworthy areas of coding improvement were seen in distinguishing the CIP area of engineering from engineering technologies/technicians and also distinguishing communication, journalism, related programs from communications technologies/technicians and support services. Coding of upper-level humanities courses also improved as keyer-coders gained experience coding courses with vague or whimsical terms in their course names or catalog descriptions.

**Figure 7. Course recode rates over time: 2008**



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008 National Postsecondary Student Aid Study (NPSAS:08) and 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09).

#### 4.4 Evaluation of Transcript Keying and Coding

The many quality procedures incorporated into the keying and coding process were invaluable. Assigning staff to key and code by institution reduced the amount of time required to key and code and also maximized the accuracy of keying and coding. Keyer-coders became familiar with the institution’s transcript format and catalogs and thus were able to key and code the transcripts consistently within the institutions. The on-screen instructions and validations in the KCS from the field test are recommended for the full-scale study to reduce error and increase efficiency.

An average of approximately 2 hours was required for keying and coding a student’s transcript. The speed of keying and coding increased over the period. The time per transcript spiked

in the first week after training and came down across the following 2 weeks. As keyer-coders gained familiarity with the system, the data entry fields, and the code list, their speed improved.

There is a steep learning curve associated with the task of coding courses from transcripts. The following procedures were put in place to ensure that keying and coding staff had sufficient resources available to them, and these procedures are recommended for the full-scale study's keying and coding:

- substantial 5-day training on keying and coding procedures (see appendix D for the training agenda);
- on-site supervisors available to answer questions;
- weekly quality control meetings to ensure consistent keying and coding; and
- supplying feedback to the keyer-coders on their performance.

After keying and coding concluded, debriefings were held with the keyer-coders and expert coders. The coding system, keying procedures, and issues related to coding majors and courses were all discussed. The feedback provided will be incorporated into the full-scale study's procedures, system, and training materials. Examples of feedback include ways by which to streamline course entry in the KCS and which fields could use better on-screen instructions.

Improvements were made to keying and coding accuracy throughout the keying and coding period. Providing feedback to the keyer-coders on their performance facilitated these improvements. The recode rates for course coding decreased over time from 35 percent to 17 percent. It is likely that the rate would have continued to decrease as the keyer-coders became familiar with the subtleties of the taxonomy and how courses should be coded if the keying and coding period had lasted longer. The steady decline of the recode rates serves as evidence that the training was effective. The keyer-coders consistently applied the protocol in which they had been trained, and the feedback with which they were provided helped them to master the subtleties of coding those courses that were more difficult to code.

The code list used for coding courses worked very well. Ninety-nine percent of the courses were coded using the code list. This shows that the CIP, though developed for classifying instructional programs, can be refined and used successfully for course coding. In preparation for the full-scale study, the field test coding results will be evaluated in conjunction with a review of the 2010 CIP, and refinements will be made to the code list.

## 4.5 Transcript Data Files

The data files for the B&B:08/09 field test transcript component contain the data included on each transcript receipt that was entered via the KCS. The following files were produced at the end of the field test:

- *Student*. Contains student-level education information, such as high school graduation date, skills testing, undergraduate credits attempted and earned, and college grade point average. There is one record for each sample student.
- *Institution*. Contains data related to all postsecondary institutions attended by respondents. This is an institution-level file; there is one record for each unique institution that provided transcripts for the B&B sample.

- *Tests.* Contains student-level data about standardized tests (college and graduate admission examinations, subject-specific entrance examinations, etc.) taken by respondents, including test type, date taken, and score obtained. There is one record per student per test.
- *Degrees.* Contains student-level information about any postsecondary degrees and certificates (e.g., degree type, completion date) earned by respondents, as well as the field(s) of study. There is one record per student per degree.
- *Courses.* Contains student-level data about the courses reported on all transcripts. There is one record per unique course reported across all transcripts received. There is one record per student per course.

The process for data cleaning and editing for the field test transcript component involved several stages. The general steps in the data editing process included: replacing blank or missing data with a -9 for all variables in the datasets; inserting a -3 consistency code for the legitimate skips, where appropriate; and variable formatting. During the data cleaning process, detailed documentation was produced that describes item and response options for each delivered variable.

## 4.6 Conclusions

The institution participation rate for the transcript collection was 87 percent, resulting in receipt of transcripts for 88 percent of the student sample. The collection effort would have benefited from a longer data collection period so that ample prompting and follow-up with institutions could have occurred. The most common reasons provided by institutions for not participating included the lack of available staff to complete the request and the timing of the request. It is likely that many of these institutions could have participated if given a longer window for responding. The data collection period will be much longer in the full-scale study.

Transcripts were keyed and coded for 1,360 eligible students. The field test coding system included validations for data type, length, and range checks. All transcripts for an institution were keyed and coded by a single keyer-coder to increase both speed and accuracy resulting from familiarity with the institution's term and grading systems and transcript format. To ensure quality in the keying effort, 10 percent of transcripts were re-keyed. To evaluate the quality of course coding, expert coders reviewed 10 percent of all courses coded. The keyer-coder staff grasped the fundamentals from the training and then further benefited from ongoing feedback from expert coders. Agreement rates between keyer-coders and expert coders were tracked to enable individualized feedback and comparison between keyer-coders. Decreasing recode rates over time, individually and as a group, demonstrated the effectiveness of this approach.

The results of course coding illustrates the effectiveness of the hybrid course coder which combined the 2000 CIP with Adleman's College Course Map. Ninety-nine percent of the transcript courses were coded with the PETS Course Code developed for the field test transcript collection. The remaining one percent of transcript courses were typically uncodable due to unclear course titles or inadequate course descriptions rather than inadequacy of the course code. The field test PETS course code will be updated with the 2010 CIP prior to the full-scale study's keying and coding effort. The 2010 CIP includes code additions and deletions resulting from extensive analysis of instructional programs nationally. Incorporating the 2010 CIP in the PETS course code ensures the code will be based on the most current classification and improves comparability with other analyses using the 2010 CIP code.



# Chapter 5.

## **File Preparation and Evaluation of Data Quality**

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This chapter includes summaries of the data quality evaluations conducted for the 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) field test data collection. An analysis of quality control procedures, coding processes, help text usage, item-level nonresponse, and debriefing results is also presented. File preparation procedures are also discussed.

### **5.1 Student Interview Evaluation**

#### **5.1.1 Question Format Experiment**

The B&B:08/09 field test used a subset of interview items to evaluate three different response formats: radio button, check-all, and open-ended with subsequent self-coding. Responses were compared across the formats to determine whether there were differences in administration time or data completeness. Five different questions from the field test interview were administered in one of the three response formats, randomly determined, to respondents to whom the item applied. The results of the format comparison were analyzed across the self- and interviewer-administered modes.

Examples of each of the three response formats are presented below. Figure 8 shows the radio button format, figure 9 presents the check-all format, and figures 10 and 11 display the open-ended format followed by a self-coding dropdown box. In the latter design, respondents entered text strings in response boxes and could add boxes, as needed. On the next screen, original text strings were presented with a dropdown list of response options with the request that the category that best described the text string be selected. The same set of response options was presented across the three item formats for each question.

**Figure 8. Screen shot of radio button format: 2008**

	Yes	No
Networking with friends, relatives, or acquaintances	<input type="radio"/>	<input type="radio"/>
Talking to faculty/staff	<input type="radio"/>	<input type="radio"/>
Attending recruiting fairs, professional meetings	<input type="radio"/>	<input type="radio"/>
Visiting unemployment office, employment commission posting/referral	<input type="radio"/>	<input type="radio"/>
Contacting employment agency/professional recruiter	<input type="radio"/>	<input type="radio"/>
Volunteering	<input checked="" type="radio"/>	<input type="radio"/>
Using school's placement office (referral, posted job notice)	<input type="radio"/>	<input type="radio"/>
Using internet to find job notices	<input type="radio"/>	<input type="radio"/>
Responding to newspaper/other print advertisements	<input type="radio"/>	<input type="radio"/>
Sending out resume/contacting employers directly	<input type="radio"/>	<input type="radio"/>
Other strategy not listed	<input type="radio"/>	<input type="radio"/>

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

**Figure 9. Screen shot of check-all format: 2008**

(Please check all that apply.)

- Using internet to find job notices
- Sending out resume/contacting employers directly
- Contacting employment agency/professional recruiter
- Attending recruiting fairs, professional meetings
- Talking to faculty/staff
- Visiting unemployment office, employment commission posting/referral
- Using school's placement office (referral, posted job notice)
- Volunteering
- Networking with friends, relatives, or acquaintances
- Responding to newspaper/other print advertisements
- Other strategy not listed

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

**Figure 10. Screen shot of open-ended format with follow-up coding: 2008**

The screenshot shows the top navigation bar with the B&B logo on the left and the IES logo on the right. Below the logos, the text reads "Baccalaureate and Beyond Longitudinal Study" and "Sections Completed: 1 \_\_\_ 2 \_\_\_ 3 \_\_\_ 4 \_\_\_ 5 \_\_\_ 6 \_\_\_ 7 \_\_\_". Further down, it says "OMB Clearance No: 1850-0729 Exp. Date: 02/28/2011 Progress in Section: [Progress bar]". The user's name and role are listed as "John Public methexp Post-BA Employment / RDSRCHD".

The main question is: "What job search strategies are you currently using to look for a job?" followed by instructions: "(Please enter one response in the box provided. For each additional response you wish to provide, click the 'Provide an additional response' button.)".

A text input field contains the response: "Networking through friends". Below the input field is a button labeled "Provide an additional response".

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

**Figure 11. Screen shot of follow-up coding of open-ended responses: 2008**

This screenshot is similar to Figure 10, showing the same top navigation and user information. The main question is: "How would you categorize the answer(s) you gave?" with instructions: "(Please match your response(s) provided below to a category from the drop down list.)".

The response from the previous screen, "Networking through friends", is displayed above a dropdown menu. The dropdown menu is open, showing a list of categories. The category "Networking with friends, relatives, or acquaintances" is highlighted in blue.

The dropdown menu options are:
 

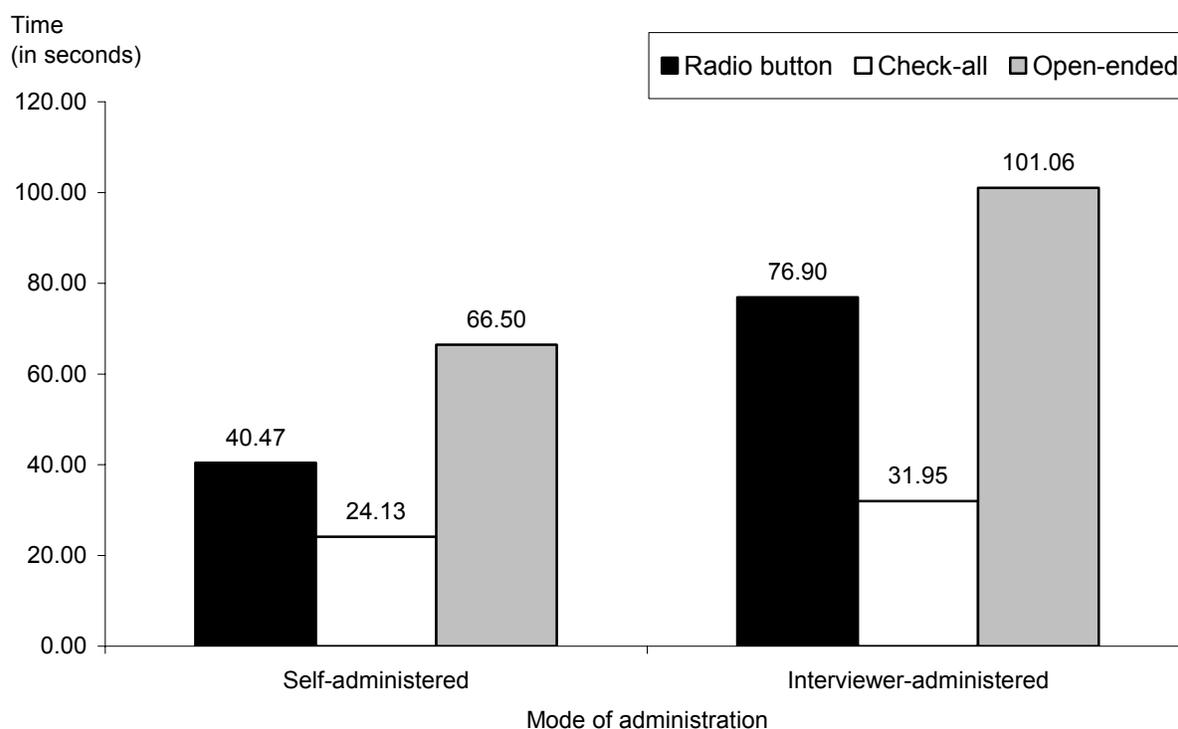
- Select one-
- Select one-
- Using school's placement office (referral, posted job notice)
- Using internet to find job notices
- Responding to newspaper/other print advertisements
- Sending out resume/contacting employers directly
- Networking with friends, relatives, or acquaintances
- Talking to faculty/staff
- Attending recruiting fairs, professional meetings
- Visiting unemployment office, employment commission posting/referral
- Contacting employment agency/professional recruiter
- Volunteering
- Other strategy not listed

There are "Help" and "Logout" links in the bottom right corner of the form area.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

Figure 12 shows the average time, in seconds, required to administer each of the three question formats across the self- and interviewer-administered modes. The differences in time to administer the three question formats were statistically significant, and the pattern of differences in the mean total time required to administer the questions was consistent across the five questions within each format. Items administered in the check-all format consistently averaged less time to administer than the radio button format, which required an explicit yes-or-no response to each option. Not surprisingly, the open-ended coding format, which included both entering text responses and coding each of the responses on a dropdown list, consistently averaged more time than either the radio button format or the check-all format. Also, as expected, mean times were consistently higher for interviewer-administered than for self-administered responses.

**Figure 12. Mean total time required to administer experimental questions, by response format: 2008**



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

Table 29 shows the completeness of responses across formats for the five questions that were included in the question format experiment. The completeness of responses is examined by comparing the rate at which respondents selected an affirmative response to the response options for each question. Across all questions, 37 of the 52 possible response options presented in the radio button format were selected by significantly more respondents than when offered in the open-ended format. Thirty of the 52 possible response options were selected by more respondents when in the radio button format, compared with the check-all format. And 24 of the 52 potential response options were selected by significantly more respondents when in the check-all format than in the open-ended format.

**Table 29. Completeness of data for experimental items, by question format: 2008**

Question and item	Format					
	Radio button		Check-all		Open-ended	
	Number	Percent	Number	Percent	Number	Percent
<b>Reason for multiple enrollment</b>						
To finish school more quickly	40	57.0 <sup>1</sup>	30	34.9 <sup>1</sup>	30	41.8
To take easier classes at a different school	20	25.0 <sup>2</sup>	20	18.6	10	8.9 <sup>2</sup>
The other school offered a better class schedule	20	26.3 <sup>2</sup>	20	20.9 <sup>3</sup>	10	6.3 <sup>2,3</sup>
Preparing to transfer to or trying out another school	10	6.6	#	2.3	#	5.1
Trying out a program or major not available at your primary school	10	17.1	10	8.1	10	12.7
Participated in a consortium	10	9.2	#	3.5	#	5.1
Personal enrichment (took extra classes at another school not related to your program at your primary school)	20	23.7 <sup>1,2</sup>	10	9.3 <sup>1</sup>	10	6.3 <sup>2</sup>
Financial reasons	20	22.4 <sup>1,2</sup>	10	10.5 <sup>1</sup>	#	5.1 <sup>2</sup>
To earn an additional degree at another school	10	6.6	10	7.0	#	2.5
Other reason	30	34.2 <sup>2</sup>	20	24.4	10	13.9 <sup>2</sup>
<b>Reason for postponed education</b>						
Undergraduate debt	80	38.0 <sup>1,2</sup>	60	28.4 <sup>1,3</sup>	30	15.8 <sup>2,3</sup>
Couldn't get financial aid	10	6.5 <sup>2</sup>	10	5.3 <sup>3</sup>	#	1.1 <sup>2,3</sup>
Personal financial reasons	100	46.8 <sup>2</sup>	80	38.0 <sup>3</sup>	50	25.0 <sup>2,3</sup>
Raising children	40	17.1 <sup>2</sup>	20	11.1	20	9.8 <sup>2</sup>
Other family responsibilities/constraints	70	30.6 <sup>1,2</sup>	30	13.9 <sup>1,3</sup>	10	5.4 <sup>2,3</sup>
Failed to meet application deadline	10	3.7 <sup>1</sup>	#	0.5 <sup>1</sup>	#	1.1
Not admitted to school of choice	10	3.2	10	2.4	#	2.2
Want a break from school	150	67.6 <sup>1,2</sup>	90	44.7 <sup>1,3</sup>	30	13.6 <sup>2,3</sup>
Had good job opportunity	100	45.8 <sup>1,2</sup>	40	18.8 <sup>1,3</sup>	20	8.7 <sup>2,3</sup>
Military commitment	10	3.7	10	2.9	#	1.6
Career plans indefinite	80	35.6 <sup>1,2</sup>	30	14.9 <sup>1,3</sup>	10	3.3 <sup>2,3</sup>
Want/need work experience	130	58.8 <sup>1,2</sup>	100	47.6 <sup>1,3</sup>	40	23.4 <sup>2,3</sup>
Moving/relocating	50	23.1 <sup>1,2</sup>	30	13.0 <sup>1,3</sup>	#	1.1 <sup>2,3</sup>
Another reason not listed	10	4.2 <sup>1,2</sup>	20	10.1 <sup>1</sup>	20	12.0 <sup>2</sup>
<b>Job search strategies</b>						
Using school's placement office (referral, posted job notice)	30	20.9 <sup>2</sup>	20	13.1	10	7.3 <sup>2</sup>
Using Internet to find job notices	130	87.8 <sup>1,2</sup>	110	78.1 <sup>1,3</sup>	80	62.9 <sup>2,3</sup>
Responding to newspaper/other print advertisements	80	56.1 <sup>1,2</sup>	60	41.6 <sup>1,3</sup>	10	11.3 <sup>2,3</sup>
Sending out resume/contacting employers directly	100	67.6 <sup>1,2</sup>	70	49.6 <sup>1,3</sup>	20	16.1 <sup>2,3</sup>
Networking with friends, relatives, or acquaintances	120	79.1 <sup>1,2</sup>	80	60.6 <sup>1,3</sup>	30	27.4 <sup>2,3</sup>
Talking to faculty/staff	50	32.4 <sup>1,2</sup>	30	19.0 <sup>1,3</sup>	#	3.2 <sup>2,3</sup>
Attending recruiting fairs, professional meetings	40	25.0 <sup>1,2</sup>	10	9.5 <sup>1,3</sup>	#	3.2 <sup>2,3</sup>

Question and item	Format					
	Radio button		Check-all		Open-ended	
	Number	Percent	Number	Percent	Number	Percent
Visiting unemployment office, employment commission posting/referral	30	16.9 <sup>1,2</sup>	10	7.3 <sup>1</sup>	#	2.4 <sup>2</sup>
Contacting employment agency/professional recruiter	40	27.7 <sup>1,2</sup>	20	12.4 <sup>1,3</sup>	10	4.0 <sup>2,3</sup>
Volunteering	30	19.6 <sup>1,2</sup>	10	7.3 <sup>1,3</sup>	#	0.8 <sup>2,3</sup>
Other strategy not listed	10	7.4	10	10.2	10	4.0

See notes at end of table.

**Table 29. Completeness of data for experimental items, by question format: 2008—Continued**

Question and item	Format					
	Radio button		Check-all		Open-ended	
	Number	Percent	Number	Percent	Number	Percent
<b>Reason for not applying for teaching position</b>						
Not interested in teaching	10	14.6	10	11.1	10	18.8
Poor teaching conditions	10	14.6 <sup>1,2</sup>	#	2.2 <sup>1</sup>	#	0.0 <sup>2</sup>
More money/prestige in other job	10	26.8 <sup>1,2</sup>	#	2.2 <sup>1</sup>	#	0.0 <sup>2</sup>
Still have to complete additional requirements	40	87.8 <sup>1,2</sup>	30	60.0 <sup>1</sup>	10	43.8 <sup>2</sup>
Already employed in other job	20	46.3 <sup>1,2</sup>	10	22.2 <sup>1</sup>	#	6.3 <sup>2</sup>
Student teaching was discouraging	0	7.3	#	0.0	#	0.0
Jobs hard to get	10	12.2	#	8.9	#	3.1
Difficult application process	0	7.3	#	0.0	#	0.0
Another reason not listed	10	19.5	10	28.9	10	34.4
<b>Volunteer reason</b>						
It was a class requirement	10	5.7 <sup>2</sup>	10	4.1 <sup>3</sup>	#	0.6 <sup>2,3</sup>
It was encouraged by friends, family, faculty, or a mentor	80	47.2 <sup>1,2</sup>	50	31.1 <sup>1,3</sup>	30	19.5 <sup>2,3</sup>
It allowed you to express your concern or act on a sense of responsibility for others	100	65.4 <sup>1,2</sup>	70	50.0 <sup>1</sup>	70	42.1 <sup>2</sup>
It was a way to meet new people or spend time with friends who share an interest in helping others	80	52.2 <sup>1,2</sup>	50	31.1 <sup>1,3</sup>	10	8.2 <sup>2,3</sup>
It was a way to feel needed	40	24.5 <sup>1,2</sup>	20	10.8 <sup>1,3</sup>	10	4.4 <sup>2,3</sup>
It was related to your college major	30	20.8 <sup>1,2</sup>	20	14.2	10	8.8 <sup>2</sup>
It was a way to feel good about yourself	80	52.8 <sup>1,2</sup>	50	36.5 <sup>1,3</sup>	20	13.8 <sup>2,3</sup>
Another reason not listed	40	23.3	40	29.1 <sup>3</sup>	20	15.1 <sup>3</sup>

# Rounds to zero.

<sup>1</sup> There is a significant difference between the radio button format and the check-all format ( $p < .05$ ).

<sup>2</sup> There is a significant difference between the radio button format and the open-ended format ( $p < .05$ ).

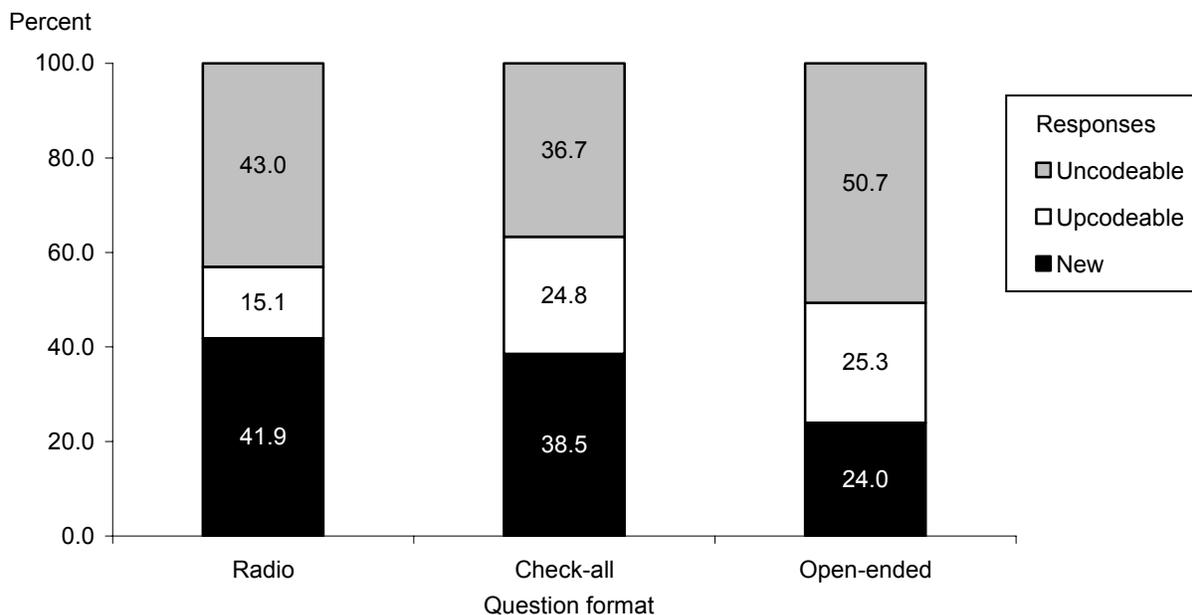
<sup>3</sup> There is a significant difference between the check-all format and the open-ended format ( $p < .05$ ).

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

A final comparison, across question formats, was made of the text responses entered by any respondents who selected “Other” when none of the other response options applied. Respondents choosing “Other” were asked to enter their response in a text box. Following data collection, the text strings were evaluated to determine if (1) a new response category needed to be created; (2) the strings could be upcoded into an existing category; or (3) the response was uncodable and, as a result, could neither be used as a new category nor upcoded. The results of the review are shown in figure 13.

**Figure 13. Codability of “Other, specify” responses offered across question formats: 2008**



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

The results show that the open-ended format had significantly fewer text strings in the “New” category than both radio format ( $\chi = 2.41$   $p < .05$ ) and check-all format ( $\chi = 2.13$   $p < .05$ ). That is, respondents were more likely to enter text strings that contributed new categories when in radio or check-all formats than in the open-ended format. No other significant differences were found between the formats.

This experiment was designed to determine if information was gained or lost in using a radio button, check-all, or open-ended question format. Previous research has shown that using the radio button yields the most complete data, but costs in terms of the burden on respondents (because they are answering separate yes-or-no questions, whether read by the respondent or by an interviewer) is time consuming (Cominole et al. 2009; Smyth et al. 2006). The present results confirmed that radio button formats do yield more data than either the check-all or the open-ended formats, but they also require more time than the most common alternate format, check-all questions.

The open-ended format was included in the comparison of question formats to begin to assess the potential bias introduced when a specific set of response options is presented to respondents. Before a self-administered option was added to the B&B data collection methodology, telephone and field interviewers would have read the questions as if in an open-ended format and then coded all responses given into the set of response options available. Respondents could not see

the options and, therefore, were not influenced by them in forming responses to the questions. If the open-ended format in the B&B:08/09 experiment evoked broader types of responses, there should have been more new categories added when compared with the other two formats.

### 5.1.2 Identifying Difficult Items: Help Text, Conversion Text, and Item Nonresponse

**Help text analysis.** The field test interview offered general and screen-specific help text on all instrument screens. The general help text provided answers to frequently asked questions about response types and browser settings for questionnaire completion. The screen-specific help text provided definitions of terms and phrases used in question wording and response options and explained the type of information requested. Interviewers were trained and encouraged to use help text, as needed.

The number of times that respondents or interviewers clicked the help text button for each screen was tallied to determine the rate of help text access per screen relative to the number of respondents to whom the screen was administered. The screen-level rate of help text access was analyzed overall and by mode of interview administration to identify screens that may have been problematic for users.

For forms administered to at least 25 respondents, the overall mean rate of help text hits per screen was less than 1 percent. Table 30 presents the rates of help text access for the eight interview forms that were administered to 25 or more respondents and in which help text was accessed at an overall rate of 5 percent or more.

**Table 30. Rates of help text access, by item: 2008**

Variable name	Description	Overall		Self-administered		Interviewer-administered	
		Number administered to	Percent of help text access	Number administered to	Percent of help text access	Number administered to	Percent of help text access
RETCTP01	Most recent teaching position	50	15.2	30	14.3	20	16.7
RECRTNAM	Name of teacher certification	130	14.9	90	3.3	40	40.5
RBMLTERA	Reason for multiple enrollment	70	10.0	50	1.9	20	35.3
REALLPOS	Teaching positions held	220	9.6	150	0.0	70	30.4
RESTED01	Teaching position starting/ending date	170	9.0	110	2.7	60	21.8
RFTAXTYP	Untaxed benefit type	70	9.0	50	0.0	20	30.0
RBLNDEF	Loan deferral reason	110	6.3	70	1.4	40	15.0
RDJBRESP	Job responsibilities	980	5.9	720	0.1	270	21.4

NOTE: Detail may not sum to totals because of rounding. Table is based on the rates of help text access for interviewer screens administered to a minimum of 25 respondents and in which help text was accessed at a rate of at least 5 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Study 2008/09 (B&B:08/09) Field Test.

The item “most recent teaching position” had the highest rate of help text access, at 15 percent. This item asked the respondent whether he or she served as a long-term substitute teacher,

itinerant teacher, support teacher, or elementary or secondary school teacher in his or her most recent position. Approximately 17 percent of interviewer-administered respondents who received this form accessed the help text, while 14 percent of self-administered respondents used the help text ( $\chi = 0.22, p > .10$ ). There was no significant difference in the rate of help text access across modes for “most recent teaching position.” The “name of teacher certification” screen had a 15 percent rate of help text access overall. Interviewer-administered respondents accessed help text for this form at a rate of 41 percent, compared with the 3 percent access rate for self-administered respondents ( $\chi = 5.61, p < .01$ ). The overall help text access rate for “reason for multiple enrollment” was 10 percent. Self-administered respondents accessed help text at a rate of 2 percent, while 35 percent of interviewer-administered respondents accessed help text for the item asking respondents why they decided to enroll at more than one school at the same time ( $\chi = 4.00, p < .01$ ). For “teaching positions held,” which had an overall help text access rate of 10 percent, all of the help text access was in the interviewer-administered mode. Interviewer-administered respondents received help text 30 percent of the time ( $\chi = 7.08, p < .01$ ).

The “teaching position starting/ending date” question had a 9 percent overall help text access rate. The help text access rate was 3 percent for self-administered respondents and 22 percent for interviewer-administered respondents ( $\chi = 4.04, p < .01$ ). “Untaxed benefit type” also had a 9 percent overall help text access rate, and all of the help text usage for this form was in the interviewer-administered mode. In the interviewer-administered mode, the help text access rate was 30 percent ( $\chi = 3.94, p < .01$ ). The question related to deferrals, “loan deferral reason,” had an overall rate of help text access of 6 percent. Interviewer-administered respondents were more likely to use the help text for this form than self-administered respondents (15 percent and 1 percent, respectively [ $\chi = 2.83, p < .01$ ]). “Job responsibilities” also had an overall help text access rate of 6 percent. Only 1 of 717 self-administered respondents accessed help text for “job responsibilities,” for a self-administered access rate of zero percent. The interviewer-administered help text access rate was 21 percent ( $\chi = 12.58, p < .01$ ).

**Conversion text.** To minimize nonresponse, particularly for critical items, conversion text was used to encourage a respondent to provide an answer. Originally, the conversion text was intended to mimic the response conversion attempted by an interviewer when a respondent refuses to answer a question. In the B&B:08/09 field test instrument, key items were identified to include conversion text. If left blank, these items were displayed again, usually with the addition of a “*don’t know*” option and additional text emphasizing the importance of the item. Overall, there was a greater-than-80-percent conversion rate for all items that had conversion text (table 31). Of items with more than 10 total cases, “occupation” had the highest conversion rate (95 percent); a minority of the converted respondents, 5 percent, answered *don’t know*.

The item-level conversion rate is calculated by dividing the total number of responses into the total number of cases that saw the conversion text. These numbers are rounded, but the percentage is based on the actual numbers. The rate of conversion was significantly different by mode for one item, “monthly rent or mortgage payment amount” (RFMTGAMT). The RFMTGAMT conversion rate was 78 percent for self-administered respondents and 33 percent for interviewer-administered respondents ( $\chi = 2.41, p < .01$ ).

**Table 31. Use of conversion text to minimize nonresponse: 2008**

Variable name	Description	Total				
		Number of cases	Number converted	Percent converted	Percent valid response	Percent don't know
RDOCC1	Occupation coder	40	40	95.1	94.9	†
	Monthly rent or mortgage payment amount					
RFMTGAMT	amount	30	20	65.6	76.2	23.8
RBUGOWE	Undergraduate loan amount owed	20	10	75.0	33.3	66.7
RDJSTAT	Currently working for pay	10	10	83.3	100.0	†
RECONSID	Currently considering teaching	10	10	71.4	100.0	†
RCPSTGRD	Post-bachelor's training or education	10	10	100.0	83.3	†
RBUGLN	Took out undergraduate loans	10	#	60.0	100.0	†
RDSEARCH	Looking for a job	10	#	60.0	100.0	†
Self-administered						
RDOCC1	Occupation coder	40	40	95.0	97.4	†
	Monthly rent or mortgage payment amount					
RFMTGAMT	amount	20	20	78.3	77.8	22.2
RBUGOWE	Undergraduate loan amount owed	10	10	85.7	50.0	50.0
RDJSTAT	Currently working for pay	10	10	87.5	100.0	†
RECONSID	Currently considering teaching	10	#	60.0	100.0	†
RCPSTGRD	Post-bachelor's training or education	10	10	100.0	83.3	†
RBUGLN	Took out undergraduate loans	#	#	66.7	100.0	†
RDSEARCH	Looking for a job	10	#	60.0	100.0	†
Interviewer-administered						
	Monthly rent or mortgage payment amount					
RFMTGAMT	amount	10	#	33.3	66.7	33.3
RBUGOWE	Undergraduate loan amount owed	10	10	66.7	16.7	83.3

† Not applicable.

# Rounds to zero.

NOTE: Detail may not sum to totals because of rounding. Percentage is calculated by dividing the total number converted into the total number of cases who saw the conversion text.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Study 2008/09 (B&amp;B:08/09) Field Test.

**Item nonresponse.** The item-level nonresponse analysis presented here focuses on the rates of nonresponse to student interview items. Missing data for items in the field test student interview were associated with a number of factors: (1) a true refusal, (2) an unknown answer, (3) an inappropriate question for that respondent that the respondent could not answer, (4) confusion related to the question wording or response options, or (5) hesitation to provide a best guess

response.<sup>15</sup> Overall, however, item-level nonresponse rates were relatively low; out of about 894 items administered to at least 25 respondents, only 54 had more than 5 percent missing data. These items are shown in tables 32–36 and are grouped by interview section. Item nonresponse rates were based on the number of interview respondents to whom the item was applicable and asked.

It is important to recognize which items, if any, are difficult for self-administered respondents to understand, because these respondents do not have the assistance of a trained interviewer while completing the interview. Therefore, in addition to the overall analysis, the item-level nonresponse is presented by mode of interview administration in tables 32–36. The items presented in tables 32–36 include 14 with rates of nonresponse that were significantly different by mode. Of the 14 items with significant differences by mode, only one item had a higher rate of nonresponse among interviewer-administered respondents.

Table 32 shows the nonresponse rates for the 24 items in the undergraduate education section with overall rates of nonresponse greater than 5 percent. The nonresponse rate is uniform across the item set “reason for multiple enrollment combined” because nonresponse occurred only if all response options in the set were left unanswered.<sup>16</sup> At 14 percent, “reason for multiple enrollment combined” had the highest rate of nonresponse in this section.

Significant differences in nonresponse rates by administration mode occurred for three items related to “original major at NPSAS” (National Postsecondary Student Aid Study) and three items related to “final major at NPSAS.” Overall rates of nonresponse for the “original major at NPSAS” string, general code, and specific code were 9 percent, 10 percent, and 13 percent, respectively. Self-administered respondents had higher nonresponse rates for the “original major at NPSAS” string than interviewer-administered respondents (12 percent and zero percent, respectively [ $\chi^2 = 3.36, p < .01$ ]). Self-administered respondents had a nonresponse rate of 14 percent for the “original major at NPSAS” general code, compared with the interviewer-administered nonresponse rate of zero percent ( $\chi^2 = 3.71, p < .01$ ). The “original major at NPSAS” specific code nonresponse rate for self-administered respondents was 17 percent, while the nonresponse rate for interviewer-administered respondents was zero percent ( $\chi^2 = 3.85, p < .01$ ). Overall nonresponse rates for the “final major at NPSAS” string, general code, and specific code were 9 percent, 8 percent, and 9 percent, respectively. Self-administered respondents had a significantly higher rate of item nonresponse for the “final major at NPSAS” string than interviewer-administered respondents (12 percent and zero percent, respectively [ $\chi^2 = 6.13, p < .01$ ]). For the “final major at NPSAS” general code, self-administered respondents had a nonresponse rate of 11 percent, and interviewer-administered respondents had a nonresponse rate of zero percent ( $\chi^2 = 6.04, p < .01$ ). The “final major at NPSAS” specific code nonresponse rate was 13 percent for self-administered respondents and zero percent for interviewer-administered respondents ( $\chi^2 = 6.40, p < .01$ ).

<sup>15</sup> Some questions allowed only one response (e.g., *yes* or *no*), so for these questions only one response option was necessary for recording the answer. Other questions allowed multiple responses (e.g., check-all questions), so for these questions each response option was recorded separately, into an individual item. Consequently, for single-response questions, the response and item were identical; for multiple-response questions, each response option was associated with a unique item.

<sup>16</sup> For this and other questions with multiple response options, all unanswered items were assumed to be *no* if an answer was provided for any item in the set.

**Table 32. B&B:08/09 interview item nonresponse, undergraduate education: 2008**

Item	Item description	Overall		Self-administered		Interviewer-administered	
		Number administered to	Percent missing	Number administered to	Percent missing	Number administered to	Percent missing
RBTWSP01	Reason attended 2-year pre-bachelor's school 1: Other, specify	120	6.8	70	9.5	40	2.3
RBTWSP02	Reason attended 2-year pre-bachelor's school 2: Other, specify	50	5.9	30	6.5	20	5.0
RBSCH03	Other pre-bachelor's school 3: Name	70	8.7	50	12.0	20	0.0
RBEMY03	Date last enrolled at pre-bachelor's school 3	60	6.3	40	9.1	20	0.0
RBENST03	Pre-bachelor's school 3: Enrollment intensity	70	8.7	50	12.0	20	0.0
RBORGMAJ	Original major at NPSAS: String	310	8.5	220	11.9	90	0.0
RBOMJGEN	Original major at NPSAS: General code	310	10.1	220	14.2	90	0.0
RBOMJSPE	Original major at NPSAS: Specific code	310	12.7	220	17.4	90	1.1
RBNPMAJ	Final major at NPSAS: String	1,190	8.6	870	11.6	320	0.3
RBNPMGEN	Final major at NPSAS: General code	1,190	8.4	870	11.3	320	0.3
RBNPMSPE	Final major at NPSAS: Specific code	1,190	9.3	870	12.5	320	0.3
RBNPTRN	Transfer or multiple enrollment	670	5.2	500	5.0	180	5.7
RBLNFRG	Participated in loan forgiveness program	580	9.2	450	10.3	130	5.4
RBMLTA	Reason for multiple enrollment combined: Finish more quickly	270	14.0	200	14.1	70	13.7
RBMLTB	Reason for multiple enrollment combined: Easier classes	270	14.0	200	14.1	70	13.7
RBMLTC	Reason for multiple enrollment combined: Better class schedule	270	14.0	200	14.1	70	13.7
RBMLTD	Reason for multiple enrollment combined: Prepare to transfer	270	14.0	200	14.1	70	13.7
RBMLTE	Reason for multiple enrollment combined: Try out major/program	270	14.0	200	14.1	70	13.7
RBMLTF	Reason for multiple enrollment combined: Participate in consortium	270	14.0	200	14.1	70	13.7
RBMLTG	Reason for multiple enrollment combined: Personal enrichment	270	14.0	200	14.1	70	13.7
RBMLTH	Reason for multiple enrollment combined: Financial reason	270	14.0	200	14.1	70	13.7
RBMLTI	Reason for multiple enrollment combined: Earn additional degree	270	14.0	200	14.1	70	13.7
RBMLTJ	Reason for multiple enrollment combined: Other	270	14.0	200	14.1	70	13.7
RBLNINSP	Undergraduate loan debt influenced employment: Other, specify	100	6.2	60	7.0	40	5.0

NOTE: Detail may not sum to totals because of rounding. This table includes only items that were administered to at least 50 respondents. NPSAS = National Postsecondary Student Aid Study.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Study 2008/09 (B&B:08/09) Field Test.

The nonresponse rates for the 10 items in the Postbaccalaureate Education/Training section with overall rates of nonresponse greater than 5 percent are in table 33. The highest nonresponse rate in this section was for “expected tuition reimbursement,” which had an overall rate of 29 percent; the radio option *don’t know* accounted for nearly all of the percentage of the overall nonresponse rate (99 percent), while other nonresponse accounted for about 1 percent. Self-administered respondents had greater rates of nonresponse for “expected tuition reimbursement” than interviewer-administered respondents (37 percent and 10 percent, respectively [ $\chi = 9.95$ ,  $p < .01$ ]).

**Table 33. Interview item nonresponse, Postbaccalaureate Education/Training: 2008**

Item	Item description	Overall		Self-administered		Interviewer-administered	
		Number administered to	Percent missing	Number administered to	Percent missing	Number administered to	Percent missing
RCMAJ01	Postbaccalaureate school 1: primary major: String	350	8.2	260	10.5	100	2.1
RCMGEN01	Postbaccalaureate school 1: primary major: General code	310	7.4	230	9.6	80	1.2
RCMSPE01	Postbaccalaureate school 1: primary major: Specific code	310	8.0	230	10.0	80	2.4
RCMAJ02	Postbaccalaureate school 2: primary major: String	60	18.8	50	21.2	10	8.3
RCMAJINT	Intended major: String	570	25.0	410	32.7	160	5.1
RCINTGEN	Intended major: General code	570	7.6	410	8.4	160	5.7
RCINTSPE	Intended major: Specific code	570	9.7	410	11.3	160	5.7
RCENSTIN	Intended enrollment intensity	600	25.0	430	30.3	170	11.4
RCFTREMP	Expect tuition reimbursement	600	29.4	430	37.1	170	9.6
RCDELS01	Postponing continued education combined 1: Other, specify	50	13.0	30	14.3	30	11.5

NOTE: Detail may not sum to totals because of rounding. This table includes only items that were administered to at least 50 respondents.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Study 2008/09 (B&B:08/09) Field Test.

Approximately 8 percent of respondents did not provide a response for the “Postbaccalaureate school 1: Primary major” string. Self-administered respondents were less likely to provide a response (11 percent nonresponse) than interviewer-administered respondents (2 percent nonresponse [ $\chi = 4.03$ ,  $p < .01$ ]). The “Postbaccalaureate school 1: Primary major” general and specific codes, which had overall nonresponse rates of 7 percent and 8 percent, respectively, had significant differences by mode, as well. The “Postbaccalaureate school 1: Primary major” general code had a self-administered nonresponse rate of 10 percent and an interviewer-administered nonresponse rate of 1 percent ( $\chi = 4.05$ ,  $p < .01$ ). The specific code of the same item had a 10 percent self-administered nonresponse rate and a 2 percent interviewer-administered nonresponse rate ( $\chi = 3.47$ ,  $p < .01$ ).

The self-administered nonresponse rate was also higher for the “intended major” string, which had a self-administered nonresponse rate of about 33 percent, compared with the interviewer-administered nonresponse rate of 5 percent ( $\chi = 10.40$ ,  $p < .01$ ). For “intended enrollment

intensity,” which had a 25 percent overall rate of nonresponse, the nonresponse rate among self-administered respondents was 30 percent, while the nonresponse rate among interviewer-administered respondents was 11 percent ( $\chi = 7.16, p < .01$ ). The radio option “have not decided yet” accounted for the majority of the overall “intended enrollment intensity” nonresponse rate (97 percent); other nonresponse accounted for 3 percent.

Table 34 displays the nonresponse rates for the 12 items in the Postbaccalaureate Employment section with overall rates of nonresponse greater than 5 percent. With 34 percent nonresponse, the “occupation: detailed code” has the highest overall rate of nonresponse for the Postbaccalaureate Employment section. Approximately 16 percent of respondents overall did not provide a response for “job duties.” Of self-administered respondents, 20 percent did not provide “job duties,” compared with 3 percent of interviewer-administered respondents ( $\chi = 6.89, p < .01$ ). The “occupation: general code,” “occupation: specific code,” and “occupation: detailed code” had overall nonresponse rates of 33 percent, 33 percent, and 34 percent, respectively. For the “occupation: general code,” the nonresponse rate for self-administered respondents was 42 percent, and the nonresponse rate for interviewer-administered respondents was 9 percent ( $\chi = 9.93, p < .01$ ). Similarly, the “occupation: specific code” had a self-administered nonresponse rate of 42 percent and an interviewer-administered nonresponse rate of 9 percent ( $\chi = 9.85, p < .01$ ). Self-administered respondents were also less likely to provide “occupation: detailed code” information (42 percent) than interviewer-administered respondents (10 percent [ $\chi = 9.53, p < .01$ ]). Self-administered respondents were less likely to provide responses for “looking for work July 2008” (9 percent) than interviewer-administered respondents (3 percent [ $\chi = 3.16, p < .01$ ]).

**Table 34. Interview item nonresponse, Postbaccalaureate Employment: 2008**

Item	Item description	Overall		Self-administered		Interviewer-administered	
		Number administered to	Percent missing	Number administered to	Percent missing	Number administered to	Percent missing
RDJBDY	Job duties	1,020	15.6	740	20.3	270	2.6
RDOCC2	Occupation: General code	1,020	32.7	740	41.5	270	8.5
RDOCC3	Occupation: Specific code	1,020	33.4	740	42.2	270	9.2
RDOCC6	Occupation: Detailed code	1,020	33.7	740	42.2	270	10.3
RDSRHT01	Job search strategies 1: Text box	130	5.5	90	7.5	30	0.0
RDSRHD01	Job search strategies 1: Self-coded dropdowns	130	5.5	90	7.5	30	0.0
RDJBLS2	Job search location 2	160	12.3	140	14.1	30	3.6
RDJBLS3	Job search location 3	110	18.9	90	20.9	20	6.7
RDJBLS4	Job search location 4	70	27.0	60	30.6	10	8.3
RDJBLS5	Job search location 5	60	33.3	50	38.0	10	10.0
RDLK8JL	Looking for work July 2008	590	6.1	310	9.2	280	2.9
RDLK8SP	Looking for work September 2008	150	6.5	80	8.6	70	4.1

NOTE: Detail may not sum to totals because of rounding. This table includes only items that were administered to at least 50 respondents.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Study 2008/09 (B&B:08/09) Field Test.

Table 35 presents nonresponse rates for the three teaching items with overall rates of nonresponse greater than 5 percent. The highest overall rate of nonresponse was for “name of

teacher certification,” which had a nonresponse rate of 9 percent. There was no significant difference in the rate of item nonresponse across modes for the K–12 Teaching section.

**Table 35. Interview item nonresponse, teaching: 2008**

Item	Item description	Overall		Self-administered		Interviewer-administered	
		Number administered to	Percent missing	Number administered to	Percent missing	Number administered to	Percent missing
RECRTNAM	Name of teacher certification	130	9.0	90	6.5	40	14.3
	Teaching position 1: Academic year						
RESINC01	base salary	170	7.8	110	6.3	60	10.9
	Plans for education-related job: Other, specify						
REMVOTH		70	8.3	50	12.0	20	0.0

NOTE: Detail may not sum to totals because of rounding. This table includes only items that were administered to at least 50 respondents.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Study 2008/09 (B&B:08/09) Field Test.

The five items in the Student Background section with overall nonresponse rates greater than 5 percent are in table 36. The “income in 2007: estimate” item had the highest rate of overall nonresponse in the Student Background section, with about 19 percent. The “don’t know” radio button accounted for about one-half of the overall nonresponse for “income in 2007: estimate” (52 percent), while other nonresponse accounted for the other 48 percent. For the item “income in 2007,” approximately 13 percent of interviewer-administered respondents did not provide an answer, compared with approximately 8 percent of self-administered respondents ( $\chi^2 = 2.40, p < .01$ ). Of the 14 items with significant differences by mode, only “income in 2007” had a higher rate of nonresponse for interviewer-administered respondents than self-administered respondents.

**Table 36. B&B:08/09 interview item nonresponse, Student Background: 2008**

Item	Item description	Overall		Self-administered		Interviewer-administered	
		Number administered to	Percent missing	Number administered to	Percent missing	Number administered to	Percent missing
	Reason moved away from high school:						
RFHOSPE	Other, specify	60	5.3	40	7.7	20	0.0
RFINCOM	Income in 2007	1,180	9.3	870	8.1	320	12.7
RFINEST	Income in 2007: Estimate	110	19.1	70	21.4	40	15.0
RFINCSP	Spouse's income in 2007	300	5.4	220	4.5	70	8.1
RFSCHS01	Volunteer reason combined 1: Other, specify	120	13.0	80	16.7	30	3.2

NOTE: Detail may not sum to totals because of rounding. This table includes only items that were administered to at least 50 respondents.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Study 2008/09 (B&B:08/09) Field Test.

To help minimize nonresponse and mode differences in the full-scale study, items with high nonresponse rates will be reviewed for clear wording and help text to assist respondents as they answer the items. For the full-scale study, training also will be evaluated to ensure that interviewers are sufficiently trained in methods to reduce the rates of missing data.

### 5.1.3 Reliability Reinterview

An important element of data quality in survey research is the reliability of self-reported responses to interview questions. A reliability reinterview was administered to a subsample of respondents to evaluate the reliability of self-reported data collected in the B&B:08/09 field test interview. The reinterview consisted of a subset of items from the main interview and took approximately 5 minutes to complete. Conducting a reliability analysis in the field test allows evaluations of the results in order to make any needed revisions to items for the full-scale interview.

**Response rates.** A subsample of about 310 B&B:08/09 sample members who completed the interview was randomly selected. Those selected were informed of their selection at the end of the initial interview and invited to participate in the subsequent reinterview. Respondents were asked to complete the reinterview in the same mode as the initial interview, either self-administered or interviewer-administered, to avoid confounding the results of the reliability analyses with changes in administration mode.<sup>17</sup>

A summary of the reinterview sample is presented in table 37. Response rates shown are overall and by completion mode. Overall, 71 percent of those selected completed the reliability reinterview. The response rate for those selected to participate in the reliability reinterview via self-administration was 70 percent; for those selected to do a telephone reinterview, the response rate was 73 percent. This difference was not statistically significant ( $z = 0.58$ ).

**Table 37. Reliability reinterview response, by completion mode: 2007**

Completion mode	Number selected for the reinterview	Participated in reinterview	
		Number	Percent
Total	310	220	71.2
Self-administered	140	100	69.7
Interviewer-administered	160	120	72.6

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

**Results.** The items selected for the B&B:08/09 reliability reinterview included those that were new to the B&B survey and items that warrant further monitoring. For each item evaluated, the number of cases, percentage agreement between the initial interview and reinterview, and relational statistic are shown. Reliability statistics are presented overall and by administration mode. Mode differences were tested for statistical significance and noted where relationships were found.

For discrete variables, percent agreement was based on the extent to which responses to the initial interview matched exactly to the reinterview responses. For continuous variables, responses were considered in agreement if the initial interview responses were within one standard deviation of the reinterview responses.

The relational statistics provided help to quantify the strength of association between the two variables being compared, where 1.00 indicates a perfect correlation (i.e., an exact match

<sup>17</sup> In a very few cases (fewer than five) the reinterview was not completed in the same mode as the original interview. This was allowed when the sample member selected for the reinterview wished to participate but could not use the same administration mode (e.g., if Internet access was no longer available).

between the item on the initial interview and the same item on the reinterview for all respondents). The relational statistic, Cramer's  $V$ , was used for items with discrete, unordered response categories (e.g., *yes* or *no*). Kendall's tau- $b$  ( $\tau_b$ ) estimated the relationship between items with ordered categories (e.g., not at all, occasionally, and frequently). Lastly, the Pearson product-moment correlation coefficient ( $r$ ) was used for variables yielding interval or ratio responses (e.g., income).

The Undergraduate Education section gathered information about all colleges, universities, or trade schools attended by the respondent before his or her receipt of the bachelor's degree from the NPSAS school, as well as information about the respondent's NPSAS school and any undergraduate financial aid information. Results are shown in table 38. Four items asked about enrollment at the NPSAS school, and agreement ranged from 86 percent to 93 percent. The three undergraduate loan items in table 38 show a high percentage of agreement as well (83 percent to 97 percent).

Finally, two questions shown in table 38 asked about satisfaction with the undergraduate major and school choice. Agreement for these two items was 94 percent for "satisfaction with undergraduate major choice" and 85 percent for "cost/time of education worth career options/earnings." For the section as a whole, the percentage of agreement was high, ranging from 83 percent to 97 percent. Eight of the nine items had a relational statistic greater than 0.5.

The Postbaccalaureate Education/Training section contained questions about enrollment in any colleges, universities, or trade schools that the respondent had attended since he or she had received the bachelor's degree from the NPSAS school and about the intended field of study. Table 38 shows that the percentage of agreement for these two items was 94 percent and 82 percent, both with a relational statistic of .9.

The next section focused on Postbaccalaureate Employment. Two questions were included in the reinterview about employment since the respondent's receipt of the bachelor's degree from the NPSAS school: one about the number of jobs applied for to obtain the current job and the other about whether the respondent had been employed in the previous 12 months. As shown in table 38, the percentage of agreement for these two items was 93 percent and 83 percent, and the relational statistics were .7 and .5, respectively.

The Teaching section gathered information about the respondent's experiences with or interest in teaching at the kindergarten through the 12th-grade level. Reliability results for these items are shown in table 38. The item that asked if the respondent taught since graduating from the NPSAS school had 98 percent agreement, with a relational statistic of .9. Among those who had taught and been certified, the type of teacher certification had 77 percent agreement and a relational statistic of .9.

Certified teachers were asked about the content area of their certification, and results are presented in table 38. Multiple responses were allowed, and percentage agreement ranged from 68 percent (for secondary education certification) to 100 percent. Six of the content areas had percentage agreement of 100 percent. The relational statistic for these items varied from -.1 to 1.0.

The reinterview also included questions regarding background characteristics. In table 38, the seven items regarding the reason that the respondent moved away from the NPSAS school had a percentage agreement between 82 percent and 97 percent, and the relational statistics ranged from .4 to .9.

Reliability results for the items regarding household composition are shown in table 38. This item set had a high percentage agreement from 92 percent to 97 percent, and the relational statistics

were between .4 and .8. Table 38 presents results for the income items: respondent's income, spouse's employment status, and spouse's income. The income items were very reliable, with 93 percent to 98 percent agreement, with relational statistics from .6 to .9.

Two questions were asked about volunteering. In table 38 the number of interview hours volunteered was consistent with the number of reinterview hours volunteered, with 89 percent agreement. Interviewer-administered respondents were more likely to report consistently that the volunteering event was a one-time event (98 percent agreement) than self-administered respondents (73 percent [ $\chi = 3.3, p < .01$ ]). The consistency of the answers about the benefits received from volunteering ranged from 70 percent to 93 percent agreement. Four benefits received from volunteering had less than 80 percent agreement: "Addition to resume" had 70 percent agreement; "new way of looking at life" had 75 percent agreement; both "become a compassionate person" and "develop real-world knowledge/skills" had 76 percent agreement.

**Table 38. Reliability indices, by interview section: 2008**

Variable	Variable label	Total			Self-administered			Interviewer-administered		
		Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic	Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic	Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic
Undergraduate Education: enrollment										
RBOTHSCH	Attended other colleges before completing bachelor's at NPSAS	140	92.7	0.83 <sup>3</sup>	60	93.4	0.85 <sup>3</sup>	80	92.1	0.82 <sup>3</sup>
RBNPCONT	Continuously enrolled at NPSAS for bachelor's degree	220	87.6	0.50 <sup>6</sup>	100	84.9	0.42 <sup>6</sup>	120	89.8	0.57 <sup>3,5,6</sup>
RBNPMJCH	Ever formally changed major at NPSAS	220	91.7	0.82 <sup>4</sup>	100	87.8	0.73 <sup>4</sup>	120	95.0	0.92 <sup>4</sup>
RBNPMGEN	Final major at NPSAS: General code	210	86.3	0.84 <sup>3</sup>	90	83.9	0.88 <sup>3</sup>	120	88.2	0.89 <sup>3</sup>
Undergraduate Education: loans										
RBUGLAM	Amount borrowed in undergraduate loans	140	96.5	0.92 <sup>4</sup>	70	96.9	0.93 <sup>4</sup>	80	96.2	0.90 <sup>4</sup>
RBUGPRIV	Amount borrowed in private undergraduate loans	40	86.8	0.37 <sup>4</sup>	10	91.7	0.46 <sup>4</sup>	30	84.6	0.35 <sup>4</sup>
RBUGPRDK	Amount borrowed in private undergraduate loans: Don't know	60	82.5	0.56 <sup>6</sup>	30	80.0	0.61 <sup>3,6</sup>	30	84.4	0.24 <sup>6</sup>
Undergraduate Education: satisfaction										
RBMAJCHO	Satisfaction with undergraduate major choice	220	93.6	0.73 <sup>3,4</sup>	100	93.9	0.81 <sup>3</sup>	120	93.3	0.56 <sup>3,4</sup>
RBCOBEN	Cost/time of education worth career options/earnings	220	84.7	0.62 <sup>3,4</sup>	100	81.6	0.61 <sup>3</sup>	120	87.2	0.61 <sup>3,4</sup>
Postbaccalaureate Education/Training										
RCPSTGRD	Enrolled in any school for Postbaccalaureate education	220	94.0	0.88 <sup>3</sup>	100	97.0	0.94 <sup>3</sup>	120	91.6	0.83 <sup>3</sup>
RCINTGEN	Intended major: General code	90	82.0	0.88 <sup>3</sup>	40	81.0	0.88 <sup>3</sup>	50	83.0	0.93 <sup>3</sup>
Postbaccalaureate Employment										
RNUMAPP	Number of jobs applied for current job	180	93.4	0.71 <sup>4</sup>	80	93.8	0.73 <sup>4</sup>	100	91.1	0.68 <sup>4</sup>

Variable	Variable label	Total			Self-administered			Interviewer-administered		
		Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic	Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic	Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic
RDWRK12M	Employed during the last 12 months	40	83.3	0.48 <sup>3,5</sup>	20	89.5	0.68 <sup>3,5</sup>	20	76.5	0.23 <sup>3,5</sup>
K-12 Teaching										
REEVRTCH	Taught since graduating from NPSAS	190	98.4	0.87 <sup>3,4</sup>	90	97.8	0.85 <sup>3,4</sup>	100	99.0	0.91 <sup>3,4</sup>
RECRTTYP	Type of teacher certification	30	76.9	0.85 <sup>3</sup>	10	77.8	† <sup>3</sup>	20	76.5	0.88 <sup>3</sup>

See notes at end of table.

**Table 38. Reliability indices, by interview section: 2008—Continued**

Variable	Variable label	Total			Self-administered			Interviewer-administered		
		Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic	Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic	Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic
K-12 Teaching: certification content area										
RECGENA	Content area certification: Elementary education	30	84.0	0.62 <sup>3,4</sup>	10	66.7	0.35 <sup>3,6</sup>	20	93.8	0.79 <sup>3,4</sup>
RECGENB	Content area certification: Secondary education	30	68.0	0.26 <sup>6</sup>	10	66.7	0.35 <sup>3,6</sup>	20	68.8	0.09 <sup>6</sup>
RECSPCED	Content area certification: Special education	30	100.0	† <sup>3</sup>	10	100.0	† <sup>3</sup>	20	100.0	† <sup>3</sup>
RECART	Content area certification: Arts and music	30	100.0	1.00 <sup>3</sup>	10	100.0	1.00 <sup>3</sup>	20	100.0	1.00 <sup>3</sup>
RECENGL	Content area certification: English and language arts	30	96.0	0.87 <sup>3</sup>	10	100.0	1.00 <sup>3</sup>	20	93.8	0.83 <sup>3</sup>
RECESL	Content area certification: English as a second language	30	100.0	† <sup>3</sup>	10	100.0	† <sup>3</sup>	20	100.0	† <sup>3</sup>
RECFLNG	Content area certification: Foreign languages	30	100.0	1.00 <sup>3</sup>	10	100.0	1.00 <sup>3</sup>	20	100.0	† <sup>3</sup>
RECHELTH	Content area certification: Health/physical education	30	96.0	0.89 <sup>3</sup>	10	88.9	0.76 <sup>3</sup>	20	100.0	1.00 <sup>3</sup>
RECMATH	Content area certification: Math and computer science	30	100.0	1.00 <sup>3</sup>	10	100.0	1.00 <sup>3</sup>	20	100.0	1.00 <sup>3</sup>
RECSCIEN	Content area certification: Natural sciences	30	88.0	-0.06 <sup>6</sup>	10	88.9	† <sup>3</sup>	20	87.5	0.07 <sup>6</sup>
RECSOSCI	Content area certification: Social sciences	30	88.0	0.60 <sup>6</sup>	10	100.0	1.00 <sup>3</sup>	20	81.3	0.46 <sup>6</sup>
RECVOCTC	Content area certification: Vocational/career/technical education	30	96.0	† <sup>3</sup>	10	88.9	† <sup>3</sup>	20	100.0	† <sup>3</sup>
REMISC	Content area certification: Miscellaneous	30	100.0	1.00 <sup>3</sup>	10	100.0	† <sup>3</sup>	20	100.0	1.00 <sup>3</sup>
RECOTHER	Content area certification: Other	30	92.0	† <sup>3</sup>	10	100.0	† <sup>3</sup>	20	87.5	† <sup>3</sup>

Student Background: reason moved away

Variable	Variable label	Total			Self-administered			Interviewer-administered		
		Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic	Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic	Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic
RFCWORK	Reason moved away from NPSAS: Work-related reasons	120	82.2	0.64 <sup>3</sup>	50	80.7	0.62 <sup>3</sup>	70	83.3	0.66 <sup>3</sup>
RFCADEDU	Reason moved away from NPSAS: Pursue additional education	120	96.6	0.92 <sup>3</sup>	50	100.0	1.00 <sup>3</sup>	70	93.9	0.86 <sup>3</sup>
RFCNRFAM	Reason moved away from NPSAS: Closer to family/friends	120	93.2	0.82 <sup>3</sup>	50	96.2	0.91 <sup>3</sup>	70	90.9	0.73 <sup>3,4</sup>
RFCFRFAM	Reason moved away from NPSAS: Farther from family/friends	120	96.6	0.50 <sup>3,4</sup>	50	94.2	0.61 <sup>3,4</sup>	70	98.5	† <sup>3</sup>

See notes at end of table.

**Table 38. Reliability indices, by interview section: 2008—Continued**

Variable	Variable label	Total			Self-administered			Interviewer-administered		
		Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic	Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic	Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic
Student Background: reason moved away—Continued										
RFCPERSL	Reason moved away from NPSAS: Personal reasons	120	82.2	0.36 <sup>3,4,6</sup>	50	84.6	0.57 <sup>4,6</sup>	70	80.3	0.03 <sup>3,4,6</sup>
RFCAREA	Reason moved away from NPSAS: Live in a new area	120	83.9	0.38 <sup>3,4,6</sup>	50	82.7	0.51 <sup>4,6</sup>	70	84.9	0.10 <sup>3,4,6</sup>
RFCORSN	Reason moved away from NPSAS: Other	120	85.6	0.46 <sup>3,4,6</sup>	50	88.5	0.50 <sup>4,6</sup>	70	83.3	0.43 <sup>3,4,6</sup>
Student Background: household composition										
RFALONE	Household composition: Live alone	220	93.6	0.82 <sup>3</sup>	100	92.0	0.76 <sup>3,5</sup>	120	94.9	0.87 <sup>3,5</sup>
RFSPODP	Household composition: Live with spouse or domestic partner	220	93.5	0.84 <sup>3</sup>	100	95.0	0.86 <sup>3</sup>	120	92.4	0.82 <sup>3</sup>
RFDPTS	Household composition: Live with children/dependents	220	94.0	0.74 <sup>3,4</sup>	100	96.0	0.78 <sup>3,4</sup>	120	92.4	0.72 <sup>3,4</sup>
RFPARIL	Household composition: Live with parents or in-laws	220	94.9	0.85 <sup>3</sup>	100	96.0	0.89 <sup>3</sup>	120	94.1	0.82 <sup>3</sup>
RFSIBOR	Household composition: Live with siblings or other relatives	220	96.8	0.70 <sup>3,4</sup>	100	99.0	0.81 <sup>3</sup>	120	94.9	0.68 <sup>3,4</sup>
RFROOM	Household composition: Live with roommate(s)	220	92.2	0.76 <sup>3,4</sup>	100	89.9	0.75 <sup>3,4</sup>	120	94.1	0.75 <sup>3,4</sup>
RFHOTH	Household composition: Other	220	97.2	0.40 <sup>3,4,6</sup>	100	98.0	0.57 <sup>4,6</sup>	120	96.6	0.32 <sup>3,4,6</sup>
Student Background: income										
RFINCOM	Income in 2007	190	95.8	0.90 <sup>4</sup>	90	98.8	0.93 <sup>4</sup>	110	93.3	0.86 <sup>3,4,5</sup>
RFSEMP	Spouse employed in 2007	40	93.0	0.63 <sup>3,5</sup>	20	94.4	0.79 <sup>3,5</sup>	30	92.0	0.46 <sup>6</sup>
RFINCSP	Spouse's income in 2007	40	97.6	0.94 <sup>4</sup>	20	100.0	0.95 <sup>4</sup>	20	95.8	0.94 <sup>4</sup>
Student Background: volunteering										

Variable	Variable label	Total			Self-administered			Interviewer-administered		
		Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic	Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic	Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic
RFVLHRS	Number of hours volunteered per month	70	89.0	0.58 <sup>4,6</sup> <sub>3,5</sub>	30	84.9	0.68 <sup>4</sup> <sub>3</sub>	40	92.5	0.49 <sup>4,6</sup>
RFVLONE	One-time volunteer event	90	84.6	0.16 <sup>6</sup>	50	72.9	0.09 <sup>5,6</sup>	40	97.7	† <sup>3,6</sup>
RFRTCAR	Volunteer benefits: Helped career	90	81.6	0.62 <sup>3</sup>	40	81.8	0.62 <sup>3</sup>	40	81.4	0.63 <sup>3</sup>
RFRTREAL	Volunteer benefits: Develop real-world knowledge/skills	90	76.1	0.46 <sup>3,6</sup> <sub>3,6</sub>	50	75.6	0.48 <sup>3,6</sup>	40	76.7	0.44 <sup>3,6</sup>
RFRTRES	Volunteer benefits: Addition to resume	90	70.1	0.41 <sup>6</sup>	40	75.0	0.51 <sup>3,6</sup>	40	65.1	0.32 <sup>3,6</sup>
RFRTMAJ	Volunteer benefits: Clarified choice of major	90	80.5	0.42 <sup>6</sup> <sub>3,5</sub>	40	84.1	0.49 <sup>5,6</sup> <sub>3</sub>	40	76.7	0.39 <sup>6</sup> <sub>3,5</sub>
RFRTCOM	Volunteer benefits: Become a compassionate person	90	76.1	0.39 <sup>6</sup> <sub>3,5</sub>	50	73.3	0.41 <sup>5,6</sup> <sub>3</sub>	40	79.1	0.34 <sup>6</sup> <sub>3,5</sub>

See notes at end of table.

**Table 38. Reliability indices, by interview section: 2008—Continued**

Variable	Variable label	Total			Self-administered			Interviewer-administered		
		Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic	Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic	Number of cases <sup>1</sup>	Percent agreement <sup>2</sup>	Relational statistic
Student Background: volunteering—Continued										
RFRTSOC	Volunteer benefits: Awareness of social issues	90	79.5	0.50 <sup>3,5</sup>	50	75.6	0.50 <sup>3,5</sup>	40	83.7	0.50 <sup>3,5</sup>
RFRTPER	Volunteer benefits: New way of looking at life	90	75.3	0.52 <sup>3</sup>	50	76.1	0.57 <sup>3</sup>	40	74.4	0.49 <sup>3,6</sup>
RFRTVARY	Volunteer benefits: Work with variety of people	90	82.0	0.42 <sup>6</sup> <sub>3,5</sub>	50	82.6	0.45 <sup>5,6</sup> <sub>3</sub>	40	81.4	0.39 <sup>6</sup> <sub>3,5</sub>
RFRTSAT	Volunteer benefits: Sense of satisfaction	90	93.3	0.21 <sup>6</sup>	50	89.1	0.23 <sup>5,6</sup>	40	97.7	† <sup>3,6</sup>

† Not applicable.

<sup>1</sup> Analyses were conducted only for respondents with responses on both the initial interview and the reinterview; not all questions were applicable to all respondents.

<sup>2</sup> This percentage reflects an exact match of the paired responses.

<sup>3</sup> Cramer's V is the relational statistic used for items with discrete, unordered response categories.

<sup>4</sup> Kendall's tau-b is the relational statistic used for items with ordered categories.

<sup>5</sup> Pearson's product-moment correlation coefficient r is the relational statistic used for variables yielding interval or ratio responses.

<sup>6</sup> This relational statistic appears to be deflated due to little variation across valid response categories. As a result, minor changes in the distribution of responses between the initial interview and the reinterview tend to lower the relational statistic.

NOTE: Detail may not sum to totals because of rounding. NPSAS = National Postsecondary Student Aid Study.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

Overall, results of the reinterview analysis indicate that the survey yields data of high quality, with consistently reliable results. With one exception, reliability did not differ by administration mode. The majority of items (51 out of 57) had a percentage agreement of 80 percent or higher.

#### 5.1.4 Interviewer Delivery and Data Entry Error Rates

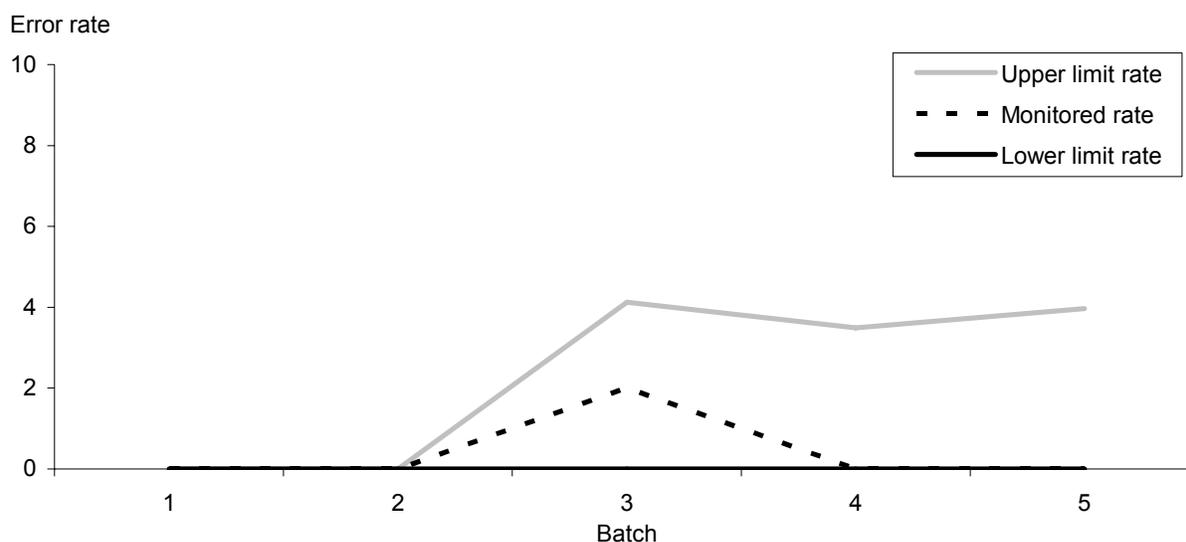
Regular monitoring of computer-assisted telephone interviewing (CATI) data collection improves interviewing and enhances data quality. Monitoring throughout the B&B:08/09 field test helped to meet these important quality objectives:

- identification of problem items;
- reduction in the number of interviewer errors;
- improvement in interviewer performance by reinforcing desired strategies; and
- assessment of the quality of the data collected.

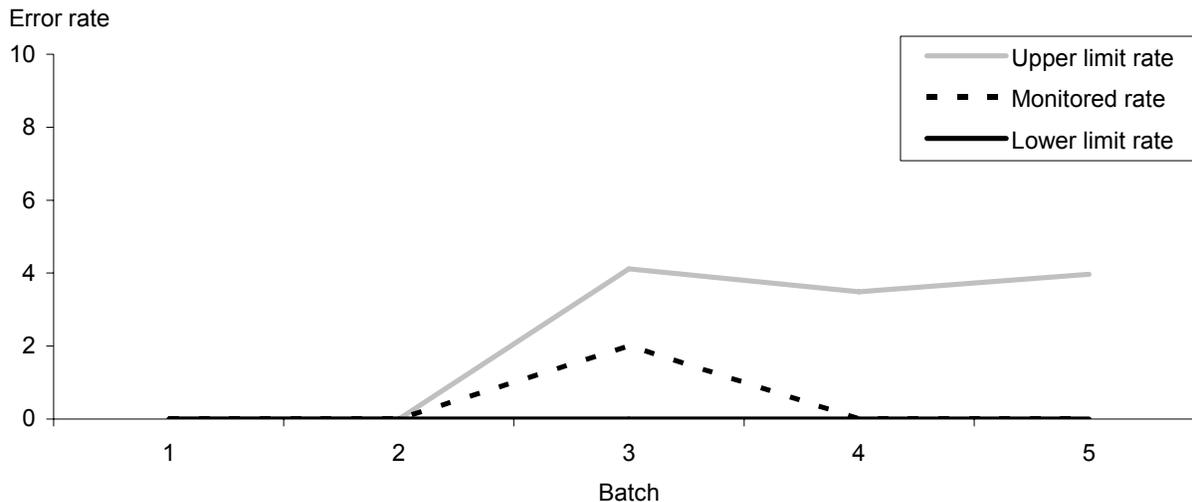
Specially trained monitors simultaneously listened to and viewed CATI data collection using remote monitoring telephones and computer equipment. This system allowed monitors to observe live interviews without disturbing the interviewer or respondent. Monitors listened to up to 20 questions during an ongoing interview and evaluated both question delivery and data entry. To guarantee an accurate reflection of data collection activities, monitors conducted their evaluations throughout all of the CATI data collection, including day, evening, and weekend shifts.

Daily, weekly, and cumulative question delivery and data entry outcomes were measured and displayed on the Integrated Management System (IMS). During CATI data collection, 231 items were monitored. Of these items, call center staff observed only two errors (one question delivery error and one keying error), yielding very low error rates overall. Figures 14 and 15 illustrate the question delivery and data entry errors, respectively. Results are shown in batches of 50 monitoring observations.

**Figure 14. Question delivery error rate, by batch: 2008**



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

**Figure 15. Data entry error rate, by batch: 2008**

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

### 5.1.5 Help Desk

As described in chapter 2, a help desk was available to assist respondents in completing the self-administered web interview. Help desk agents (HDAs) were trained to answer calls received from the help desk hotline, as well as to conduct telephone interviews, as needed. HDAs also assisted sample members with questions about the interview and provided technical assistance to sample members who experienced problems while completing the self-administered web interview. HDAs also responded to voice-mail messages left by respondents when the call center was closed or when HDAs were otherwise busy.

A web-based software program was developed to record each help desk incident that occurred during data collection. For each incident, HDAs confirmed contact information for the sample member and recorded the type of problem, a description of the problem and resolution, and incident status (pending or resolved).

Table 39 provides a summary of help desk incidents encountered during B&B:08/09 data collection. HDAs assisted 93 sample members (5 percent of the sample) with 102 total incidents. Calls from sample members requesting their study ID, password, or both were the most common type of help desk incident (69 percent). The second most common type of call was for miscellaneous issues (9 percent). Further, 7 percent were outbound calls placed to sample members when they requested to be contacted via the study website. Inquiries regarding questionnaire content accounted for 2 percent of help desk incidents, while incidents involving “Program error call-in,” “Questions about the study,” and “Routing/skip problems” each accounted for 1 percent of help desk incidents.

**Table 39. Help desk requests, by type of incident reported: 2008**

Type of incident reported	Number of requests	Percent of requests
Total	102	100.0
Study ID/password	70	68.6
Website down/unavailable	5	4.9
Program error call-in	1	1.0
Questionnaire content	2	2.0
Questions about the study	1	1.0
Routing/skip problems	1	1.0
Pop-up blocker issues	6	5.9
Website contact requests	7	6.9
Other problems, not classifiable	9	8.8

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09).

Quality Circle (QC) meetings were critical to ensuring that project staff, call center and field supervisory staff, and telephone and field interviewers were communicating on a regular basis about the goals of the study and addressing challenges encountered along the way. These meetings provided a forum for discussing elements of the survey instrument, questionnaire design, and interview cooperation tactics; motivating the group toward the goals of the study; and acquiring feedback on data collection issues. Weekly QC meetings for telephone staff were held at the call center, while the QC meeting for the field staff was held as a conference call. For interviewing staff unable to attend the meetings, notes were distributed by interviewer supervisory staff. A summary of issues addressed in the meetings is outlined below:

- clarification of questions and item responses;
- interviewer submission of problem sheets;
- importance of providing detailed case comments;
- help desk operations;
- data security protocols;
- methods of gaining cooperation from sample members and gatekeepers (e.g., parents and roommates); and
- general morale boosting and reinforcement of positive interviewing techniques.

Throughout the duration of the study, a variety of issues were addressed at the QC meetings that reinforced specific content from training and contributed to prompt problem solving. Some of the issues covered in QC meetings included the following:

**Writing problem sheets.** Reporting problems when they occur is an important part of telephone interviewing. Interviewers were trained to report problems electronically and to provide specific detail, including (but not limited to) the problem that occurred, when it occurred, and the specific point in the interview at which it occurred. Problem sheets further delineated how the issue was addressed. Review of problem sheets in QC meetings was a critical means through which staff learned to recognize and manage the different problems that they would encounter.

**Eligibility criteria.** Because of the considerable complexity of the eligibility criteria, interviewers were reminded to allow eligibility determination to be made by the programmed instrument.

**Gaining cooperation.** Discussions focused on the difficulty of gaining a sample member's trust during the initial phases of the call. Refusal avoidance strategies were revisited during QC meetings and adapted, as needed, for problems specific to the B&B:08/09 data collection. For example, obtaining new contact information from parents (for sample members no longer living at home) was a focal point for many discussions. Interviewers shared tips for overcoming parent concerns and found ways to benefit and learn from others' experiences.

**Questionnaire.** Interviewers were given hard copies of the questionnaire and asked to read and review the questions to identify any items that seemed to be confusing or misleading. During QC meetings, particular problems with question wording and other aspects of the interview were discussed.

**Interviewer debriefings.** At the conclusion of the B&B:08/09 field test, project staff held debriefing meetings with the telephone and field interviewers to learn more about the field test experience. Interviewer debriefings focused on what worked well and what could be improved with respect to the following:

- help desk and interviewer training sessions;
- tracing and locating strategies;
- avoiding and converting reluctant respondents and refusal cases;
- interview administration, including questions and coding systems that were difficult for the respondents to answer or the interviewers to code; and
- use of incentives and mailouts.

A summary of the telephone and field interviewer debriefing meetings was prepared and will be considered when planning B&B:08/09 full-scale data collection in 2009.

### 5.1.6 Student Evaluation of Interview

After completing the student interview, respondents were asked a set of additional questions that dealt primarily with their experience with completing the interview. These items also addressed technical issues with the Web interface and were designed to alert project staff to improvements that could be made in the B&B full-scale study. Respondents were informed that the additional questions were optional. Table 40 displays the response rates to the opinions section, by mode of administration. Computer-assisted personal interviewing (CAPI) respondents are excluded from this analysis because the opinions section had not been administered to them. Nearly all Web and CATI respondents completed this optional section.

**Table 40. Opinions response rates for student interview respondents, by mode of administration: 2008**

Mode of administration	Total interview respondents	Completed debriefing questionnaire	
		Number	Percent
Total respondents	1,150	1,140	99.6
Self-administered	870	870	99.8
Interviewer-administered	280	280	99.3

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008 Baccalaureate and Beyond Longitudinal Study (B&B:08) Field Test.

Overall, a low percentage of self-administered respondents reported specific difficulties with the Web interface. Eighteen percent of respondents, however, reported difficulty accessing the survey because of pop-up blockers. Outside of the pop-up blocker issue, respondents reported little difficulty with the survey. Table 41 shows the percentage of respondents who cited technical difficulties in completing the self-administered web interview.

**Table 41. Problems reported by self-administered debriefing respondents: 2008**

Problem	Number	Percent
Accessing the survey because of a pop-up blocker	160	17.9
Connecting to the B&B website or survey	40	4.2
Entering your answers to the survey questions	30	3.0
Moving backward or forward through the survey	20	1.7
Restarting the survey after already completing some of the survey questions	10	1.2
Accessing additional information through the use of the "Help" features	#	0.3
Some other difficulty	30	3.0
None of the above	560	64.2

# Rounds to zero.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008 Baccalaureate and Beyond Longitudinal Study (B&B:08) Field Test

Respondents were asked how the B&B:08/09 field test instrument performed in terms of speed compared with other online surveys. The majority of self-administered respondents reported that the B&B interview performed the same as (51 percent) or faster than (13 percent) other online surveys. Ten percent reported that the B&B interview performed slower than other surveys. The remaining self-administered respondents answered either that they did not know or that they had not completed other online surveys.

Interviewer-administered respondents were also asked an optional questionnaire at the end of the field test interview. Over one-quarter (28 percent) of interviewer-administered respondents reported that they had attempted to complete the self-administered interview at some point during data collection. Table 42 presents the reasons interviewer-administered respondents provided for choosing to complete the B&B interview over the telephone rather than on their own over the Internet. Convenience and computer access issues were cited as the most common reasons for doing a telephone interview. Almost one-half (49 percent) of interviewer-administered respondents

provided an open-ended response that was categorized as “Other.” Problems with the login ID/password comprised 30 percent of these other reasons.

**Table 42. Reasons for completing the interview via telephone versus the Web: 2008**

Problem	Number	Percent
Telephone interview was more convenient	70	25.5
No access to a computer	20	8.0
Could not connect to the B&B website or survey	10	4.7
Encountered error in Web survey	10	3.3
Prefer not to use computers	#	1.5
Had trouble accessing the survey on the Web because of a pop-up blocker	#	0.7
Website was too confusing	#	0.7
Interview took too long on the website	#	0.4
Other	140	49.1

# Rounds to zero.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008 Baccalaureate and Beyond Longitudinal Study (B&B:08) Field Test.

### 5.1.7 Online Coding and Editing

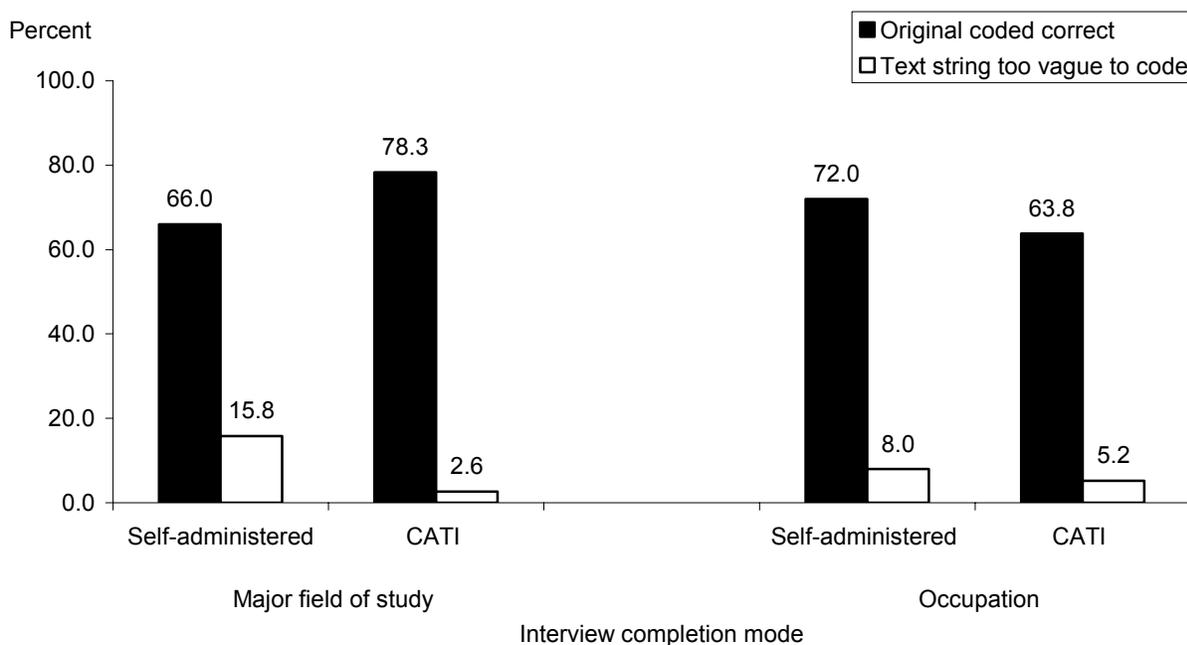
Coding systems used to categorize students’ institution, major, occupation, and employer’s industry were standardized into predetermined categories (see section 2.2.1.1 for a discussion of the B&B:08/09 coding systems). Coding system results were evaluated as described below.

#### 5.1.7.1 Recoding

The procedures used to code major or field of study and occupation were assessed by expert coders who reviewed the selected text string and associated code. A random sample of 25 percent of all text strings submitted was selected and reviewed by expert coders to assess the accuracy of the coding process.

For major coding, respondents used an assisted coder that returned one or more specific areas of study that matched most closely to the text string provided by the respondent. If no areas matched, respondents were offered a pair of dropdown boxes containing general areas and, as applicable, secondary areas of study. As shown in figure 16, self-administered respondents coded their major correctly 66 percent of the time, while interviewer-administered respondents correctly coded their major 78 percent of the time ( $\chi^2 = 2.77, p < .01$ ). While 3 percent of the interviewer-administered text strings were too vague to code accurately, 16 percent of self-administered respondents’ text strings were too vague to code accurately ( $\chi^2 = 4.21, p < .01$ ).

For occupation coding, respondents used an assisted coder that returned one or more specific occupations that matched most closely to the text string provided by the respondent. If no areas matched, respondents were offered a pair of dropdown boxes containing general areas, secondary areas, and a detailed occupation classification. Self-administered respondents were no more likely to have a text string that was too vague to code accurately (8 percent) than were interviewer-administered respondents (5 percent [ $\chi^2 = 0.67, p > .10$ ]).

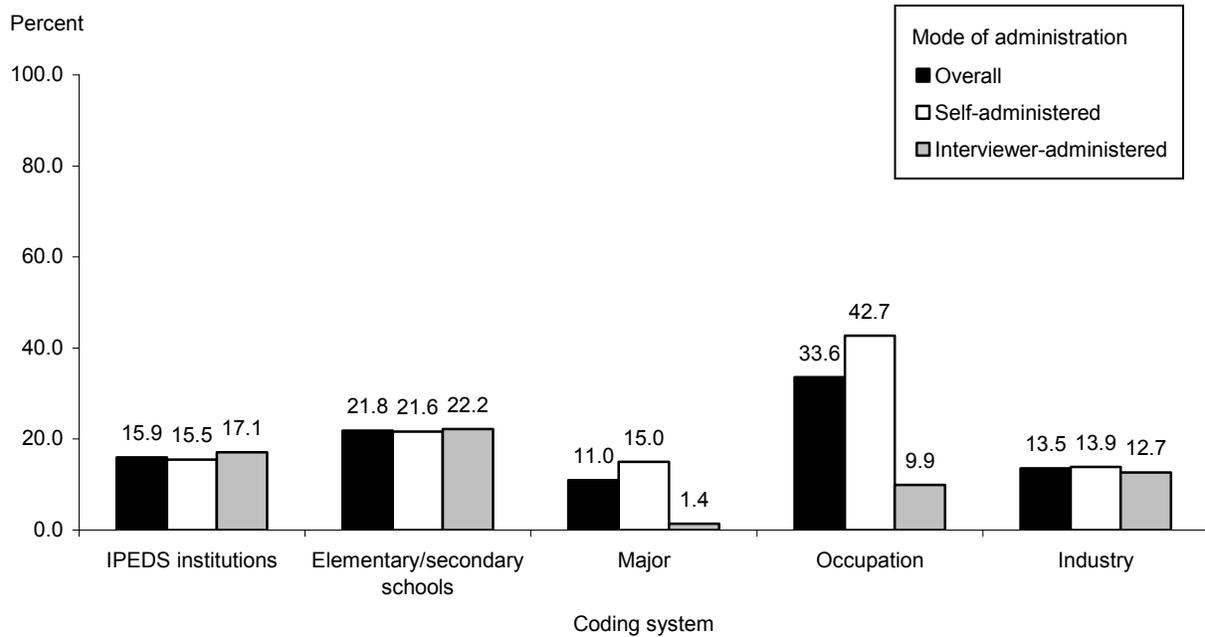
**Figure 16. Summary of recode results, by completion mode: 2008**

NOTE: CATI = computer-assisted telephone interviewing.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

### 5.1.7.2 Upcoding

In addition to evaluating the accuracy of coding performed during the interview, project staff *upcoded* the text strings that were not coded in the instrument; that is, strings that were entered but not coded into a category during an interview were subsequently reviewed and coded by project staff. Approximately 16 percent of all postsecondary institutions that were entered into the coder required upcoding. The upcoding rate for self-administered interviews (15 percent) was not different than that for interviewer-administered interviews (17 percent [ $\chi^2 = 0.73, p > .10$ ]). Almost 22 percent of all elementary and secondary schools entered into the coder needed upcoding. The upcoding rate for self-administered interviews was equal to interviewer-administered interviews (22 percent [ $\chi^2 = 0.11, p > .10$ ]). Of the 11 percent of majors or fields of study that needed upcoding, there was a statistical difference between self-administered (15 percent) and interviewer-administered interviews (1 percent [ $\chi^2 = 8.31, p < .01$ ]). Roughly 33 percent of the occupations needed upcoding. Again, the upcoding rate for self-administered interviews (43 percent) was far higher than for interviewer-administered interviews (10 percent [ $\chi^2 = 9.93, p < .01$ ]). Nearly 14 percent of industries needed upcoding. The upcoding rate for self-administered interviews (14 percent) was not different than for interviewer-administered interviews (13 percent [ $\chi^2 = 0.46, p > .10$ ]). Results of the upcoding process are shown in figure 17.

**Figure 17. Summary of upcoding results, by coding system and administration mode: 2008**

NOTE: IPEDS = Integrated Postsecondary Education Data System.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

### 5.1.8 Post-Data-Collection Editing

The B&B:08/09 field test data were edited using procedures developed and implemented for previous studies sponsored by NCES, including the base-year study, NPSAS:08. These procedures were tested again during the B&B:08/09 field test in preparation for the full-scale study.

Following data collection, the information collected in the student instrument was subjected to various QC checks and examinations. These checks were to confirm that the collected data reflected appropriate skip patterns. Another evaluation examined all variables with missing data and substituted specific values to indicate the reason for the missing data. A variety of explanations are possible for missing data. For example, an item may not have been applicable to certain respondents, a respondent may not have known the answer to the question, or a respondent may have just skipped the item entirely. Table 43 lists the set of consistency codes used to assist analysts in understanding the nature of missing data associated with B&B data elements.

**Table 43. Description of missing data codes: 2008**

Missing data code	Description
-1	Don't know
-3	Not applicable
-6	Out of range
-8	Item was not reached due to an error
-9	Data missing

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

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 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 several iterations and many multiway cross-tabulations to ensure that the proper data were captured.

The data cleaning and editing process for the B&B:08/09 field test data files 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 instrument database. A one-way frequency distribution of every variable was reviewed to confirm that no missing or blank values remained. These same one-way frequencies revealed any out-of-range or outlier values, which were investigated and checked for reasonableness against other data values (e.g., hourly wages of \$0.10, rather than \$10.00). Creating formats from expected values and the associated value labels also revealed any categorical outliers.

Descriptive statistics were produced for all continuous variables. All values less than zero were temporarily recoded to missing. Minimum, median, maximum, and mean values were examined to assess reasonableness of responses, and anomalous data patterns were investigated and corrected, as necessary.

- Step 2.** Legitimate skips were identified using instrument source code. Gate-nest relationships were defined to replace -9s (missing for unknown reason) with -3s (not applicable), as appropriate. Two-way cross-tabulations between each gate-nest combination were evaluated, and high numbers of nonreplaced -9 codes were investigated to ensure skip-pattern integrity.

Nested values were further quality checked to reveal instances in which the legitimate skip code overwrote valid data, which typically occurred if a respondent answered a gate question and the appropriate nested item(s) but then backed up and changed the value of the gate, following an alternate path of nested item(s). Responses to the first nested item(s) remained in the database and, therefore, required editing.

- Step 3.** Variable formatting (e.g., formatting dates, such as YYYYMM) and standardization of time units, for items that collected amounts of time in multiple units, were performed during this step.

Also at this step, logical recodes were performed when the value of missing items could be determined from answers to previous questions or preloaded values. For instance, if the student is not currently repaying any education loans, then the monthly payment on education loans is coded to \$0 rather than -3 or -9.

- Step 4.** One-way frequency distributions for all categorical variables and descriptive statistics for all continuous variables were examined. Out-of-range or outlier values were replaced with the value of -6 (bad data, out of range).

- Step 5.** One-way frequencies on all categorical variables were regenerated and examined. Variables with high counts of -9 values were investigated. Because self-administered interview respondents could skip over most items without providing

an answer, -9s did remain a valid value, especially for sensitive items, such as those asking for income information.

Concurrent with the data cleaning process, detailed documentation was developed to describe question text, response options, logical imputations, recoding, and the “administered to” text for each delivered variable. The documentation information can be found in the student instrument facsimile in appendix E.

### 5.1.9 Question-Level Edits

The self-administered web-based student instrument included edit checks to ensure that the data collected were within valid ranges. Examples of some of the general online edit checks include the following:

- Range checks were applied to all numerical entries.
- A consistency check was triggered when a respondent provided a valid answer and then checked a “None of the above” option. Valid options were automatically unchecked when the “None of the above” option was chosen. Conversely, if a respondent selected “None of the above” first and then checked a valid answer, the system automatically unchecked the “None of the above” option.
- If a respondent clicked an “Other” box and did not type a response into the “Other, specify” text box, a pop-up box reminded the respondent to enter text.
- Consistency checks were used for cross-item comparisons. For example, in the undergraduate education section, when asked, “In what month and year were you last enrolled at [NPSAS institution] for your bachelor's degree?” if the response was a date earlier than the date first enrolled at the NPSAS institution, then the respondent was prompted to verify their response.

## 5.2 Student Interview Data Files

The field test data files for B&B:08/09 contain component data files from a variety of sources. Included are student-level data collected from student interviews and government financial aid databases. The following files were produced at the end of the field test:

- **Respondent data file.** Contains interview data collected from approximately 1,270 respondents. Topics include undergraduate education, Postbaccalaureate education, Postbaccalaureate employment, teaching experiences, and the respondent’s background.
- **Central Processing System (CPS) 2007–08 data file.** Contains data received for the approximately 370 sample members who matched to the 2007–08 federal aid application files.
- **CPS 2008–09 data file.** Contains data received from CPS for the approximately 260 sample members who matched to the 2008–09 federal aid application files.
- **National Student Loan Data System (NSLDS) file.** Contains raw loan-level data for the nearly 1,330 sample members who received federal education loans. The NSLDS file is a history file with separate records for each transaction in the loan files and therefore can have multiple records per case spanning several academic years.

- **Pell Grant data file.** Contains raw grant-level data received from NSLDS for the approximately 790 sample members who received Pell Grants during the 2007–08 academic year or prior years. The Pell data file is a history file with separate records for each transaction in the Pell system and therefore can have multiple records per case.
- **National Science and Mathematics to Retain Talent (SMART) Grant data file.** Contains raw grant-level data received from NSLDS for the 20 sample members who received SMART Grants during the 2007–08 academic year or prior years. The SMART Grant data file is a history file with separate records for each transaction in the database and therefore can have multiple records per case.

### 5.3 B&B Eligibility Evaluation

As described in section 2.1.2, the base-year NPSAS field test sample included about 600 interview nonrespondents who were either classified as potential bachelor’s recipients in the student institutional records obtained through computer-assisted data entry (CADE) or were identified as such according to the initial classification by the NPSAS sample institution at the time of student sampling (prior to base-year data collection). All NPSAS nonrespondents who were potential bachelor’s recipients were included in the B&B field test sample to help determine the stratification and sampling rates for the full-scale nonrespondent subsample.

Table 44 shows the distribution of the B&B field test sample, by base-year status and transcript status. About 81 percent of those confirmed to be eligible in the NPSAS interview had a transcript that confirms eligibility; 7 percent were not eligible, based on transcripts; and 12 percent did not have a transcript. Table 45 shows the distribution of the B&B field test sample by base-year status and interview outcome. About 80 percent of those confirmed to be eligible in the NPSAS interview had a completed interview; 2 percent were not eligible, based on the interview; and 18 percent did not complete the interview. Table 46 presents the final status of the B&B:08 field test sample across sources.

**Table 44. Distribution of the B&B field test sample, by NPSAS:08 status and transcript status: 2008**

NPSAS:08 status	Transcript status					
	Eligible		Ineligible		No transcript	
	Number	Percent	Number	Percent	Number	Percent
Interview	990	81.1	80	6.6	150	12.3
Noninterview						
Study respondent, B&B eligible in CADE	300	74.2	60	13.5	50	12.3
Study respondent, B&B eligible on enrollment list	50	28.9	100	60.4	20	10.7
Study nonrespondent, B&B eligible in CADE	10	100	#	#	#	#
Study nonrespondent, B&B eligible on enrollment list	10	46.2	10	46.2	#	7.7

# Rounds to zero.

NOTE: Detail may not sum to totals because of rounding. CADE = computer-assisted data entry. NPSAS = National Postsecondary Student Aid Study.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

**Table 45. Distribution of the B&B field test sample, by NPSAS:08 status and interview outcome: 2008**

NPSAS:08 status	Interview outcome					
	Respondent		Nonrespondent		Ineligible	
	Number	Percent	Number	Percent	Number	Percent
Interview	970	79.8	220	18.1	30	2.1
Noninterview						
Study respondent, B&B eligible in CADE	200	48.2	190	47.4	20	4.4
Study respondent, B&B eligible on enrollment list	40	24.5	90	57.2	30	18.2
Study nonrespondent, B&B eligible in CADE	#	28.6	10	71.4	#	#
Study nonrespondent, B&B eligible on enrollment list	10	26.9	10	50	10	23.1

# Rounds to zero.

NOTE: Detail may not sum to totals because of rounding. CADE = computer-assisted data entry. NPSAS = National Postsecondary Student Aid Study.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&amp;B:08/09) Field Test.

**Table 46. Final B&B:08 field test eligible sample: 2008**

Eligible sample	Number	Percent
Field test starting sample	1,820	100.0
Eligible respondents	1,530	83.9
Interview and transcript respondents	1,010	55.4
Interview respondents	140	7.9
Transcript respondents	380	20.6
Ineligible respondents	230	12.5
Nonrespondents	60	3.5

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&amp;B:08/09) Field Test.

## 5.4 Conclusions

This chapter presented summaries of the data quality evaluations for the B&B:08/09 field test data collection. Analysis of the quality of data collected included item reliability and nonresponse, as well as evaluations of quality control procedures, coding processes, help text usage, and debriefing results. File preparation procedures and file structures were also discussed.

Results of the field test evaluations indicate that the instruments, systems, and procedures used for field test data collections were successful. The low percentage of help text hits, the successful administration of conversion text, and low item nonresponse rates suggest that the interview captures quality data. Further, the results from the reliability reinterview indicate that the survey produces consistently reliable results. No major data quality issues were uncovered, based on

the interviewer debriefings, quality assurance monitoring, CATI monitoring, and range and consistency checks.

## Chapter 6.

# Recommendations for the Full-scale Study

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The purpose of the 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) field test was to evaluate procedures and inform planning for the full-scale study. Chapters 3, 4, and 5 of this report documented key field test outcomes and evaluation results. Overall, essential aspects of the field test data collection were conducted successfully, while some results warranted procedural or substantive modifications to the full-scale study design. Recommended changes are summarized in this chapter, particularly those changes whose purpose was to improve the efficiency of data collection and reduce burden on study participants.

### 6.1 B&B:08/09 Full-scale Sample

The B&B:08/09 sample will consist of all students, identified as part of the 2007-08 National Postsecondary Student Aid Study (NPSAS:08), who completed requirements for the bachelor's degree at any time between July 1, 2007, and June 30, 2008. Eligibility for the B&B:08 full-scale cohort will be based primarily on information obtained from each student's transcript. Lacking a transcript, eligibility will be based on responses provided during the NPSAS:08 student interview. Without either the transcript or the interview, eligibility will be based on each student's institutional record, obtained through NPSAS:08 computer-assisted data entry (CADE) or the enrollment list provided by the NPSAS institution at the time of student sampling. The recommendation for the full-scale sample design is to evaluate eligibility based on transcripts prior to selecting and fielding the sample for the follow-up cohort.

In order to have full population coverage of the B&B sample, a subsample of 500 of the NPSAS:08 interview nonrespondents who were either confirmed to be degree candidates in CADE or were listed by the NPSAS sample institution as bachelor's degree candidates will be selected. The selection of the full-scale subsample will be informed by all available information to ensure the highest possible eligibility rate among those selected for the subsample. The transcript data from the baccalaureate-degree-granting institution will be available in time to be a resource for eligibility determination for subsample selection. Another data source, the National Student Clearinghouse (NSC) is a central repository for postsecondary enrollment, degree, and certificate records of participating postsecondary institutions for the 2007–2008 academic year. The NSC will be used to identify potential sample members who received a baccalaureate degree. Additional data, such as loan and grant history data from NSLDS will be reviewed to increase the rate of eligibility among the nonrespondent subsample.

Table 47 displays the expected eligibility and response rates for the full-scale sample, by base-year interview response status. Members of the cohort who are identified from the transcripts as being eligible are then sent to data collection if they were NPSAS:08 interview respondents, or they are eligible for subsampling if they were NPSAS:08 interview nonrespondents. The expected sample sizes for the full-scale study are based on the B&B:08/09 field test results and will be updated prior to sample selection, based on transcript results to date.

**Table 47. Expected eligibility and response rates, by NPSAS:08 field test response status: 2008**

Base-year response status	B&B:08 cohort from NPSAS:08	Sample available for B&B:09 student DC <sup>1</sup>	Expected response rate	Expected interview yield
Total	23,050	17,310	0.86	14,720
NPSAS:08 interview respondents	18,010	16,810	0.87	14,470
NPSAS:08 interview nonrespondents	5,040	500	0.51	250

<sup>1</sup> Members of the cohort who are identified from transcripts as being eligible are then sent to data collection if they were a 2008 National Postsecondary Student Aid Study (NPSAS:08) interview respondent, or they are eligible for subsampling if they were a NPSAS:08 interview nonrespondent.

NOTE: Detail may not sum to totals because of rounding. DC = data collection.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/09 Baccalaureate and Beyond Longitudinal Study (B&B:08/09) Field Test.

## 6.2 Locating and Contacting Sample Members

The field test included an experiment that involved contacting sample members. The experiment compared the use of Priority Mail to sending initial mailing materials with First Class Mail. Based on the results presented in chapter 3, Priority Mail did not significantly improve early response rates during the B&B field test; therefore, 9" x 11" First-Class Mail envelopes will be used to announce the start of full-scale data collection.

The full-scale study will continue to send early address update requests to both sample members and their parents. In addition, the full-scale study will contact sample members throughout data collection using e-mails, postcards, fliers, regular envelopes, Priority Mail, and Federal Express. The full-scale study will also use text messaging as a means of notifying those sample members who have given permission for us to do so about the study.

## 6.3 Data Collection

An experiment conducted during the initial mailing for the field test offered approximately one-half of the sample members a prepaid incentive of either \$5 cash or a \$5 check and promised them an additional \$30 on completion of the interview during the early response phase. The remaining sample members were promised the entire \$35 on completion of the interview. After careful consideration and review of the field test results, the use of a \$5 prepaid cash incentive, with a \$30 incentive promised on completing the interview, is recommended for the early response period in the full-scale study.

In addition, an experiment to assess the benefit of a \$20 incentive for completing the interview during the production phase of data collection was conducted during the field test. The results of the experiment do not support offering the \$20 production incentive during the production phase of data collection. However, sample members that directly refuse to participate in the study, that cannot be located, or that fail to complete a telephone interview within 10 attempts by CCS staff will proceed to the nonresponse phase of data collection. A promised \$35 incentive will be offered to sample members that complete the interview during the nonresponse phase of data collection.

Finally, B&B:08/09 will include a computer-assisted personal interviewing (CAPI) component for full-scale data collection. The CAPI component will include up to 50 field

interviewers (FIs) that will be hired throughout the country in areas that have the largest concentration of sampled cases. These experienced FIs will be trained on all project procedures needed to administer the B&B interview and will be responsible for using field tracing techniques to locate and attempt to interview any cases assigned to them in their geographical area. This additional tracing source and mode of data collection will help to maximize response rates during B&B:08/09 full-scale data collection.

## 6.1 Instrumentation

The B&B:08/09 field test conducted an experiment testing three different question formats: radio button, check-all, and open-ended. The results showed that the open-ended format was more difficult and time consuming for respondents to complete. In addition, this format offered no new information over the other two formats. For the full-scale interview, the use of the check-all and radio formats will be determined on a question-by-question basis.

The field test instrument will be reviewed, and items that were determined to be difficult will be evaluated and revised for clarity. The full-scale instrument will be revised with consideration for the data quality evaluations presented, timing, and feedback from telephone interviewer debriefings and Technical Review Panel meetings. Difficult items include those with high rates of nonresponse, help text usage, and conversion text. In addition, the overall length of the interview will be evaluated, and efforts will be made to reduce respondent burden through the reduction and revision of interview items.

## 6.2 Interviewer Training

Telephone interviewing staff gave generally favorable reviews of the project training and felt well prepared to conduct interviews. However, minor aspects of the training will be modified in response to interviewers' suggestions for improving the training process. In particular, more interview practice will be incorporated, especially with coding systems. Additionally, recorded interviews from the field test (that have been stripped of all identifying information) will be used to provide real examples of positive interviewing techniques.

## 6.3 Transcripts

Planned modifications for the full-scale transcript collection involve enhancing and expanding the options for transcript transmission. In the full-scale collection, faxes will be received and stored electronically on a secure server. An additional transmission option that will be available to participating institutions is eSCRIP-SAFE™. Institutions can send data to the eSCRIP-SAFE™ server by secure internet connection where they can be downloaded only by a designated user. Furthermore, the full-scale transcript collection will accommodate institutional systems by establishing a contact person at the system level who may provide data for sampled students from all institutions within the system.

Additional improvements will focus on making refinements to the keying and coding system to enhance its usability and reduce the time required to key and code transcripts. Finally, the course code list will be expanded to include new codes available from a draft of the 2010 Classification of Instructional Programs.

Evaluations of quality in the full-scale transcript collection will focus on improved systems to quantify results regarding re-keying and recoding.

## 6.4 Conclusion

The purpose of the B&B:08/09 field test was to test fully all data collection procedures in preparation for the full-scale study. This report details the design and results of data collections for both transcripts and interviews. Major topics discussed for both collections included methods to encourage participation, eligibility and response rates, and evaluations of data quality. The systems developed to support the transcript collection and the interview data collections were effective. Also evaluated were the training procedures implemented for interviewers and keying-coding staff. The full-scale study will require a relatively small number of modifications that were informed by the evaluations conducted in the field test study.

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