

# **2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test**

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# **2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test**

**Working Paper Series**

**June 2009**

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# Executive Summary

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## Introduction

The 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09), conducted for the U.S. Department of Education's National Center for Education Statistics, collected information about students' education and employment in the 5 years since their first enrollment in postsecondary education.

This report describes the methodology and findings of the BPS:04/09 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 BPS:04/09 field test was students who started their postsecondary education for the first time during the 2002–03 academic year at any postsecondary institution in the United States or Puerto Rico. All sampled students were first-time beginning students (FTBs) who were eligible for the 2004 National Postsecondary Student Aid Study (NPSAS:04).

The BPS:04/09 field test sample included a total of 1,140<sup>1</sup> sample members. The majority, 780 sample members, were BPS:04/06 respondents who were part of the supplemental sample of potential FTBs who were not included in the NPSAS:04 field test.

## Instrumentation

Similar to the BPS:04/06 field test instrument, the BPS:04/09 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 data collection design for the BPS:04/09 field test involved several stages. The initial process of locating sample members involved batch-locating activities to update sample members' address and telephone information. Sources for this task included the U.S. Department of Education's Central Processing System (CPS), the U.S. Postal Service's National Change of Address

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<sup>1</sup> The numbers appearing in the tables and text of this report were rounded to the nearest ten to maintain the confidentiality of study respondents. Percents were calculated from unrounded numbers.

(NCOA) system, and Telematch. In addition, sample members and their parents were sent an initial mailing to collect updated contact information.

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 first, the early response phase, spanned the first 4 weeks of the data collection period. Sample members who completed the BPS:04/09 field test interview during this phase were offered an incentive of \$30. During this phase, sample members could complete the self-administered interview or call the help desk to complete a telephone interview. During the second phase (production interviewing), telephone interviewers began calling the remaining sample members to obtain interviews. Incentives were not offered during the production interviewing phase. 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 phase were offered an incentive of \$30.

Of the 1,140 sample members for the BPS:04/09 field test, 890 (78 percent) were successfully located and 800 completed an interview. The response rate among the eligible sample was 70 percent, and was 90 percent among those sample members who were successfully located. The majority of completed interviews (71 percent) were obtained via self-administration.

On average, the BPS:04/09 field test interview took 25 minutes to complete. Self-administered respondents took an average of 22 minutes to complete the interview, compared with approximately 30 minutes for interviewer-administered respondents.

## **Experiments**

Three experiments included in the BPS:04/09 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 prompting calls in increasing response rates during the early response period. The third experiment evaluated the effectiveness of a prepaid cash incentive. The sample was randomly assigned prior to data collection to each of the conditions, and response rates at the end of the early response period were compared.

Another experiment for the BPS:04/09 field test evaluated three question response formats: radio button, checkall, and open-ended. Five items within the interview were selected for this experiment. For the radio button format, the respondent was asked to respond either “yes” or “no” to each item. For the checkall format, the respondent was asked to check the box next to each item that was applicable. The respondent could check all of the items that were applicable. For the open-ended format, the respondent was first asked to provide his or her 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 BPS:04/09 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 BPS:04/09 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 include online coding and editing systems, range and consistency checks for all data, and post data-collection data editing. Detailed documentation was also developed to describe question text, response options, logical imputations, and recoding.

### **Planned Changes for the BPS:04/09 Full-scale Study**

The final chapter of this report summarizes the changes planned for the BPS:04/09 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 plan, in order to improve efficiency and clarity. More substantial changes recommended for the BPS:04/09 full-scale study include the following:

- Data collection notification materials will be sent to sample members in Priority mail packaging.
- All incentive offers will be promised rather than prepaid.
- Halfway through the early response period, prompting calls will be made to prior round nonrespondents, reminding them of the end date of the early response phase.
- For the BPS:04/09 full-scale study, sample members will become eligible for the nonresponse incentive once 10 call attempts have been made and an interview has not yet been completed.
- 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 checkall 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.

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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 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09). The BPS:04/09 field test is the second and final follow-up interview for the cohort of first-time beginning postsecondary students identified as part of the field test of the 2004 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 BPS:04/09 full-scale study. Additional information about BPS:04/09 is available on the Web at <http://www.nces.ed.gov/surveys/bps>.

Tom Weko  
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# Acknowledgments

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The authors 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 BPS:04/09 field test a success.



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# Chapter 1.

## Overview of BPS:04/09

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This working paper describes the design, methodological procedures, and related evaluations for the 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) field test. RTI International,<sup>1</sup> with the assistance of MPR Associates, Inc., is conducting the BPS:04/09 field test and subsequent full-scale study for the National Center for Education Statistics (NCES) of the U.S. Department of Education (Contract No. ED-02-CO-0011).

This introductory chapter describes the background and legislative authorization, schedule, and products of the BPS:04/09 study and the unique purposes of the field test. Chapter 2 provides detail about the field test design and procedures. Chapter 3 presents field test data collection results, including the results of experiments implemented during field test data collection. Chapter 4 presents quality evaluations of the data collected during the field test and the results of an item design comparison embedded within the questionnaire. Finally, chapter 5 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 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 BPS:04/09 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 BPS

NCES conducts several studies to respond to the need for a nationally representative data concerning key, postsecondary education (PSE) issues: access, choice, enrollment, persistence, progress, curriculum, attainment, continuation into graduate and professional school, and the benefits of PSE to individuals and to society. BPS is one of several studies sponsored by NCES to address this need, specifically studying students who began their postsecondary education for the first time.

NCES is authorized to conduct BPS by the following legislation:

- Title I, Section 153 of the Education Sciences Reform Act [P.L. 107–279];
- The General Education Provisions Act, as amended, 20 U.S.C. § 1221 e-1 (2001);
- The 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);

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

- The 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
- 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 BPS series of studies is uniquely able to identify students as first-time beginners (FTBs) through its base study, the National Postsecondary Student Aid Study—a recurring survey of nationally representative, cross-sectional samples of postsecondary students designed to determine how students and their families pay for postsecondary education. Once FTBs are identified, the BPS study series follows them over a period of 6 years to monitor their progress. Figure 1 shows the data collection timeline for the base-year and subsequent follow-up studies for each BPS in the series.

**Figure 1. Chronology of the Beginning Postsecondary Students Longitudinal Study: 1990 to 2009**

Academic year	Cohort		
	BPS:1990	BPS:1996	BPS:2004
Year 1	1989–90 (NPSAS:90)	1995–96 (NPSAS:96)	2003–04 (NPSAS:04)
Year 2			
Year 3	1991–92 (BPS:90/92)	1997–98 (BPS:96/98)	2005–06 (BPS:04/06)
Year 4			
Year 5	1993–94 (BPS:90/94)		
Year 6		2000–01 (BPS:96/01)	2008–09 (BPS:04/09)

NOTE: NPSAS = National Postsecondary Student Aid Study.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/06 Beginning Postsecondary Student Longitudinal Study (BPS:04/06) Field Test.

The BPS:04/06 follow-up captured information on the academic progress and persistence in postsecondary education of 2003–04 FTB students in the 3 years following their initial entry into a postsecondary institution. Data collected as part of the first follow-up focused on continued education and experience, education financing, entry into the workforce, and the relationship between experiences during postsecondary education and various societal and personal outcomes.

The second follow-up, BPS:04/09, monitors students' academic progress in the 6 years following their first entry into postsecondary education and assesses completion rates in 4-year programs. Data collection continues to focus on education and employment, and the survey includes many of the questions used in the first follow-up. The second follow-up is also enhanced to collect detailed information about the transition into employment after degree completion.

## 1.2 Overview of the Field Test Study Design

The BPS:04/09 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. In addition to the data collection evaluations, the field test included the following experiments:

- Three experiments were included to examine the impact of various data collection strategies on early response rates:
  1. whether the use of Priority Mail envelopes to deliver study materials and survey invitations would increase early response rates compared with sample members who received the study materials in a 9"x12" envelope via regular mail; and
  2. whether offering sample members a prepaid \$5 cash incentive with a promise of a \$25 check paid on interview completion during the early response period of self-administered interviewing would increase response rates compared with sample members who were promised an incentive of \$30 on interview completion.
  3. whether prompting sample members with telephone calls reminding them to participate in the interview during the first 4 weeks of data collection (early response period) would increase response rates in that time period compared with sample members who did not receive a prompting call;
- 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

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. BPS:04/09 will produce

- a “First look” reports which provide descriptive summaries of the BPS:04 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 BPS:04/09 activities: 2008–2010**

Activity	Start date	End date
<b>BPS:04/09 field test</b>		
Finalize student sample	11/27/2007	11/16/2007
Conduct self-administered web/CATI data collection	03/24/2008	06/30/2008
Process data, construct data files	07/01/2008	08/29/2008
Prepare methodology report	05/02/2008	07/30/2009
<b>BPS:04/09 full-scale</b>		
Finalize student sample	08/01/2008	09/30/2008
Conduct self-administered web/CATI data collection	02/24/2009	09/14/2009
Conduct field CAPI data collection	06/15/2009	09/14/2009
Process data, construct data files	09/15/2009	03/30/2010
Prepare methodology report	05/02/2009	07/30/2010
Prepare First Look report	04/30/2010	07/30/2010
Prepare descriptive report	08/30/2010	11/19/2010

NOTE: BPS = Beginning Postsecondary Students Longitudinal Study. CAPI = computer-assisted personal interviewing. CATI = computer-assisted telephone interviewing.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Student Longitudinal Study (BPS:04/09) Field Test.

# Chapter 2.

## Design and Methodology

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The purpose of the 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) 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, with a focus on planned evaluations. An overview of the sampling design, sample member locating and contacting activities, interview design, and data collection procedures is presented, together with a description of the systems developed to support the BPS:04/09 field test data collection.

### 2.1 Sampling Design

This section describes the BPS:04 field test cohort across each of the three points of contact in the longitudinal study: the base-year field test (2004 National Postsecondary Student Aid Study [NPSAS:04]) in which the BPS:04 field test cohort was identified, the first follow-up field test study (BPS:04/06), and the second follow-up field test study (BPS:04/09).

#### 2.1.1 Base-Year Study

The respondent universe for the BPS:04/09 field test consisted of all students who began their postsecondary education for the first time during the 2002–03 academic year at any Title IV - eligible postsecondary institution in the United States or Puerto Rico. The sample students were the first-time beginners (FTBs) identified as part of the NPSAS:04 field test (Riccobono et al. 2005). NPSAS:04 used a two-stage sampling design: institutions were selected in the first stage, and then the student sample was selected in the second stage from enrollment lists provided by participating institutions.

**Institution sample.** Institutions eligible for the NPSAS:04 field test were required during the 2002–03 academic year to meet all the requirements for distributing Title IV aid, including the following:

- offering an educational program designed for persons who have completed secondary education;
- offering at least one academic, occupational, or vocational program of study lasting at least 3 months or 300 clock hours;
- offering courses that are open to more than the employees or members of the company or group (e.g., union) that administers the institution; and
- being located in the 50 states, the District of Columbia, or Puerto Rico.

Institutions providing only avocational, recreational, or remedial courses or only in-house courses for their own employees were excluded, as were U.S. Service Academies because of their unique funding/tuition base.

These institution eligibility criteria were consistent with previous NPSAS studies with two exceptions. First, the requirement to be eligible to distribute Title IV aid was implemented beginning with NPSAS:2000.<sup>2</sup> Second, the previous NPSAS studies excluded institutions that only offered correspondence courses. NPSAS:04 included such institutions if they were eligible to distribute Title IV student aid.

The institutional sampling frame for the NPSAS:04 field test was constructed from the 2001 Integrated Postsecondary Education Data System (IPEDS) Institutional Characteristics (IC) and header files and the 2001 Fall Enrollment file. A field test sample of 200 institutions was selected purposively from the complement of institutions selected for the full-scale study. This approach ensured that no institution would be burdened with participating in both the field test and full-scale studies yet maintained the representativeness of the full-scale sample. Certain institutions for the full-scale study were excluded from the field test. The certain institutions either were in strata where all institutions were selected or had expected frequencies of selection greater than unity (1.00). The field test sample of institutions was selected to approximate the distribution by institutional stratum for the full-scale study. The distribution of the field test institutional sample is presented in table 2. Overall, about 98 percent of the sampled institutions met the NPSAS eligibility requirements; of those, about 89 percent provided enrollment lists for student sampling.

**Table 2. NPSAS:04 field test institution sample sizes and yield, by sampling stratum: 2004**

Institutional sampling stratum	Frame	Sample	Eligible institutions		Provided list	
			Number	Percent <sup>1</sup>	Number	Percent <sup>2</sup>
Total	6,674	200	200	97.5	170	88.7
Public less-than-2-year	321	#	#	66.7	#	100.0
Public 2-year	1,225	70	70	98.6	60	84.3
Public 4-year non-doctorate-granting	358	20	20	100.0	20	95.5
Public 4-year doctorate-granting	276	10	10	100.0	10	91.7
Private not-for-profit 2-year-or-less	379	10	10	83.3	10	100.0
Private not-for-profit 4-year non-doctorate-granting	1,076	50	50	97.8	40	84.4
Private not-for-profit 4-year doctorate-granting	537	20	20	100.0	10	86.7
Private for-profit less-than-2-year	1,390	20	10	93.3	10	100.0
Private for-profit 2-year-or-more	1,112	10	10	100.0	10	100.0

# Rounds to zero.

<sup>1</sup> Percent is based on the number sampled within the row under consideration.

<sup>2</sup> Percent is based on the number eligible 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, 2004 National Postsecondary Student Aid Study (NPSAS:04), Field Test Report.

**Student sample.** The student sample sizes for the NPSAS:04 field test were set to approximate the distribution planned for the NPSAS:04 full-scale study, with the exception that additional FTBs were selected to have more available for the BPS:04 field test cohort. As shown in table 3, the NPSAS:04 field test was designed to sample 1,290 students, including 810 first-time

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

beginner students, 360 other undergraduate students, and 130 graduate and first-professional students. There were eight student sampling strata for the NPSAS:04 field test:

- four sampling strata for undergraduate students:
  - FTB in-state tuition students,
  - FTB out-of-state tuition students,
  - other undergraduate in-state tuition students, and
  - other undergraduate out-of-state tuition students;
- three sampling strata for graduate students:
  - master’s,
  - doctoral, and
  - other graduate students; and
- a sampling stratum for first-professional students.

The numbers of FTB students shown in table 3 include both true FTBs who began their postsecondary education for the first time during the NPSAS field test year and effective FTBs who had not completed a postsecondary class prior to the NPSAS field test year. Unfortunately, postsecondary institutions cannot readily identify their FTB students. Therefore, the NPSAS sampling rates for students identified as FTBs and other undergraduate students by the sample institutions were adjusted to achieve the expected counts after accounting for expected false-positive and false-negative rates. The false-positive and false-negative FTB rates experienced in NPSAS:96 (i.e., the most recent NPSAS to include a BPS base-year cohort) were used to set appropriate sampling rates for the NPSAS:04 field test.<sup>3</sup> The overall expected and actual student sample sizes are shown in table 3.

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<sup>3</sup>The NPSAS:96 false-positive rate was 28 percent for students identified as potential FTBs by the sample institutions, and the false-negative rate was 9 percent for those identified as other undergraduate students

**Table 3. Expected and actual NPSAS:04 field test student samples, by student type and level of institutional stratum: 2005**

Student type and institutional stratum	Expected student sample size <sup>1</sup>	Actual student sample size
Total	1,290	1,280
Potential FTB	810	790
Less-than-2-year	200	80
2-year	360	410
4-year	250	300
Other undergraduate	360	360
Less-than-2-year	30	10
2-year	80	70
4-year	250	280
Master's (4-year)	60	30
Doctoral (4-year)	40	30
Other graduate (4-year)	10	60
First-professional (4-year)	20	20

<sup>1</sup> Based on sampling rates, Fall 2001 Integrated Postsecondary Education Data System (IPEDS) Fall Enrollment file counts, and Fall 2001 IPEDS Completions file counts.

NOTE: Detail may not sum to totals because of rounding. FTB = first-time beginner. NPSAS = National Postsecondary Student Aid Study.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/06 Beginning Postsecondary Student Longitudinal Study (BPS:04/06) Field Test.

To create the student sampling frame for NPSAS:04, each participating institution was asked to provide a list of eligible students from which the student samples were selected. As shown in table 4, the NPSAS:04 field test selected students from the first 80 institutions that provided lists that passed quality control checks. 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. These 80 institutions provided a sufficient variation and number of sample students for the NPSAS:04 field test.

**Table 4. Distribution of NPSAS:04 field test student sample, by sampling stratum: 2004**

Institutional sampling stratum	Provided lists	Used for student sample selection	
		Number	Percent
Total	170	80	100.0
Public less-than-2-year	#	#	2.6
Public 2-year	60	30	33.8
Public 4-year non-doctorate-granting	20	10	11.7
Public 4-year doctorate-granting	10	10	6.5
Private not-for-profit 2-year-or-less	10	#	3.9
Private not-for-profit 4-year non-doctorate-granting	40	20	23.4
Private not-for-profit 4-year doctorate-granting	10	#	5.2
Private for-profit less-than-2-year	10	10	7.8
Private for-profit 2-year-or-more	10	#	5.2

# Rounds to zero.

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

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/06 Beginning Postsecondary Student Longitudinal Study (BPS:04/06) Field Test.

Consistent with previous studies, NPSAS-eligible students were those enrolled in eligible institutions who satisfied the following eligibility requirements:

- were enrolled in either (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;
- were *not* concurrently enrolled in high school; and
- were *not* concurrently or solely enrolled in a General Equivalency Diploma (GED) or other high school completion program.

Table 5 provides the interview results from the NPSAS:04 field test for each of the institutional strata. Of the 1,280 students sampled for the field test, 1,160 were determined to be NPSAS eligible. There were 820 student interview respondents; 310 of these were confirmed as FTBs in the student interview.

**Table 5. NPSAS:04 field test student sample, by institutional stratum, eligibility, response status, and FTB status: 2004**

Institutional stratum	Number sampled	Number eligible	NPSAS:04 field test respondents		Nonrespondents
			Number	Number confirmed FTBs	
Total	1,280	1,160	820	310	340
Public					
Less-than-2-year	40	30	20	10	10
2-year	380	320	200	100	120
4-year non-doctorate-granting	190	180	140	60	40
4-year doctorate-granting	200	190	140	30	50
Private not-for-profit					
2-year-or-less	60	60	40	10	20
4-year non-doctorate-granting	230	220	170	60	50
4-year doctorate-granting	90	90	70	20	20
Private for profit					
Less-than-2-year	60	40	20	10	20
2-year-or-more	50	40	30	10	10

NOTE: Detail may not sum to totals because of rounding. First-time beginner (FTB) status was determined by student interview. NPSAS = National Postsecondary Student Aid Study.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/06 Beginning Postsecondary Student Longitudinal Study (BPS:04/06) Field Test.

**BPS eligibility determination.** Eligibility for the BPS:04 field test cohort was initially determined as part of the base-year study – the field test of NPSAS:04. The students eligible for the BPS:04/09 field test were those eligible to participate in the NPSAS:04 field test who were FTBs at NPSAS sample institutions in the 2002–03 academic year. NPSAS-eligible students who enrolled in a postsecondary institution for the first time during the NPSAS year (i.e., July 1, 2002– June 30, 2003) after completing high school were considered pure FTBs and were included in the BPS:04 field test cohort. Those students who had enrolled for at least one course after completing high school but had never completed a postsecondary course before the 2002–03 academic year were considered effective FTBs and were also eligible for membership in the BPS:04 field test cohort.

### 2.1.2 First Follow-up Study

The BPS:04/06 field test sample was drawn from NPSAS:04 field test interview study respondents who confirmed their FTB status and from most of the nonrespondents who were identified as potential FTBs by their institutions. However, to obtain the 1,000 interviews needed to adequately test the interview and procedures across institutional strata, the field test sample included a supplemental sample of potential FTBs not previously contacted for the NPSAS:04 field test. Each of these three groups is described below. Table 6 provides the details of the field test sample distribution.

- **Confirmed FTBs who responded to NPSAS:04.** All 310 students who responded to the NPSAS field test student interview and verified their FTB status were included in the BPS:04/06 field test sample.

- Potential FTBs who were NPSAS:04 nonrespondents.** Of the 340 sampled nonrespondents to the NPSAS:04 field test student interview, 210 were identified as FTBs by their sample institution and had a valid Social Security number (SSN).<sup>4</sup> To improve the likelihood that base-year nonrespondents would be eligible for inclusion in the BPS:04/06 field test cohort, the indicator for FTB status according to the U.S. Department of Education’s Central Processing System (CPS)<sup>5</sup> was considered whenever possible. Students who matched to CPS (2002/03) and were identified as FTBs were included in the sample, as were base-year nonrespondents identified as potential FTBs by their institution who did not match to CPS, (180 students). Because of the difficulty of locating and interviewing nonrespondents to prior studies, any students identified as FTBs by their institution but who matched to CPS and were not identified as FTBs (40 students) were excluded from the sample.
- Potential FTBs not yet contacted.** A supplemental sample of students selected for the NPSAS:04 field test but not included in the final base-year student sample was also included in the BPS:04/06 field test sample. To increase the likelihood of locating and interviewing an FTB from this group of students, the supplemental sample was restricted to the 2,120 students identified as FTBs by institution indicators with a valid SSN, and those identified with locating information either from CPS or Telematch.

The number of students in each group sampled for the BPS:04/06 field test data collection is presented in table 6. The field test sample for BPS:04/06 was designed to yield a total of 1,000 respondents.

**Table 6. BPS:04/06 field test sample sizes, by institutional stratum: 2004**

Sample type	Total	Public 4-year	Public 2-year	Private not-for-profit 4-year	Private for-profit less-than-2-year	Other
Total sample	2,610	430	700	440	590	440
Responding FTBs from the NPSAS:04 field test	310	90	110	80	10	20
Base-year nonrespondents to be included in the BPS:04/06 sample <sup>1</sup>	180	30	80	20	20	30
Supplemental sample of students with SSN and indicator of FTB from institution and locator information from either CPS or tracing	2,120	310	520	340	570	390

<sup>1</sup> Excludes 40 cases for whom the Central Processing System (CPS) first-time beginner (FTB) indicator was “no”.

NOTE: Detail may not sum to totals because of rounding. Other includes public less-than-2-year, private not-for-profit 2-year, not-for-profit less-than-2-year, and private for-profit 2-year-and-higher institutions. BPS = Beginning Postsecondary Student Longitudinal Study. CPS = Central Processing System. FTB = first-time beginner. NPSAS = National Postsecondary Student Aid Study. SSN = Social Security number.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/06 Beginning Postsecondary Student Longitudinal Study (BPS:04/06) Field Test.

<sup>4</sup> To conserve resources, the follow-up sample of base-year nonrespondents was restricted to those with a valid SSN to increase the likelihood that they could be matched to sources used for locating.

<sup>5</sup> This designation indicates that students were FTBs during the 2002–03 academic year, as were base-year interview respondents.

### 2.1.3 Second Follow-up Study

The sample for the second follow-up of the BPS:04 field test cohort (BPS:04/09) included confirmed FTBs who had responded to either NPSAS:04 or BPS:04/06 or both. The sample types are described below and shown in table 7:

- 230 students who responded to both NPSAS:04 and BPS:04/06 field tests;
- 80 students who responded to the NPSAS:04 field test but did not respond to the BPS:04/06 field test;
- 40 students who were part of the NPSAS:04 field test, did not respond to NPSAS:04, but did respond to the BPS:04/06 field test; and
- 780 students who were part of the BPS:04/06 supplemental sample and responded to the BPS:04/06 field test.

**Table 7. BPS:04/09 field test sample, by response status at prior rounds: 2008**

NPSAS:04 field test response status	BPS:04/06 field test response status	Number of cases included in BPS:04/09 sample
Total	Total	1,140
Respondent	Respondent	230
Respondent	Nonrespondent	80
Nonrespondent	Respondent	40
BPS: supplemental sample (not in NPSAS:04)	Respondent	780

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

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/06 Beginning Postsecondary Student Longitudinal Study (BPS:04/06) Field Test.

## 2.2 Data Collection Design

This section provides an overview of the procedures implemented for the BPS:04/09 field test data collection. First, the content and design of the multimode survey instrument are outlined, and a summary of the study website is provided. Next, the details of data collection procedures are presented, including a summary of training for data collection staff, procedures used to locate and contact sample members, and procedures for conducting interviews. Experiments designed to evaluate the impact of various data collection strategies are described. Finally, the systems used to develop the survey instrument and its documentation and those used to monitor data collection activities are discussed.

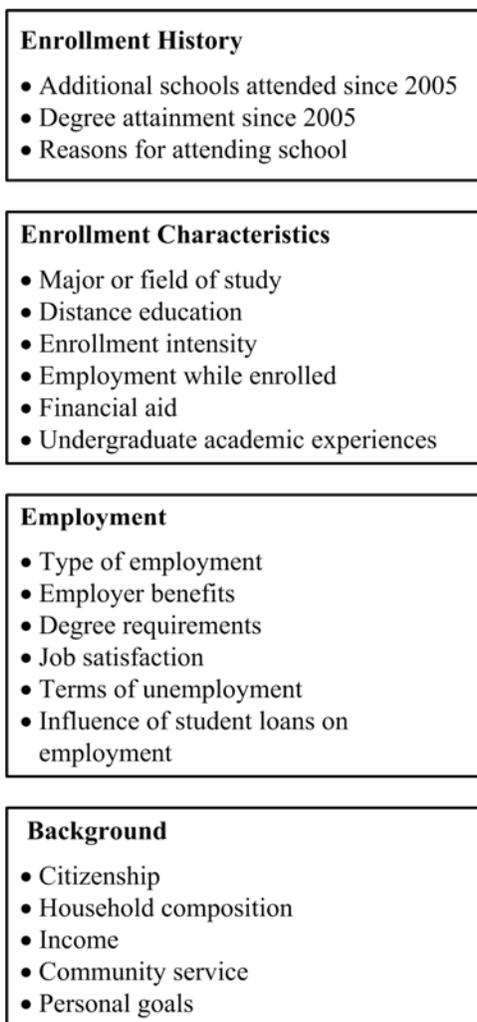
### 2.2.1 Interview Design

The content of the second follow-up interview remained primarily the same as that in prior BPS second follow-up interviews (BPS:90/94 and BPS:96/01), building on data elements developed with input from the study's Technical Review Panel (TRP) and from the National Center for Education Statistics (NCES). (See appendix A for a list of TRP members and appendix B for a list

of the final set of data elements.) The interview consisted of four sections, grouped by topic (see figure 2):

Respondents were guided through each section of the interview according to skip logic that took into account previously provided information. The first section, enrollment history, collected information about all postsecondary enrollment since the last follow-up (July 2005). The second section, enrollment characteristics, gathered information on the respondent's experiences at the primary undergraduate school, which was the school where respondents had earned a bachelor's degree, or if no bachelor's degree had been earned, where respondents had been most recently enrolled. This section captured the respondent's major or field of study and any employment while enrolled at the primary undergraduate school, and any financial aid received (undergraduate and graduate). The third section, employment, was applicable to all bachelor's degree recipients regardless of current enrollment status and to any additional respondents who were not enrolled at the time of the interview. This section collected information regarding the respondent's employment, earnings, and job satisfaction. The final section, background, obtained information about student demographic characteristics, including race/ethnicity, citizenship, voting behavior, marital status and family composition, volunteerism, disability status, and goals. The complete BPS:04/09 field test instrument facsimile can be found in appendix C.

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



NOTE: The section headings used in BPS:04/09 instrument were the same as those used in the BPS:04/06 instrument. The eligibility section in the BPS:04/06 instrument was not necessary for BPS:04/09.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Student Longitudinal Study (BPS:04/09) Field Test.

A single, web-based survey was developed to be administered in one of two modes: a self-administered interview or computer-assisted telephone interview (CATI). The web-based survey was designed to be functionally equivalent in both administration modes. In order to minimize mode effects, specific methodological features were incorporated into the web instrument to provide self-administered respondents the assistance that would normally be provided by a trained interviewer. These included

- help text on every form to define key terms and clarify question intent;
- pop-up messages to correct responses that were out of range or in an incorrect format;
- conversion text to encourage responses to critical items when left unanswered; and

- pop-up messages to prompt sample members to provide a response after leaving three consecutive questions blank, reminding them of the importance of providing complete responses for the success of the study.

Additionally, instructions were included for telephone interviewers on each screen indicating how the question was to be administered (e.g., whether the response options must be read aloud, when to probe, etc.) to minimize the differences between telephone and self-administered interviews.

**Coding systems.** Various coding systems were used to standardize the collection of data on any postsecondary schools attended, major or field of study, occupation, industry, and licenses and certifications.

*Assisted coding* systems were used to code postsecondary schools attended, major or field of study, and occupation. Text strings were collected and then a keyword search was conducted on the underlying database (provided below), returning a list of options. The response was then coded into the available categories. If no areas matched, respondents were offered dual drop-down boxes from which to select the best general and specific categories. The coding systems and sources are described below.

- The school coder was developed using the set of institutions contained in IPEDS, developed by NCES (<http://nces.ed.gov/IPEDS/>).
- The major coder was constructed to parallel the Classification of Instructional Programs (CIP) taxonomy, also developed by NCES (<http://nces.ed.gov/pubs2002/cip2000/>).
- The occupation coder was built from the Occupational Information Network Online (O\*NET) database (<http://online.onetcenter.org>).
- The interview also collected occupational industry as well as types of professional licensure and certifications. Industry coding was a manual process in which respondents selected the best categorical description from among a set of defined options, based on the North American Industry Classification System (NAICS) (<http://www.census.gov/epcd/www/naics.html>). A text string was collected, and the respondent was then asked to choose the category that best described that industry. The choices were laid out in general categories across the screen. When the respondent selected a category, examples of businesses within that industry were displayed, allowing the respondent to determine the appropriateness of the industry chosen.
- To collect professional licenses and certifications, respondents were shown a form with two drop-down menus and were asked to select the best categories from the general and specific lists of the licensure or professional certification. The list of licenses and certifications was developed based on extensive investigation and results from previous data collections.

### 2.2.2 Training of Data Collection Staff

Extensive training was provided to all members of the BPS:04/09 data collection team. The specific roles and duties are summarized below, along with a description of the type of training they received (see appendix D for examples of the BPS:04/09 field test training materials).

**Tracing Staff.** The primary functions of the tracing staff were to use intensive measures to locate sample members once they were designated as having incorrect contact information. Tracing staff received up to 16 hours of general training activities, depending on their level of experience. In addition, tracers received 1 hour of project-specific training in which they were presented with a background of the BPS study, a review of the Frequently Asked Questions, and the tracing techniques best suited to locate missing sample members.

**Help Desk.** Help desk agents were available to assist sample members with any problems encountered while completing the self-administered interview. Help desk agents were also available to complete telephone interviews during the early response period with anyone who preferred to do a telephone interview. During the early response period, help desk agents made prompting calls to remind sample members about the study, and they placed outbound calls once telephone interviewing began. Help desk agents were provided with general and project-specific interviewer training, and were also trained on recording and tracking calls to the study help line, using common resolutions to technical problems, and answering caller questions.

**Telephone Interviewers.** The primary functions of the telephone interviewer were to gain cooperation from and conduct interviews with respondents and to use techniques to avoid refusals and to address the concerns of reluctant sample members. The interviewers each received 8 hours of training that focused on general interviewing skills, including how to use the computer-assisted telephone interview (CATT) software and the case management system (CMS). Interviewers also received 16 hours of project-specific training that included an overview of the BPS study and the student interview, a discussion on confidentiality requirements, and hands-on practice exercises for instrument administration and the instrument coding systems.

**Quality Control Supervisors.** Quality control (QC) supervisors were employed to provide support and guidance for the telephone interviewers and to monitor interview administration. The QC supervisors each received the telephone interviewer training for BPS. Once this training was completed, new QC supervisors spent time shadowing a senior QC supervisor to receive on-the-job training.

### 2.2.3 Study Website

A study website was designed for use by BPS:04/09 field test sample members. The website was made available to sample members at the time of the first mailing to them, prior to data collection. The website provided general information about the BPS set of studies, how the data are used, and examples of findings from earlier studies. Sample members could also learn about the study sponsor and contractors. The website provided contact information for the study help desk, and project staff at RTI, as well as links to the NCES and RTI websites. Sample members were also able to log in to the secure portion of the website to provide updated contact information and complete the online survey once it was available.

Figure 3 shows the home page for the BPS:04/09 field test website. Designed according to NCES web policies, the BPS website used a three-tier approach to security to protect all data collected. At the first tier, sample members could log onto the secure areas of the website using a unique Study ID and password provided them in the prenotification mailing (described below.) As a security measure, sample members were provided with strong passwords which were at least eight bytes long, contained at least one upper and one lower case letter, at least one numeric digit, and at least one non-alphabetic, non-numeric 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. Home page for the BPS:04/09 field test website: 2008**

**BPS**  
Beginning Postsecondary Students  
Longitudinal Study

**ies** NATIONAL CENTER FOR  
EDUCATION STATISTICS  
Institute of Education Sciences

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

Home  
About BPS  
FAQs  
Confidentiality  
Contact Us  
Login to the Interview

**Home/Login**

OMB Clearance No.: 1850-0631  
Expiration Date: 04/30/2011  
[Burden Statement](#)

Welcome to the Beginning Postsecondary Students Longitudinal Study website!

The BPS study collects data related to enrollment in and transition out of postsecondary education. The study includes individuals who first entered postsecondary institutions—vocational schools, community colleges, and 4-year colleges and universities—in the 2002-2003 school year. Data collected from BPS will help educators, researchers, and policymakers at the local, state, and national levels better understand what percentage of beginning students complete their degree programs, the financial, family, and school related factors that prevent students from completing their programs, and what can be done to help them.

**The 2008 Data collection for BPS has ended.**

You can obtain additional information about the BPS study by using the links to the left of this page. If you need additional assistance, send an e-mail to [bps@rti.org](mailto:bps@rti.org) or call toll-free at 1-800-334-2321.

VERIFYP

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

**BPS**

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Student Longitudinal Study (BPS:04/09) Field Test.

## 2.3 Locating and Contacting

Before sample members could be contacted to complete the BPS:04/09 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. As part of the prenotification mailings, address update forms were sent to sample members and their parents. The final two stages of locating sample members

for the BPS study involved CATI locating and intensive tracing. These methods are described in detail below.

- **Batch Searches.** The first step in locating BPS:04/09 field test sample members was to conduct tracing activities. Before mailout activities began, batch searches were conducted to obtain updated contact information for the BPS:04/09 field test sample. These searches used the U.S. Department of Education's CPS and the U.S. Postal Service's National Change of Address database.
- **Prenotification Mailings.** Approximately 3 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 (see appendix E) and a letter introducing the BPS:04/09 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 and contacting them and encouraging their participation.

Approximately 2 months before data collection, the study packet was sent to sample members (using any updated contact information provided by parents). The mailing included a letter and the study brochure, an address update form, and a business reply envelope. Sample members were notified of the upcoming data collection and asked to update their address information.

To maximize the likelihood of reaching sample members, an informational packet was sent to all sample members via postal mail announcing the start of data collection. The prenotification mailing was followed by an e-mail containing the same information a few days later (when a working e-mail address was available.) The mailing provided sample members with a unique Study ID and password and informed them that they were eligible to receive an incentive if they completed the interview by the end of the 4-week early response period. A similar letter was also sent via postal mail to parents of all sample members (when a parent address was available), asking for their assistance in encouraging the sample members to participate in the interview.

- **CATI Locating.** Once outbound telephone interviewing began, CATI interviewers conducted limited tracing and locating activities as needed. These activities included calling all telephone numbers and contacts for sample members or speaking with persons answering the telephone to determine how to contact sample members. When sample members could not be located at a known address, the case was compiled with other cases also in need of tracing and sent to Accurant for directory assistance services. Cases that could not be located using any existing address information were identified for individual tracing by RTI's Tracing Operations (TOPS) housed within Call Center Services (CCS). Tracing specialists attempted to locate these individual cases, and if they were not located, they were sent to intensive tracing.

- **Intensive Tracing.** The most difficult locating cases were traced using a number of online sources. First, for those cases with an SSN, credit bureau services (i.e., Experian, TransUnion, and Equifax) were searched. Any new contact information obtained was processed immediately and the case returned to production interviewing. Remaining cases underwent a more intensive tracing process, which included calls to directory assistance, alumni offices, and contacts with neighbors and/or landlords. Each case was handled individually based on the amount of information already available, the age of the locating data, and the presence of an SSN.

### 2.3.1 Interviewing

The data collection design for the BPS:04/09 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 from the time sample members were informed that data collection had begun. Sample members who completed the interview during this phase received an incentive of \$30.
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. No incentive was given to respondents during this phase.
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 \$30.<sup>6</sup> Sample members could access the self-administered web interview throughout the entire data collection period.

**Self-administered Interviews.** The self-administered interview was introduced to sample members in the lead letter packet. During the early response period (the first 4 weeks of data collection), only self-administered web interviews were completed unless sample members called the help desk for assistance and asked to complete the telephone interview. As part of a field test experiment, one half of the sample was randomly selected to receive a telephone prompting call approximately 10 days after the beginning of the sample members' data collection period. Sample members who were selected to receive a prompting call but had already completed the interview were not prompted. The purpose of the prompting call was to remind sample members that they had been selected to participate in the BPS study and to encourage them to log in to the study website and complete the self-administered interview. The website was accessible 24 hours per day,

<sup>6</sup> In the last 2 weeks of the BPS:04/09 field test, a \$40 incentive payment was offered to all remaining nonrespondents in the nonresponse phase, replacing the \$30 that was offered initially as a nonresponse incentive. The number of completed interviews per day decreased to 1 or 2, and the completion rate among those reaching the nonresponse phase was only 43 percent. We expect that the higher incentive amount will be unnecessary for full-scale data collection. The field test sample was largely comprised of supplemental sample members—those added to the field test sample without having participated in the NPSAS base year interview. Given the slowed progress of data collection at the time, the higher amount of incentive was necessary to encourage response from an already difficult group. The BPS full-scale sample does not contain a similar supplemental sample subset.

7 days per week, throughout the data collection period, giving sample members the option to complete interviews online at any time.

**Help Desk Operations.** The BPS:04/09 help desk opened on April 10, 2008, in anticipation of the first student calls after the introductory mailing. Help desk staff were available to assist sample members who had questions or problems accessing and completing the self-administered interview. A toll-free help 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 rather than attempt the self-administered interview.

The help desk interface documented all incoming calls from sample members. In addition to this primary documentation function, it 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 means for tracking calls that could not be resolved immediately.

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

**Telephone Interviews.** CATI follow-up locating and interviewing began after the 4 week early response period expired. CATI procedures included attempts to locate, gain cooperation from, and interview sample members who had not completed the online interview. Upon reaching sample members, the interviewer would encourage them to complete the interview by telephone; however, the interviewer informed sample members that they could still complete the interview online if that was their preference.

The case management system (CMS) included an automated call scheduler program that assigned cases to interviewers by time of day, day of week, existence of previously scheduled appointments, and type of case. Case assignment was designed to maximize the likelihood of contacting and interviewing sample members, and cases were assigned to various queues for this purpose. For example, the CMS included queues for new cases that had not been called, Spanish-language cases,<sup>7</sup> initial refusals, and various appointment queues (appointments set by the sample member, appointments suggested by locator sources, and appointments for cases that were initial refusals).

For each case, a call roster prioritized sample member names and telephone numbers for the interviewers. The roster included locating information provided by institutions and students and

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<sup>7</sup> A Spanish partial interview will be available for the full-scale study but was not available for the field test study. Cases identified in initial calls as needing a Spanish interpreter were contacted by a trained, Spanish-speaking, bilingual interviewer. The interviewer assessed the sample member's capability of completing the interview in English. If the interview could not be conducted in English, the case was finalized as "Spanish language nonrespondent." If the sample member spoke a language other than English or Spanish and was not able to complete the interview in English, the case was coded as "other language nonrespondent."

obtained through tracing activities. For example, this information might include a student's permanent and local address and telephone number, a telephone number for the student's parents, and the address and telephone number for all other contacts listed for the student. New roster lines were added as the result of CATI tracing and intensive tracing efforts.

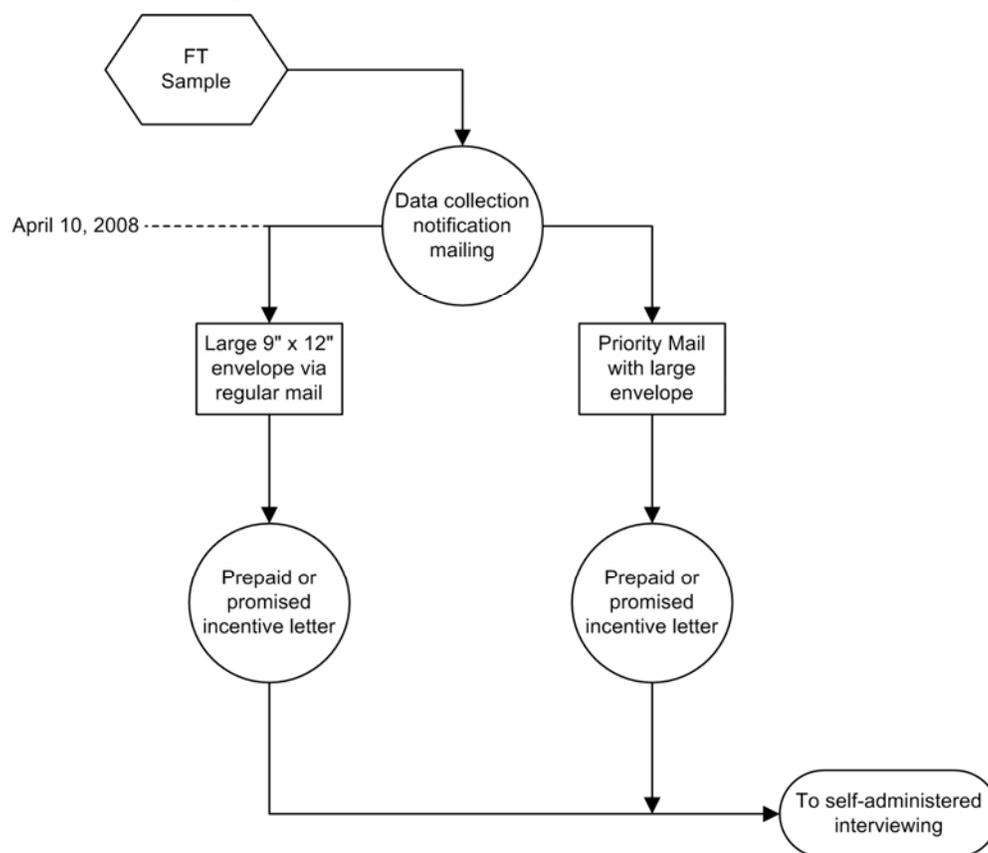
To gain cooperation from those who initially refused to participate (including locator sources who acted as "gatekeepers" to prevent access to the sample member), a subset of interviewers was trained in refusal-conversion techniques.

### 2.3.2 Experiments

Four experiments included in the BPS:04/09 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 prompting calls in increasing response rates during the early response period. The third experiment evaluated the effectiveness of a prepaid cash incentive, and the final experiment was conducted to compare question response formats for selected interview items.

**Mailing Experiment.** In the mailing experiment, the recognition of mailing materials was evaluated. Prior to the start of data collection, the field test sample was randomly assigned to two groups: one group received the initial study materials via regular mail in a 9" x 12" envelope; the other received the same materials via Priority Mail. The mailings were sent on April 10, 2008, when the entire field test sample was notified that the interview link was available on the study website; a Study ID and password for each sample member were provided as well. In both mailing groups, sample members received a letter stating they would receive an incentive if they completed the self-administered interview within the specified time frame. After the early response period, interview completion rates for the two groups (regular versus Priority Mail) were compared. Figure 4 outlines the mailing experiment. The results of the mailing experiment are presented in chapter 3.

Figure 4. Field test mailing experiment: 2008



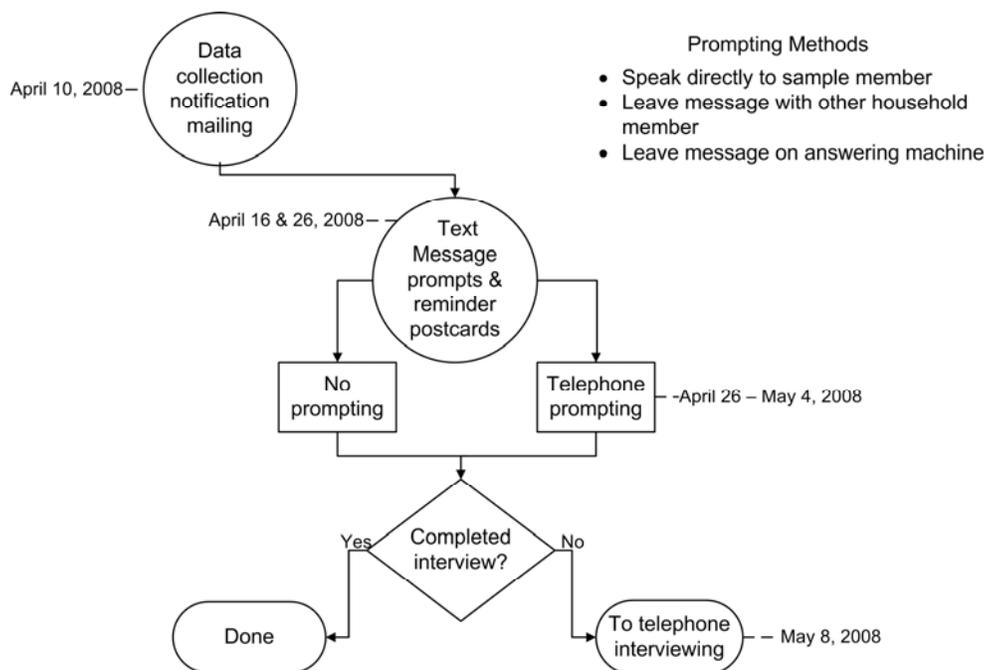
NOTE: FT= field test.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

**Prompting Experiment.** For the prompting experiment, prior to data collection the field test sample was randomly assigned to two groups: one group received prompting calls about 3 weeks into the early response period, and the other group did not receive a call. Around the third week of the early response period, prompting calls began for those who were in the group to receive a call. These calls were distributed throughout the prompting period. If no prior contact had been made with a sample member, messages were left beginning with the third call, and a maximum of five call attempts were made overall. Figure 5 outlines the prompting experiment.

The prompting calls served to provide another reminder about the study and the time frame in which the interview needed to be completed to qualify for the early response incentive. Furthermore, the prompting calls allowed early tracing and locating of all respondents no longer at the address on file. After the early response period, interview completion rates for the two groups (prompted versus not prompted) were compared. The results of the prompting experiment are presented in chapter 3.

Figure 5. Field test prompting experiment: 2008



NOTE: FT = field test.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

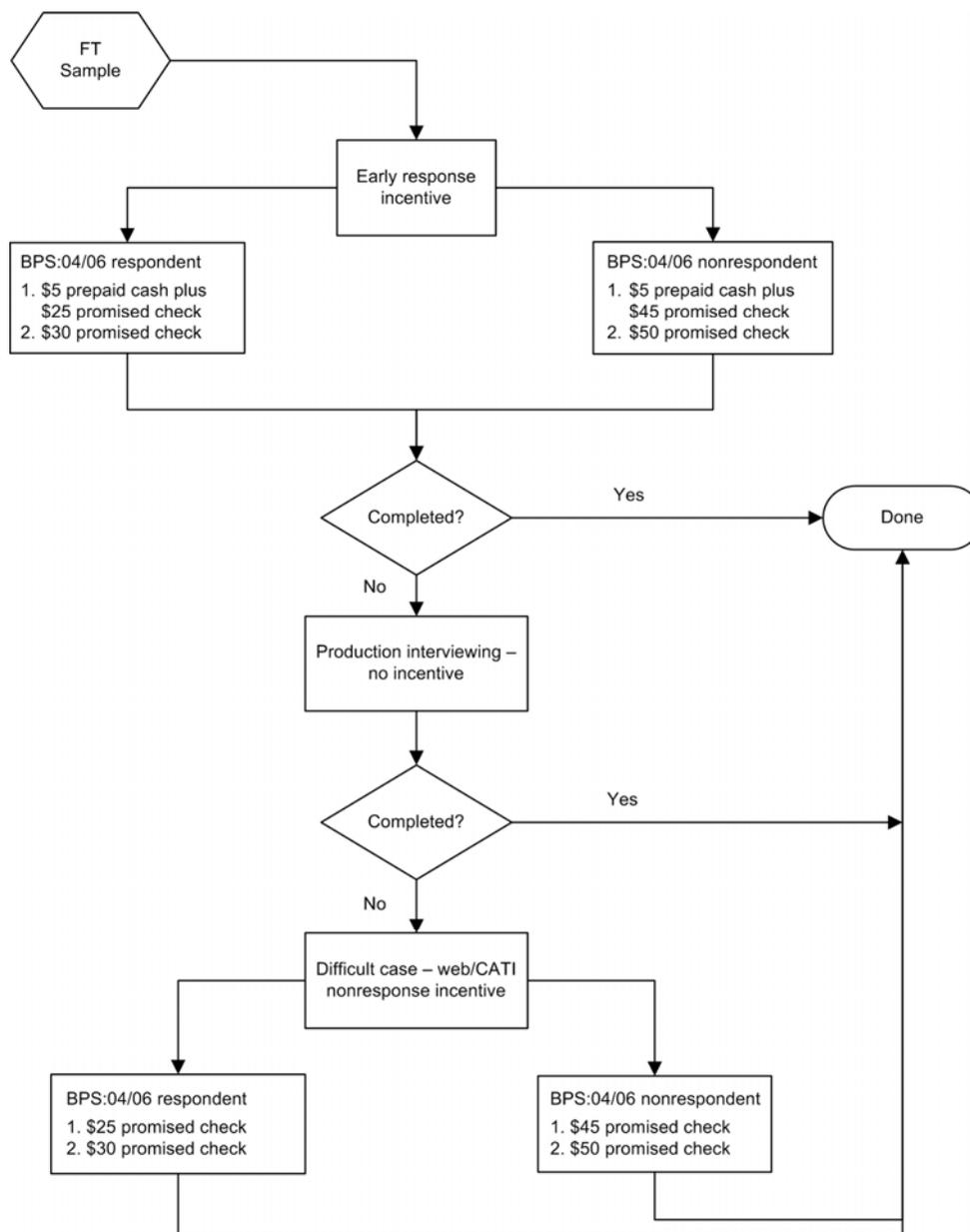
**Incentive Experiment.** The BPS:04/09 field test conducted an experiment with the use of incentives in the early response period. Sample members were offered an incentive for completing the web-based self-administered interview before production interviewing began 4 weeks later on May 8, 2008. Prior to the start of data collection, the field test sample was randomly assigned to two groups: one group received the early response incentive as \$5 prepaid cash plus a \$25 promised check, and the other group was offered a \$30 promised check on completion of the interview. In addition, all BPS:04/06 nonrespondents were offered another \$20 check to complete the self-administered interview during the early response phase. That is, if they were assigned to the \$5 prepaid cash incentive group, they were offered a \$45 check on interview completion or if they were assigned to the other group and completed the interview within the early response period, they were offered a \$50 check on interview completion.

The field test incentive experiment was limited to measuring response rates at the end of the early response period. However, the field test design included an incentive plan for sample members who did not respond during the early completion period. No incentive was offered during production interviewing. A nonresponse conversion incentive was offered if a sample member refused to be interviewed, was found to have a good mailing address but no telephone number, or was identified as hard to reach (i.e., those with more than eight call attempts and with whom contact had been established but no appointment scheduled). Additionally, sample members who were eligible for a nonresponse incentive and were also BPS:04/06 nonrespondents were offered an additional \$20 for completing the interview, as described above and in figure 6. The nonrespondent incentive mailing consisted of a letter tailored to the specific type of nonrespondent (see appendix

E) and an offer of a \$30 incentive (either \$5 prepaid followed by a \$25 check upon completion of the interview, or a \$30 promised incentive.).

Figure 6 presents the design of the incentive programs. Results of the incentive experiment are discussed in chapter 3.

**Figure 6. Field test incentive experiment: 2008**



NOTE: BPS = Beginning Postsecondary Students Longitudinal Study. CATI = computer-assisted telephone interview. FT = field test.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

**Question Response Format Experiment.** Because the BPS:04/09 instrument is administered in both a self-administered and interviewer-administered mode, item design and

wording need to be developed across modes to ensure comparability of the data. Questions with multiple response options, in particular, can be problematic since the experience of reading a list of possible options on the web when the interview is self-administered is 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 BPS:04/09 field test, four items were chosen to test the response formats. Three different format conditions were randomly assigned to respondents for each of the four 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 list of response options on the same screen and required a Yes/No answer to each option. The second format, a checkall design, presented the question and same list of response options that were presented to respondents in the radio button group except only those options which 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 drop down list, the response option which best described their answer. The list of options was the same presented in the radio button and checkall formats. The four questions used for the experiment are shown in table 8.

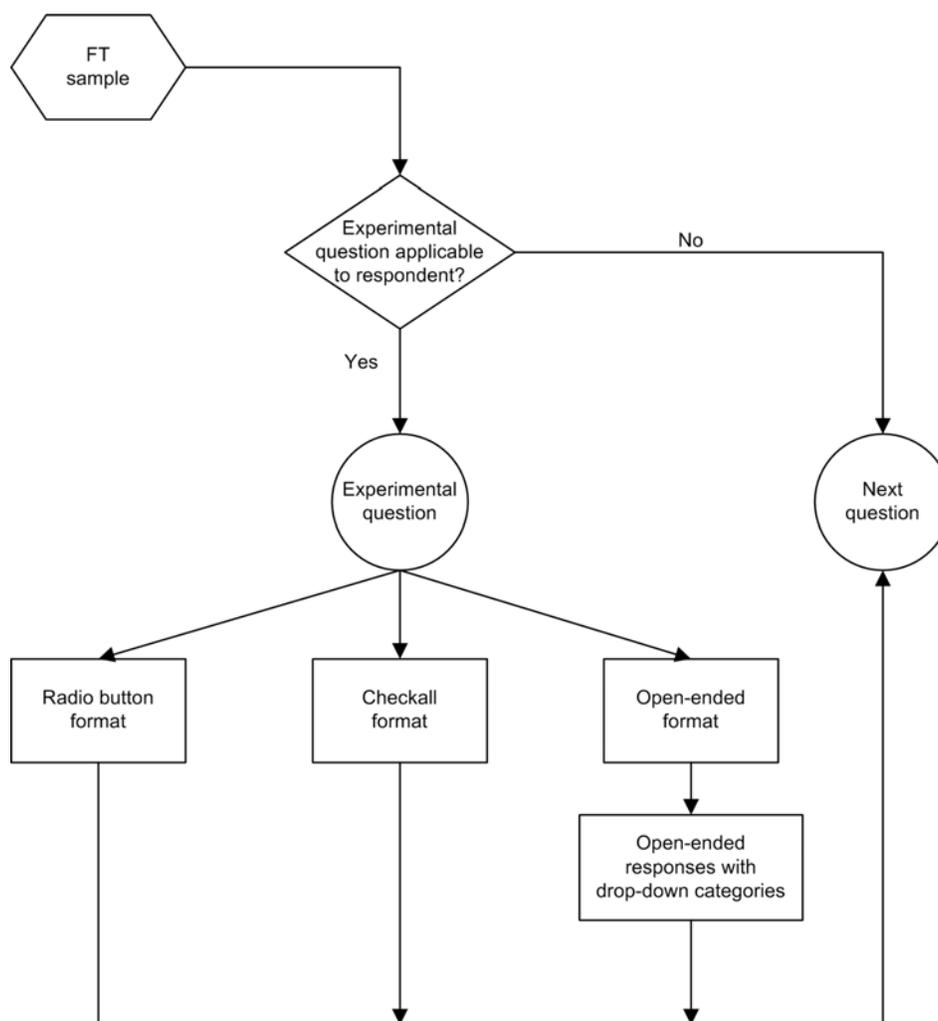
**Table 8. Interview section and question wording for items tested**

Section	Item wording
Enrollment characteristics	In what ways has your undergraduate student loan debt influenced your enrollment plans and decisions?
Employment	Since you do not consider this to be the beginning of a career you are pursuing in your occupation or industry, how would you describe your job?
	In what ways has your undergraduate student loan debt influenced your employment plans and decisions?
Background	What types of community service or volunteer work did you perform?

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Student Longitudinal Study (BPS:04/09) Field Test.

Figure 7 presents the design of the field test question format experiment. The results comparing the response rates for each of these response formats are described in chapter 4. Chapter 5 describes the instrumentation suggestions for the full-scale study based on the results of this experiment.

Figure 7. Field test question format experiment: 2008



NOTE: FT= field test.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

### 2.3.3 Overview of Administrative Data Sources

A portion of the data for the BPS:04/09 field test was obtained from two U.S. Department of Education 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:2000 and NPSAS:04, RTI was assigned a “special designation code” by CPS allowing access to the FAFSA data. Under this procedure, financial aid application data were requested through a standard ISIR (Institutional Student

Information Record) 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. The NSLDS files also contained information for recipients of the National Science and Mathematics Access to Retain Talent (SMART) National SMART Grant. 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 and loan files included both information for the year of interest and a complete federal grant or loan history for each student. The data transfer is secured through an NCES system that uses the NCES member site and SSL technology.

## 2.4 Data Collection Systems

This section describes the data collection systems used for the BPS:04/09 field test data collection, including 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).

### 2.4.1 Hatteras Survey Engine and Survey Editor

The BPS 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 BPS:04/09 field test instruments. All information relating to the instrument was stored in an SQL Server database and was made accessible through web browser interfaces. Hatteras provided specification, programming, and testing interfaces for the BPS instruments.

**Specifications.** Hatteras provided the tools and user interface for developing interview specifications. 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.

A web interface provided access to the instrument specifications for project staff at MPR Associates, Inc. (MPR) and NCES. 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.

**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. This 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 specification and code content as it was entered and updated, displaying web content as respondents would see it. The execution engine also automatically handled such web instrument functions as backing up and moving forward, recording instrument timing data, and linking to context-specific help text.

## 2.4.2 Instrument Development and Documentation Systems (IDADS)

The web-based IDADS documentation module 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. The documentation module was used to generate the instrument facsimiles and the deliverable electronic codebook (ECB) input files.

## 2.4.3 Integrated Management System (IMS)

All aspects of the study were controlled using an IMS, a comprehensive set of desktop tools designed to give project staff and NCES access to a centralized, easily accessible repository for project data and documents. The BPS:04/09 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 and strategies to assist project staff and the NCES project officer in managing the field test data collection. All management information pertinent to the study was located there, accessible 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 staff at MPR and NCES could retrieve files as necessary.

**Receipt Control System.** The RCS is an integrated set of systems that was 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. Specifically, the mailout system produced mailings to sample members, the query system enabled administrators to review the locator information and status for a particular case, and the mail return system enabled project staff to update the locator database as mailings or address update sheets were returned or forwarding information was received. The RCS also interacted with the CATI system, sending locator data between the two systems as necessary.

**Instrumentation Module.** The instrumentation module managed development of the multimode web data collection instrument within Hatteras. Developing the instrument with Hatteras ensured that all variables were linked to their item/screen wording and were thoroughly documented.

# Chapter 3.

## Data Collection Outcomes

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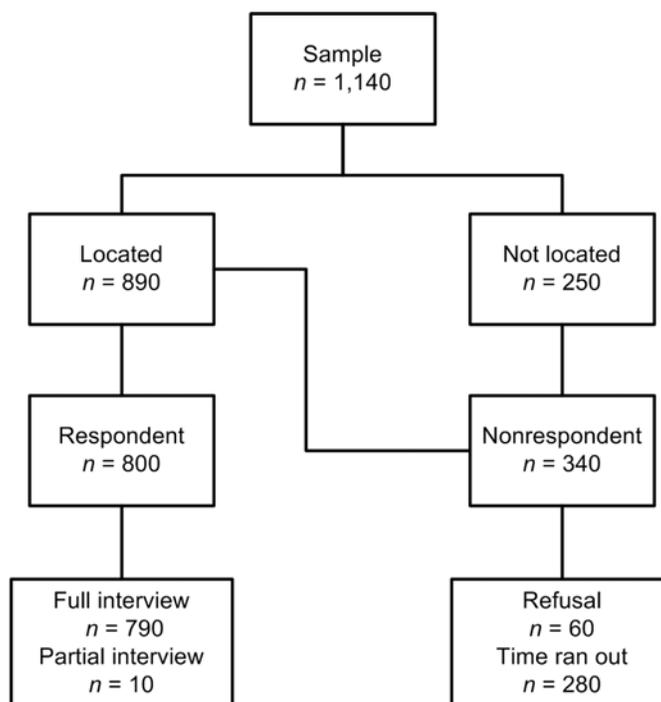
This chapter reports the data collection outcomes of the 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) field test. The response rates are reported first, including an overall summary of results, a discussion of locating and contacting results, and a discussion of interview response by mode of completion. The second section discusses the burden associated with conducting the BPS:04/09 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 Response Rates

This section presents overall results and response rates from the BPS:04/09 field test. Also discussed are locating outcomes by tracing sources and methods, contacting and interviewing outcomes, and response rates by key characteristics such as interview completion mode and response status in previous rounds of the study.

#### 3.1.1 Summary of Interview Results

The overall locating and interviewing results for the BPS:04/09 field test interview are presented in figure 8. Locating and participation results are presented in table 9. Out of the 1,140 sample members, 890 (78 percent) were successfully located. As shown in table 9, the overall response rate among eligible sample members was 70 percent. Among cases that were successfully located, however, the response rate was 90 percent.

**Figure 8. Overall locating and interviewing results for BPS:04/09: 2008**

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

Source: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

**Table 9. Locate and response rates, by prior-round response status and institution type: 2008**

	Total	Located		Responding students		
		Number	Percent of total	Number	Percent of located	Percent of total
Total	1,140	890	78.2	800	90.1	70.4
Prior-round response status						
BPS:04/06 respondent	1,060	840	79.5	760	90.7	72.1
BPS:04/06 nonrespondent	80	50	61.3	40	79.6	48.8
Institutional type						
Public						
Less-than-2-year	10	10	66.7	10	83.3	55.6
2-year	280	210	74.5	180	89.8	66.9
4-year non-doctorate-granting	110	100	87.5	90	93.9	82.1
4-year doctorate-granting	150	120	80.3	110	89.8	72.1
Private not-for-profit						
Less-than-2-year	20	10	65.0	10	100.0	65.0
4-year non-doctorate-granting	220	200	88.8	180	91.4	81.2
4-year doctorate-granting	80	70	88.0	70	90.4	79.5
Private for-profit						
Less-than-2-year	160	100	62.3	80	84.8	52.8
2-year-or-more	110	80	73.1	70	88.6	64.8

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

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

### 3.1.2 Locating and Interviewing Outcomes

Because of the longitudinal nature of the BPS:04/09 field test study, the process by which sample members are located is complex. Sample members who were prior-round respondents have not been contacted in 3 years, while prior-round nonrespondents have not been contacted in at least 5 years. In addition, the demographic makeup of this sample represents a highly mobile segment of the population, thereby increasing the likelihood that the address contact information on record is outdated. To address these challenges, a variety of tracing methods was used to locate sample members both prior to and during data collection.

Tracing for BPS:04/09 field test sample began in the spring of 2008 by using batch tracing services such as National Change of Address file (NCOA), CPS, Telematch, and Accurint. Through these sources, address information was updated or verified, or new information was obtained. Table 10 provides the match rate for each tracing source used in the field test. Of the 1,140 cases sent to NCOA, about 6 percent were successfully matched. Approximately 31 percent of cases sent to CPS returned a match. The cases sent to Telematch confirmed or provided new information for 80 percent of cases sent. Accurint was an additional tracing source that was used, prior to intensive tracing, for cases that did not have a good telephone number. Accurint provided new information for about 9 percent of the cases sent. Cases that were successfully matched through Accurint were sent back to production and the remaining cases went to intensive tracing.

**Table 10. Batch processing record match rates, by tracing source: 2008**

	Number of records sent	Number of records matched	Percent matched
NCOA	1,140 <sup>1</sup>	70	5.8
CPS <sup>2</sup>	1,140 <sup>3</sup>	380	33.3
Telematch	1,130 <sup>1</sup>	910	80.2
Accurint	190	20	8.5

<sup>1</sup> Includes all cases with a valid address.

<sup>2</sup> Matched to CPS data for the 2006–07 or 2007–08 academic year.

<sup>3</sup> Includes all cases with a valid Social Security number.

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, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

While the batch tracing was under way, all sample members and parents of sample members under 30 were sent a letter to request updated contact information. Table 11 shows the locating and interviewing outcomes for cases that provided an address update. Of the address update requests sent to parents, approximately 11 percent of the parent mailings yielded an address update. Of those, 97 percent completed the interview. Address updates were also obtained through the advance notification mailing to sample members and through the study website. Approximately 10 percent of cases updated their address information through each of these methods. Among cases that provided an address update through any of these methods, 98 percent subsequently completed the interview.

**Table 11. Interview completion rates, by address update reply: 2008**

Type of address update	Provided update		Located		Located and interviewed	
	Number	Percent	Number	Percent	Number	Percent
Total	320	100.0	300	92.9	300	98.3
Parent mailing	100	11.1	100	98.0	90	96.9
Advance notification mailing	110	9.8	90	82.9	90	98.9
Website reply <sup>1</sup>	110	9.8	110	98.2	110	99.1

<sup>1</sup> Website replies include updates from the advance notification mailing and a panel maintenance mailing conducted under the BPS:04/06 contract.

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

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

Tracing procedures continued during data collection. Follow-up letters and e-mails were sent to interview nonrespondents to encourage interview participation. In addition, telephone tracing (i.e., calling local and permanent numbers and any other numbers obtained during the course of contacting) was conducted.

In addition to the locating procedures described above, intensive tracing procedures were used as needed for more difficult cases. Intensive tracing included searching consumer databases, web searches, and criss-cross directories. Prior to the start of data collection, approximately 70 cases that did not have useful contact information such as adequate address information or a good telephone number were sent for pre-CATI intensive tracing. Among this first set, 66 percent were successfully located. Of those cases located, 69 percent completed an interview.

When all contacting information obtained through the above procedures was exhausted, level 1 intensive tracing was conducted for sample members who had not been located and were deemed hard to reach. Level 2 intensive tracing was conducted for cases returned from tracing level 1 with no good locating information. Among the cases sent for pre-CATI, level 1, and level 2 intensive tracing, approximately 63 percent were located. Of those located through intensive tracing, 47 percent completed the interview (table 12).

**Table 12. Interview completion rates, by intensive tracing status: 2008**

Tracing level	Sent to CCS	Located		Located and interviewed	
		Number	Percent	Number	Percent
Total	260	170	62.9	80	46.6
Pre-CATI <sup>1</sup>	70	50	66.2	30	68.9
Level 1	150	120	76.7	40	38.3
Level 2 <sup>2</sup>	40	#	#	#	33.3

# Rounds to zero.

<sup>1</sup> Cases that did not have adequate locating information prior to the start of data collection were sent to intensive tracing.

<sup>2</sup> Cases that are returned from tracing level 1 without adequate locating information are sent back for additional tracing.

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

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

### 3.1.3 Interview Outcomes by Mode

As noted in section 2.2.1, sample members could complete the BPS:04/09 field test survey either as a self-administered web interview or by telephone with a professional interviewer. During the first 4 weeks of data collection, sample members were able to complete the self-administered interview. If desired, sample members could call the help desk to complete a telephone interview at any time during data collection; however, no outbound calls were made during this early response phase of data collection. After the early response period concluded, telephone interviewers began making outbound calls to obtain interviews among the remaining interview nonrespondents. Sample members could complete either a self-administered or an interviewer-administered interview throughout the remainder of the data collection period, which ended July 31, 2008.

The distribution of interview completions by administration mode is displayed in table 13. Among completed interviews, about 30 percent of interviews were completed by telephone and 70 percent were completed via self-administration. Approximately half of those respondents who completed the self-administered interview did so during the first 4 weeks of data collection (early response phase).

**Table 13. Distribution of interview completions, by mode of administration: 2008**

Mode of administration	Total	Percent of completed interviews
All respondents	800	100.0
Self-administered	570	70.9
Interviewer-administered	230	29.1
Nonrespondents	340	†

† Not applicable.

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

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

## 3.2 Interview Burden

This section describes the burden associated with conducting the BPS:04/09 field test interviews. Interview completion times are discussed overall and by mode of administration. Also presented are the number of hours worked by telephone interviewers and a summary of call counts.

### 3.2.1 Time to Complete the Student Interview

To ensure that the burden associated with completing the BPS:04/09 field test interview was kept to a minimum, interview timing was monitored closely. The amount of time it took students to complete the interview was examined, with special attention paid to different completion modes and student types. 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 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 that the web page was displayed on the screen. The second time stamp, the end timer, recorded the clock time on the

respondent's or interviewer's computer at the time 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 a 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 included 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) were excluded from analysis.

Table 14 presents the average interview time for each section 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, enrollment history, enrollment characteristics, employment, and background sections of the field test interview.

**Table 14. Average time, in minutes, 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	Number of cases	Average time	Number of cases	Average time
Total interview	640	24.8	450	22.4	190	30.4
Front end	640	2.1	450	0.9	190	4.9
Enrollment history	640	3.9	450	3.7	190	4.4
Enrollment characteristics	640	5.5	450	5.4	190	5.9
Employment	640	6.3	450	6.0	190	6.8
Background	640	6.8	450	6.3	190	7.9

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

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

On average, the BPS:04/09 field test instrument took 25 minutes to complete. Overall, self-administered interviews were significantly shorter (22 minutes) than interviewer-administered interviews (30 minutes) ( $t = 6.06, p < .01$ ). The amount of time spent both 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 (21 minutes and 23 minutes, respectively) ( $t = 2.3, p = .021$ ). Conversely, interviewer-administered interviews had a shorter average transit time than self-administered interviews (2.2 minutes and 3.5 minutes, respectively) ( $t = 5.87, p < .0001$ ).

The enrollment history section collected information about the respondent's enrollment and degree attainment information since 2005. The average time to complete this section was 3.9 minutes. The amount of time spent in this section varied depending on how many schools the respondent reported attending since 2005. Table 15 shows the average interview times by interview path and section. Because the interview collected information on each school attended since 2005, respondents with more schools had longer times in this section (21.0 minutes for no schools, 26.9

minutes for one school, and 28.8 minutes for two or more schools attended since 2005) ( $F = 18.46$ ,  $p < .01$ ).

**Table 15. Average time, in minutes, to complete field test interview, by interview path and section: 2008**

Interview section	Total		Employment status				Number of schools attended since 2005					
			Employed		Not employed		None		One		Two or more	
	Number	Avg. time	Number	Avg. time	Number	Avg. time	Number	Avg. time	Number	Avg. time	Number	Avg. time
Total interview	640	24.8	420	26.0	220	22.5	240	21.0	340	26.9	60	28.8
Front end	640	2.1	420	1.8	220	2.9	240	2.8	340	1.7	60	1.9
Enrollment history	640	3.9	420	3.2	220	5.4	240	0.6	340	5.4	60	9.1
Enrollment characteristics	640	5.5	420	5.1	220	6.3	240	1.9	340	7.7	60	7.7
Employment	640	6.3	420	9.1	220	0.8	240	8.4	340	5.2	60	3.4
Background	640	6.8	420	6.7	220	7.0	240	7.0	340	6.7	60	6.6

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

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

The enrollment characteristics section collected information about the respondent's experiences while enrolled. Topics focused on major or field of study, grade point average, employment while enrolled, and financial aid. This section took an average of 5.5 minutes to complete.

The employment section, which collected information about the respondent's current job duties, benefits, requirements, and periods of unemployment, if applicable, took an average of 6.3 minutes to complete. Respondents who were employed spent longer in the employment section (9.1 minutes) than those who were not employed (0.8 minutes) ( $t = 44.63$ ,  $p < .01$ ).

The background section collected demographic information about respondents and their families. It also contained items related to personal finance, number of dependents, parent education, disability status, citizenship status, and community service work. A majority of 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 6.8 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 the National Center for Education Statistics and the Technical Review Panel for revisions to the full-scale interview.

### 3.2.2 Interviewer Hours

The interviewer-administered component of data collection required considerable effort on the part of telephone interviewers and call center supervisory staff. Telephone interviewer hours for the BPS:04/09 field test totaled approximately 1,250 hours, excluding training, supervision, monitoring, administration, and Quality Circle (QC) meetings. On average, telephone interviewers spent 6.0 hours per completed interview over the course of data collection.

Given the average telephone interview completion time of 30 minutes, the remaining time was spent in activities outside the actual interview. The majority 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 remaining interviewer time was spent on case maintenance, such as opening a case and reviewing its call history, scheduling callbacks, providing comments, and updating case statuses.

### 3.2.3 Number of Calls

The average number of calls required to obtain a completed interview varied according to prior response status and phase of data collection. Table 16 shows the average number of telephone calls overall and by current and prior response status, mode of administration, and phase of data collection. Overall, an average of 16 calls was made per sample member. Sample members who completed the interview during the early response phase required no calls.

**Table 16. Average calls per case, by interview characteristics: 2008**

Interview characteristics	Number of cases	Number of calls	Average calls per case
Total calls to all sample members	1,140	18,686	16.4
Current response status			
BPS:04/09 respondent	800	7,293	9.1
BPS:04/09 nonrespondent	340	11,403	33.9
Prior response status			
BPS:04/06 respondent	1060	16,743	15.8
BPS:04/06 nonrespondent	80	1,943	24.3
By administration mode <sup>1</sup>			
Self-administered	160	3,649	22.5
Interviewer-administered	210	3,343	15.8
By phase of data collection <sup>1</sup>			
Production interviewing	110	550	5.1
Nonresponse conversion	270	6,442	24.3

<sup>1</sup> Partial interviews removed.

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

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

Significant call count differences were found by response status to the current and prior-round studies. BPS:04/09 respondents were called on average 9 times, compared with an average of 34 times for nonrespondents ( $t = 18.05, p < .01$ ). Similarly, prior-round respondents received an average of 16 calls, while prior-round nonrespondents received an average of 24 calls ( $t = 3.51, p < .01$ ).

Call counts were also examined by mode of completion and by phase of data collection. Since no call attempts were made to obtain interviews during the early response period, cases that

completed during the early response phase were excluded from the comparison of administration mode and data collection phase. Any calls placed to sample members during the early response phase were in response to inquiries, such as requests for password and technical assistance.

Among cases that did not complete an interview during the early response phase, self-administered respondents required more calls, on average, than telephone-administered respondents (23 calls compared with 16 calls, respectively [ $t = 4.21, p < .01$ ]). Sample members who completed a self-administered survey received more calls because they may have been less willing to complete an interview over the telephone, and therefore the additional calls may have served as reminders to complete the interview.

Call counts also varied by the phase of data collection. Cases completed during the production interviewing phase (during which no incentives were offered) were called approximately five times, while cases that were called during the nonresponse conversion phase needed approximately 24 calls to complete the interview ( $t = 19.83, p < .01$ ). Not surprisingly, the call counts were higher for the nonresponse incentive cases since they did not respond during the two earlier data collection periods, and thus more effort was required to contact them and complete the interview. The early response period was fixed but the other response periods were based on refusal status, number of call, and locating status.

### 3.3 Results of Field Test Experiments

#### 3.3.1 Data Collection Experiments

As described in section 2.3.2, three experiments were included in the BPS:04/09 field test. These experiments were designed to evaluate the effectiveness of data collection strategies to increase response rates during the early response period—the first 4 weeks of data collection when sample members were invited to log on to the secure study website and complete the self-administered online survey. The first experiment evaluated the impact of the type of envelope used to mail the initial study materials. The second experiment evaluated the effectiveness of a prepaid cash incentive, and the third evaluated the effectiveness of prompting calls in increasing response rates during the early response period. For all experimental evaluations, the sample was randomly assigned to either the treatment or control condition prior to the start of data collection, and each was examined independently.

**Type of Mailing.** Table 17 presents the response rates during the early response period, for both types of mailing:

1. regular U.S. Mail in a large 9" x 12" envelope with U.S. Department of Education return address (First-Class Mail); and
2. U.S. Postal Service Express Mail envelope (Priority Mail).

In NPSAS:08, an experiment was conducted that compared the Priority Mail envelope with a standard business envelope. The NPSAS:08 study found a significant difference in early interview completion between the two groups: 39 percent of those who were sent the materials via Priority Mail completed the interview during the early response phase, compared with 33 percent of those

who were sent the materials via First-Class Mail ( $\chi^2 = 9.22, p < .01$ ).<sup>8</sup> The experiment conducted in BPS:04/09 compared the Priority Mail envelope with a 9"x12" envelope via regular mail. Results from the BPS:04/09 comparison showed that those who received the study materials in the Priority Mail envelope had an early response rate of 35 percent, compared with a response rate of 39 percent for those who received the regular envelope. However, this difference was not statistically significant.

**Table 17. Early response rates, by type of mailing: 2008**

Type of initial mailing	Eligible sample	Interviewed	
		Number <sup>1</sup>	Percent
All cases	1,140	420	37.2
Priority Mail	570	200	35.2
First-Class Mail	570	220	39.2

<sup>1</sup> Includes only those respondents who completed the interview during the early response period.

NOTE: Detail may not sum to totals because of rounding. All percentages are unweighted and based on the number of eligible students within the row under consideration.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

**Prepaid Incentives.** The effectiveness of a prepaid incentive was also examined in the field test. During the early response period, sample members were offered an incentive for completing the web-based self-administered interview before production interviewing began 4 weeks later on May 8, 2008. Prior to the start of data collection, the field test sample was randomly assigned to two groups: one group received the early response incentive as \$5 prepaid cash plus a \$25 promised check, and the other group was offered a \$30 promised check on completion of the interview. In addition, all BPS:04/06 nonrespondents were offered an additional \$20 to complete the self-administered interview during the early response phase. That is, if they were assigned to the \$5 prepaid cash incentive group, they were offered a \$45 check on interview completion. If they were assigned to the other group and completed the interview within the early response period, they were offered a \$50 check on interview completion.

Table 18 presents early response rates for prepaid and promised incentives offered during the early response phase. The early response rate obtained from those offered the prepaid incentive was 35 percent, compared with a 40 percent early completion rate among those offered the promised incentive.

<sup>8</sup> See section 3.5.1 of Cominole et al. (2008).

**Table 18. Early response rates, by prepaid incentive status: 2008**

Type of initial mailing	Eligible sample	Interviewed	
		Number <sup>1</sup>	Percent
All cases	1,140	420	37.2
Promised incentive	570	230	39.5
Prepaid incentive	570	200	34.9

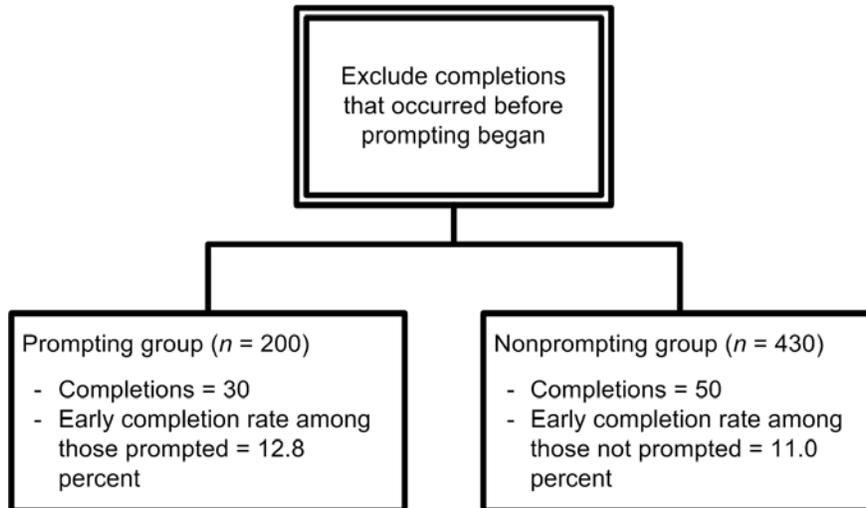
<sup>1</sup> Includes only those respondents who completed the interview during the early response period.

NOTE: Detail may not sum to totals because of rounding. All percentages are unweighted and based on the number of eligible students within the row under consideration.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

**Prompting.** Similar to the two previous experiments, one-half of the sample was randomly assigned to receive a prompting call as a reminder halfway through the early response period. All cases that had completed the interview prior to the date that the prompting calls began were excluded, regardless of experimental condition. Additional cases were excluded from the analysis because there was no phone number for the sample member. Figure 9 shows the early completions for the prompting and nonprompting groups. Among those selected to receive prompting calls, approximately one-half were successfully prompted. Among the cases successfully prompted, 13 percent completed the interview during the early response period, compared with an early response rate of 11 percent among the group that did not receive prompting calls. The early response rate was not statistically significantly different between the two groups.

**Figure 9. Early completion rates by prompting status: 2008**



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.



# Chapter 4.

## Evaluation of Data Quality and File Preparation

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This chapter includes summaries of the file preparation process for the 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) field test data collection and a detailed analysis of the quality of data collected. An analysis of quality control procedures, coding processes, help text usage, item-level nonresponse, and debriefing results is also presented.

### 4.1 Reliability Reinterview

An important element of data quality in survey research is the reliability of self-reported responses to interview questions. To evaluate the reliability of self-reported data collected in the BPS:04/09 field test interview, a reliability reinterview was administered to a subsample of respondents. 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 so that any needed revisions can be made to items for the full-scale interview.

A subsample of 300 BPS:04/09 sample members who completed the interview was randomly selected to participate in the reliability reinterview. 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.

A summary of the reinterview sample members and their participation rates is presented in table 19. Response rates are shown overall and by completion mode. Overall, 72 percent of those selected completed the reliability reinterview. The response rate was 69 percent for those selected to participate in the reliability reinterview via self-administration and 75 percent for those selected to do a telephone reinterview; however, this difference was not statistically significant ( $\chi = 1.15$ ).

**Table 19. Reliability reinterview response rates, by administration mode: 2007**

Administration mode	Number selected for the reinterview	Participated in reinterview	
		Number	Percent
Total	300	220	71.9
Self-administered	150	100	68.9
Interviewer-administered	150	110	74.8

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

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

**Reliability Reinterview Results.** Table 20 presents reliability estimates for the items included in the reinterview, by section. For each item, the number of cases, percent agreement between the initial interview and reinterview, and relational statistic are shown. 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. Reliability statistics are presented overall and by administration mode. The differences across modes were tested for statistical significance and noted where significant relationships were found.

**Table 20. 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
Enrollment history										
MBDEG01	Type of degree or certificate	120	84.5	0.80 <sup>3</sup>	60	86.2	0.84 <sup>3</sup>	60	82.8	0.79 <sup>3</sup>
MBEN501	Enrollment intensity in 2005	70	86.4	0.41 <sup>3,4</sup>	30	87.5	0.49 <sup>3,4</sup>	30	85.3	0.54 <sup>3,4</sup>
MBEN601	Enrollment intensity in 2006	90	87.2	0.54 <sup>3,4</sup>	40	88.1	0.60 <sup>3,4</sup>	40	86.4	0.54 <sup>3,4</sup>
MBEN701	Enrollment intensity in 2007	70	78.4	0.46 <sup>3,4</sup>	40	81.1	0.48 <sup>3,4</sup>	40	75.7	0.47 <sup>3,4</sup>
MBEN801	Enrollment intensity in 2008	50	81.1	0.48 <sup>3,4</sup>	30	84.6	0.52 <sup>3,4</sup>	30	77.8	0.51 <sup>3,4</sup>
Enrollment characteristics										
MCDBLMAJ	Declared a major	40	92.1	0.71 <sup>3</sup>	20	93.8	1.00 <sup>3</sup>	20	90.9	# <sup>3</sup>
MCDISTED	Ever while enrolled: any course credit via distance education	100	92.9	0.73 <sup>3</sup>	50	93.8	0.77 <sup>3</sup>	50	92.0	0.71 <sup>3</sup>
MCPROB	Ever while enrolled: withdrawal from a course after deadline	100	86.1	0.61 <sup>3</sup>	50	91.8	0.78 <sup>3</sup>	50	80.8	0.43 <sup>3</sup>
MCINCOMP	Ever while enrolled: received grade of incomplete	100	93.1	0.66 <sup>3,4</sup>	50	95.9	0.85 <sup>3</sup>	50	90.4	0.40 <sup>3,4</sup>
MCPROB	Ever while enrolled: placed on academic probation	100	98.0	0.93 <sup>3</sup>	50	100.0	1.00 <sup>3</sup>	50	96.2	0.88 <sup>3</sup>
MCRPT	Ever while enrolled: repeat courses for higher grade	100	97.1	0.93 <sup>3</sup>	50	98.0	0.95 <sup>3</sup>	50	96.2	0.91 <sup>3</sup>
MCLRNSA	Reason for undergraduate private loan: aid package did not cover cost	40	61.5	0.23 <sup>3</sup>	20	71.4	0.43 <sup>3</sup>	20	50.0	# <sup>3</sup>
MCLRNSB	Reason for undergraduate private loan: did not qualify for other aid	40	87.2	0.67 <sup>3</sup>	20	90.5	0.81 <sup>3</sup>	20	83.3	0.32 <sup>3,4</sup>
MCLRNSC	Reason for undergraduate private loan: loan application faster	40	79.5	0.25 <sup>3,4</sup>	20	81.0	0.22 <sup>3,4</sup>	20	77.8	0.39 <sup>3,4</sup>
MCLRNSD	Reason for undergraduate private loan: missed FAFSA deadline	40	97.4	† <sup>3</sup>	20	95.2	†	20	100.0	†
MCLRNSE	Reason for undergraduate private loan: federal loan disbursement late	40	100.0	† <sup>3</sup>	20	100.0	†	20	100.0	†
MCLRNSF	Reason for undergraduate private loan: no difference in terms	40	100.0	1.00 <sup>3</sup>	20	100.0	1.00 <sup>3</sup>	20	100.0	†
MCLRNSG	Reason for undergraduate private loan: deferment of loan payment	40	71.8	0.25 <sup>3,4</sup>	20	81.0	0.53 <sup>3</sup>	20	61.1	0.22 <sup>3,4</sup>
MCLRNSH	Reason for undergraduate private loan: issued directly to student	40	87.2	0.05 <sup>3,4</sup>	20	81.0	0.09 <sup>3,4</sup>	20	94.4	†
MCLRNSI	Reason for undergraduate private loan: other	40	71.8	0.32 <sup>3,4</sup>	20	85.7	0.50 <sup>3,4,*</sup>	20	55.6	0.10 <sup>3,*</sup>
MCLNTYPA	Type of undergraduate loan: federal	120	91.1	0.62 <sup>3</sup>	70	89.6	0.41 <sup>3,4</sup>	60	92.9	0.78 <sup>3</sup>

See notes at end of table.

Table 20. 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
MCLNTYPB	Type of undergraduate loan: private	120	81.3	0.61 <sup>3</sup>	70	82.1	0.63 <sup>3</sup>	60	80.4	0.60 <sup>3</sup>
MCLNTYPC	Type of undergraduate loan: other	120	91.9	0.14 <sup>3,4</sup>	70	97.0	0.48 <sup>3,4,*</sup>	60	85.7	0.07 <sup>3,4,*</sup>
MCMJ1GEN	Primary major - general category	70	87.5	0.94 <sup>3</sup>	30	84.0	0.96 <sup>3</sup>	50	89.4	0.97 <sup>3</sup>
MCMJ1SPE	Primary major - specific category	70	67.6	0.94 <sup>3</sup>	20	75.0	0.97 <sup>3</sup>	50	63.8	0.95 <sup>3</sup>
MCMJ2GEN	Secondary major - general category	10	85.7	0.90 <sup>3</sup>	#	100.0	1.00 <sup>3</sup>	#	75.0	0.79 <sup>3</sup>
MCMJ2SPE	Secondary major - specific category	10	71.4	1.00 <sup>3</sup>	#	66.7	1.00 <sup>3</sup>	#	75.0	1.00 <sup>3</sup>
MCONOFF	Job on or off campus	90	93.2	0.64 <sup>3,4</sup>	50	91.1	0.65 <sup>3,4</sup>	40	95.4	0.81 <sup>3</sup>
MCPELL	Received a Pell grant	100	90.3	0.75 <sup>3</sup>	50	90.4	0.75 <sup>3</sup>	50	90.2	0.75 <sup>3</sup>
MCPRPAA	Help from parents: tuition and fees	100	92.1	0.84 <sup>3</sup>	50	92.0	0.83 <sup>3</sup>	50	92.2	0.84 <sup>3</sup>
MCPRPAB	Help from parents: other educational expenses	100	85.2	0.70 <sup>3</sup>	50	90.0	0.78 <sup>3</sup>	50	80.4	0.62 <sup>3</sup>
MCPRPAC	Help from parents: housing	100	86.1	0.71 <sup>3</sup>	50	82.0	0.59 <sup>3</sup>	50	90.2	0.80 <sup>3</sup>
MCPRPAD	Help from parents: other living expenses	100	85.2	0.69 <sup>3</sup>	50	84.0	0.60 <sup>3</sup>	50	86.3	0.73 <sup>3</sup>
MCPRPAE	Help from parents: no financial support	100	91.1	0.81 <sup>3</sup>	50	92.0	0.84 <sup>3</sup>	50	90.2	0.77 <sup>3</sup>
MCRPYST	Currently repaying any education loans	120	86.1	0.71 <sup>3</sup>	60	83.3	0.68 <sup>3</sup>	60	89.1	0.74 <sup>3</sup>
MCUGLN	Any undergraduate loans	210	94.3	0.88 <sup>3</sup>	100	97.1	0.94 <sup>3</sup>	110	91.5	0.83 <sup>3</sup>
Employment										
MDCONCER	Job requirements: certificate	140	80.0	0.28 <sup>3,4</sup>	60	80.3	0.14 <sup>3,4</sup>	70	79.7	0.36 <sup>3,4</sup>
MDCONDEG	Job requirements: 2-year or 4-year degree	140	86.1	0.72 <sup>3</sup>	70	90.0	0.80 <sup>3</sup>	70	82.4	0.62 <sup>3</sup>
MDCONLIC	Job requirements: license	140	86.3	0.67 <sup>3</sup>	70	92.4	0.79 <sup>3,*</sup>	70	80.8	0.58 <sup>3,*</sup>
Background										
MEHSNUM	Number of people in household	220	72.4	0.76 <sup>5</sup>	100	75.0	0.75 <sup>5</sup>	110	69.9	0.77 <sup>5</sup>
MEINCHO	Satisfaction with institutional choice	110	91.9	0.43 <sup>3,4</sup>	50	84.9	0.26 <sup>3,4,*</sup>	60	98.3	0.81 <sup>3,*</sup>
MEPLNTCH	Plan on teaching at the K–12 level	210	73.2	0.60 <sup>5</sup>	100	74.8	0.69 <sup>5</sup>	110	71.7	0.47 <sup>5</sup>
MEINCOM	Income	200	91.3	0.75 <sup>6</sup>	100	91.6	0.75 <sup>6</sup>	100	91.1	0.75 <sup>6</sup>

† Not applicable.

# Rounds to zero.

\*  $p < .05$ <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> Percentage reflects an exact match of the paired responses.<sup>3</sup> Relational statistic presented is Cramer's  $V$ .<sup>4</sup> 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.<sup>5</sup> Relational statistic presented is Kendall's tau- $b$ .<sup>6</sup> Pearson's product-moment correlation coefficient  $r$  was used.

NOTE: Detail may not sum to totals because of rounding. FAFSA = Free Application for Federal Student Aid.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

The relational statistics provided help to quantify the strength of association between the two variables being compared, where 1.00 is indicative of a perfect correlation (i.e., an exact match 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/no). Kendall's tau- $b$  ( $\tau_b$ ) estimated the relationship between items with ordered categories (e.g., not at all, occasionally, and frequently). The Pearson product-moment correlation coefficient ( $r$ ) was used for variables yielding interval or ratio responses (e.g., income).

The items selected for the BPS:04/09 reliability reinterview included those that were new to the BPS survey and those that warrant further monitoring. The complete BPS:04/09 reliability reinterview facsimile can be found in appendix F.

The enrollment history section consisted of five items and focused on type of degree or certificate and enrollment intensity in the years since the last interview. The percentage of agreement was high, ranging from 78 percent to 87 percent. Each of the five questions had a moderately strong relational statistic, all greater than .40.

The enrollment characteristics section contained questions about major, distance education, undergraduate academic experiences, and financial aid. One set of questions that exhibited high reliability asked what academic experiences the respondent had had while enrolled. The percent agreement ranged from 86 percent (withdrawal from a course after the deadline) to 98 percent (placed on academic probation).

The next set of items in the enrollment characteristics section, those addressing the reasons the respondent took out private loans for undergraduate education, had percent agreement ranging from 62 percent to 100 percent. The relational statistic for these items varied from .05 to 1.00. From this set, three items were consistently listed as a reason for taking out private loans: missed Free Application for Student Aid (FAFSA) deadline (97 percent agreement), federal loan disbursement was late (100 percent agreement), and no difference in terms (100 percent agreement). Two items from this set—deferment in loan payment and aid package did not cover cost—were less consistent between the interview and reinterview (72 percent agreement and 62 percent agreement, respectively). Self-administered respondents provided more consistent responses to the “Other, Specify” item included in the “reasons for private loans” set than interviewer-administered respondents (86 percent agreement and 56 percent agreement, respectively) ( $\chi^2 = 2.09, p < .05$ ).

The final set of items in the enrollment characteristics section asked respondents what, if any, financial help they received from their parents or guardians. These items also showed high percent agreement, ranging from 85 percent to 91 percent.

The next section focused on employment and asked employed respondents what type of degree was required for their job. Each type of degree requirement showed high percent agreement: certificate (80 percent), 2-year or 4-year degree (86 percent), and license (86 percent). Certificate requirements showed a low relational statistic (.28) but had a percent agreement of 80 percent—a result that can occur when there is a small change between interview and reinterview responses but very little variation in the initial responses. The relational statistics for 2-year or 4-year and license degree requirements were higher (.72 and .67, respectively). Self-administered respondents were

more likely to report consistently that their job required a license than were interviewer-administered respondents (92 percent agreement and 81 percent agreement, respectively) ( $\chi = 1.99, p < .05$ ).

The reliability analysis included four questions from the background section—all of which performed very well. The number of people in the respondent's household was consistent between the interview and reinterview with 72 percent agreement. Respondent's income was very reliable with 91 percent agreement, while plans to teach at the K–12 level had 73 percent agreement. The respondent's satisfaction with institutional choice had the highest percent agreement of all the background items (92 percent). This item was found to be more consistent for interviewer-administered respondents (98 percent agreement) than for self-administered respondents (85 percent agreement) ( $\chi = 2.58, p < .01$ ).

Overall, results of the reinterview analysis indicate that the survey yields data of high quality, with consistently reliable results. The majority of items (33 out of 39) have a percentage agreement of 80 percent or higher.

## 4.2 Format Experiment

As described in section 2.3.2, the BPS:04/09 field test evaluated the response rates of three question response formats to look for differences in time to administer, and the completeness and quality of data across question formats: radio button, checkall, and open-ended with subsequent self-coding. Four different questions from the BPS:04/09 field test interview were administered in one of three response formats to respondents to whom the item applied. The response formats were randomly assigned to respondents and were not dependent on the format presented in a prior experimental item, if any. Figure 7 shows the flow of questions into the format types. The following section evaluates the results of the data obtained across the three format types—where possible, results are presented across modes.

An example of each of the three response formats is presented in figure 10 (radio button format), figure 11 (checkall format), and figure 12 and 13 (open-ended format followed by a self-coding dropdown). 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 which best described the text string be selected. The same set of response options was presented across the three item formats for each question.

Figure 10. Screenshot of radio button format: 2008

Beginning Postsecondary Students Longitudinal Study  
 OMB Clearance No: 1850-0631 Exp. Date: 04/30/2011  
 Employment / MDLNINCY

Sections Completed: 1 2 3 4  
 Progress in Section: \_\_\_\_\_

In what ways has your undergraduate student loan debt influenced your **employment** plans and decisions?

	Yes	No
Took job outside field of study or training to cover the monthly student loan payment	<input type="radio"/>	<input type="radio"/>
Took less desirable job	<input type="radio"/>	<input type="radio"/>
Had to look for higher paying job	<input type="radio"/>	<input type="radio"/>
Had to go to work sooner than originally planned	<input type="radio"/>	<input type="radio"/>
Had to work more hours than desired	<input type="radio"/>	<input type="radio"/>
Had to work more than one job at the same time	<input type="radio"/>	<input type="radio"/>
Other reason not listed	<input type="radio"/>	<input type="radio"/>

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

Figure 11. Screenshot of checkall format: 2008

Beginning Postsecondary Students Longitudinal Study  
 OMB Clearance No: 1850-0631 Exp. Date: 04/30/2011  
 Background / MEVLTPB

Sections Completed: 1 2 3 4  
 Progress in Section: \_\_\_\_\_

What types of community service or volunteer work did you perform?

*(Please check all that apply.)*

- Tutoring, education-related work with kids
- Other work with kids (coaching, sports, Big Brother or Big Sister, etc.)
- Homeless shelter or soup kitchen
- Fundraising (political and non-political)
- Health services or hospital, nursing home, group home
- Service to church or other religious organization
- Neighborhood improvement, clean-up, or Habitat for Humanity
- Another type of service not listed

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

Figure 12. Screenshot of open-ended format with follow-up coding: 2008

The screenshot shows the top header with the BPS logo on the left and the IES logo on the right. Below the logos, the text reads: "Beginning Postsecondary Students Longitudinal Study", "OMB Clearance No: 1850-0631", "Exp. Date: 04/30/2011", "Employment / MDNTRC", "Sections Completed: 1 [checkmark] 2 [checkmark] 3 [ ] 4 [ ]", and "Progress in Section: [progress bar]".

Job title: Motorcycle repair

Since you do not consider this to be the beginning of a career you are pursuing in your occupation or industry, how would you describe your job?

(Please enter one response in the box provided. For each additional response you wish to provide, click the "Provide an additional response" button.)

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

Figure 13. Screenshot of follow-up coding of open-ended responses: 2008

The screenshot shows the same top header as Figure 12. Below the header, the text reads: "How would you categorize the answer(s) you gave?" and "(Please match your response(s) provided below to a category from the drop down list.)".

**Pays the bills**

Select One

- Select One
- Helping to explore different career options
- Allows freedom to pursue other interests
- Already part of an established career
- Pays the bills
- Providing experience needed to pursue additional education
- Providing experience needed to enter a particular career
- Other

[Help](#) [Logout](#)

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

Across the four questions included in the evaluation, there were 30 items for which an answer could be collected. The item responses were then compared to see if the percent positive for a given item was consistent across the format types. The “percent positive” was calculated by dividing the “number of positive responses” by the “number administered to”. Approximately 67 percent of the items had a higher percent positive among radio button respondents than among open-ended respondents. In other words, 20 of the 30 possible items were selected by significantly more respondents who saw the radio button format than when offered in the open-ended format. Eleven of the 30 possible response options were selected by more respondents when in the radio button format compared to the checkall format. A comparison of the checkall and open-ended formats shows a similar result— 12 of the 30 potential response options were selected by significantly more respondents when in the checkall format than in the open-ended format.

Table 21 shows the completeness of responses across formats for the four questions that were included in the question format experiment. For each item evaluated, the number of cases administered to is presented along with the number and percent of positive responses selected on that form. For example, approximately 200 sample members were asked about the effects of loan debt on enrollment decisions across all three format types. Among the 70 cases the radio button format was administered to, 46 percent reported increasing credits/courses to finish sooner. The checkall format for the same item was 16 percent positive for those administered to, and about 12 percent for the open-ended format.

**Table 21. Completeness of data for experimental items, by question format: 2008**

Question and item	Format								
	Number administered to	Radio button		Checkall			Open-ended		
		Number of positive responses	Percent positive	Number administered to	Number of positive responses	Percent positive	Number administered to	Number of positive responses	Percent positive
<b>Effect of loan debt on enrollment decision?</b>									
Increased credits/courses to get done sooner	70	30	46.4 <sup>1,2</sup>	70	10	15.7 <sup>1</sup>	60	10	12.3 <sup>2</sup>
Took summer classes to get done sooner	70	30	42.0 <sup>1,2</sup>	70	20	21.4 <sup>1,3</sup>	60	#	1.8 <sup>2,3</sup>
Changed majors to minimize loans needed	70	10	20.3 <sup>2</sup>	70	10	15.7 <sup>3</sup>	60	#	3.5 <sup>2,3</sup>
Decreased credits/courses to decrease cost of attendance	70	20	29.0 <sup>2</sup>	70	20	22.9 <sup>3</sup>	60	#	3.5 <sup>2,3</sup>
Took terms off	70	20	24.6 <sup>2</sup>	70	20	24.3 <sup>3</sup>	60	#	7.0 <sup>2,3</sup>
Postponed enrolling	70	40	50.7	70	30	38.6	60	20	38.6
Lived at home	70	20	33.3 <sup>1,2</sup>	70	10	11.4 <sup>1</sup>	60	#	3.5 <sup>2</sup>
Other	70	10	18.8	70	10	18.6	60	20	28.1
<b>Effect of loan debt on employment decisions?</b>									
Took job outside of field or training	60	20	40.0	50	20	31.3	60	10	25.5
Took less desirable job	60	30	55.0 <sup>1,2</sup>	50	10	27.1 <sup>1,3</sup>	60	#	7.3 <sup>2,3</sup>
Had to find higher paying job	60	40	58.3 <sup>1,2</sup>	50	20	35.4 <sup>1,3</sup>	60	10	18.2 <sup>2,3</sup>
Worked sooner than planned	60	20	25.0 <sup>2</sup>	50	10	14.6	60	10	9.1 <sup>2</sup>
Worked more hours than desired	60	30	43.3 <sup>1,2</sup>	50	10	25.0 <sup>1</sup>	60	10	10.9 <sup>2</sup>
Worked 2 or more jobs at the same time	60	30	41.7 <sup>1,2</sup>	50	10	16.7 <sup>1</sup>	60	10	10.9 <sup>2</sup>
Other	60	10	10.0	50	10	16.7	60	10	10.9
<b>Characterization of current job?</b>									
Helping to explore different career options	60	30	39.7 <sup>2</sup>	50	20	34.0	70	10	18.2 <sup>2</sup>
Already part of established career	60	10	17.5	50	10	16.0	70	10	7.6
Allows freedom to pursue other interests	60	30	54.0 <sup>1,2</sup>	50	20	34.0 <sup>1,3</sup>	70	10	7.6 <sup>2,3</sup>

See notes at end of table.

**Table 21. Completeness of data for experimental items, by question format: 2008—Continued**

Question and item	Format								
	Number administered to	Radio button		Checkall			Open-ended		
		Number of positive responses	Percent positive	Number administered to	Number of positive responses	Percent positive	Number administered to	Number of positive responses	Percent positive
Pays the bills	60	60	88.9 <sup>2</sup>	50	40	78.0 <sup>3</sup>	70	40	59.1 <sup>2,3</sup>
Providing experience for additional education	60	20	27.0 <sup>2</sup>	50	10	18.0	70	10	12.1 <sup>2</sup>
Providing experience for particular career	60	20	27.0 <sup>2</sup>	50	10	24.0 <sup>3</sup>	70	#	1.5 <sup>2,3</sup>
Other	60	10	12.7	50	10	16.0 <sup>3</sup>	70	#	4.6 <sup>3</sup>
Types of community service?									
Education-related work with kids	80	30	33.3 <sup>2</sup>	90	20	22.7	90	10	15.6 <sup>2</sup>
Other work with kids	80	30	33.3	90	20	27.3	90	20	22.2
Fundraising	80	20	28.4 <sup>2</sup>	90	20	23.9 <sup>3</sup>	90	10	12.2 <sup>2,3</sup>
Homeless shelter/soup kitchen	80	10	17.3	90	10	9.1	90	10	11.1
Neighborhood improvement	80	30	32.1 <sup>1,2</sup>	90	20	18.2 <sup>1</sup>	90	10	15.6 <sup>2</sup>
Health services	80	10	11.1	90	20	17.1	90	10	12.2
Service to church/other religious organization	80	30	40.7 <sup>1,2</sup>	90	20	26.1 <sup>1</sup>	90	20	16.7 <sup>2</sup>
Other Service	80	10	16.1 <sup>1</sup>	90	30	35.2 <sup>1,3</sup>	90	20	20.0 <sup>3</sup>

# Rounds to zero.

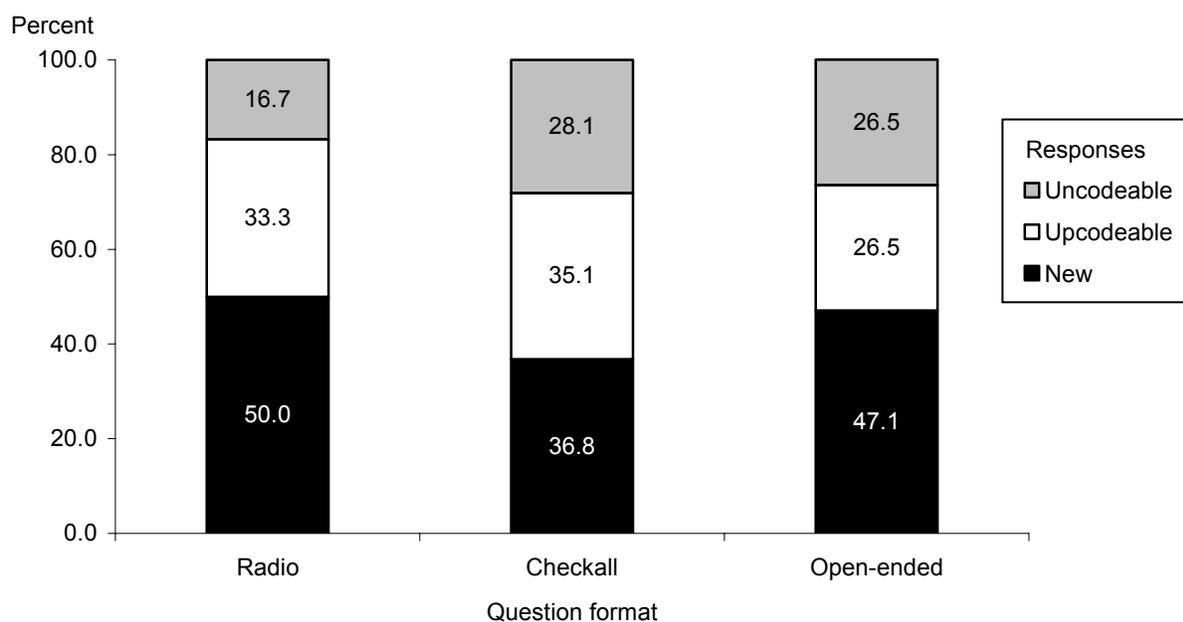
<sup>1</sup> There is a significant difference between the radio button format and the checkall format ( $p < .05$ ).<sup>2</sup> There is a significant difference between the radio button format and the open-ended format ( $p < .05$ ).<sup>3</sup> There is a significant difference between the checkall 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, 2004/09 Beginning Postsecondary Student Longitudinal Study (BPS:04/09) 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 uncodeable and, as a result, could neither be used as a new category nor upcoded. The results of the review are shown in figure 14.

**Figure 14. Codeability of “other, specify” responses offered to BPS:04/09 field test questions, across formats: 2008**

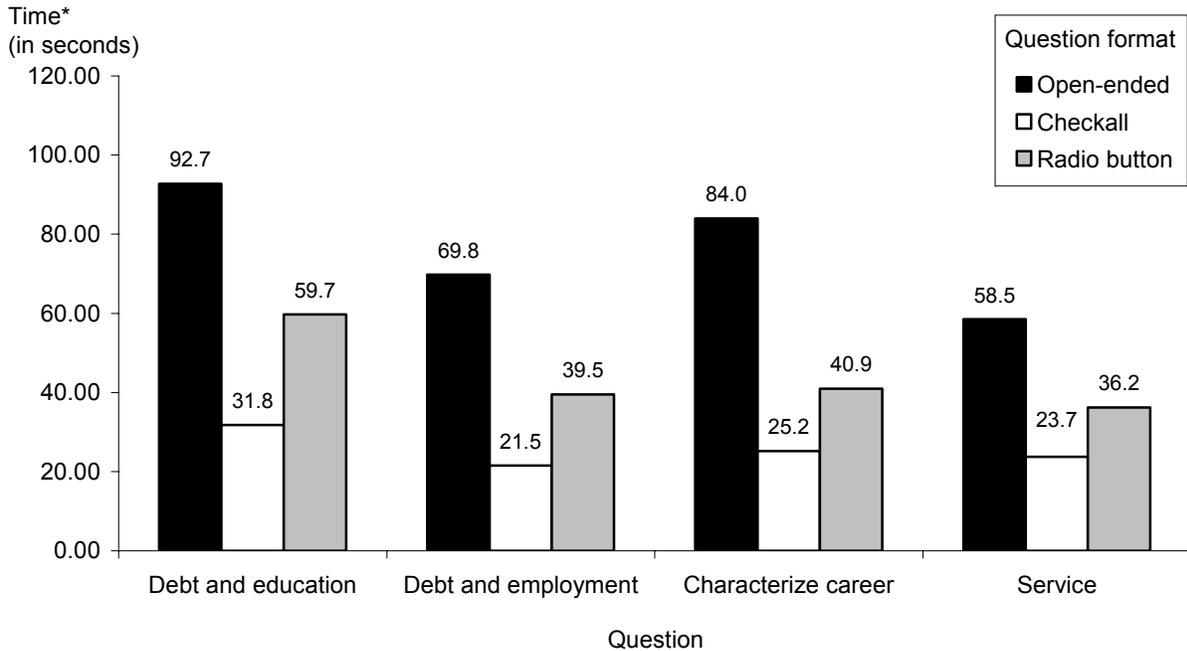


SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

There were no statistical differences in the types of information entered in the text boxes across question formats. Irrespective of formats, respondents were equally likely to enter text strings that contributed new categories, categories which could be upcoded into the existing categories, and categories that could not be upcoded at all. The lack of detectible differences may be due to the small numbers of respondents who select “other” as a category and provide a specific text string.

Figure 15 shows the average time, in seconds, required to administer each of the interview questions across the three question formats. Across all items, the differences in time to administer the three question formats were statistically significant, and the pattern of differences in mean time to administer was consistent across the four items. Items administered in the checkall format consistently averaged less time to administer than the radio button format which required an explicit yes/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 checkall format.

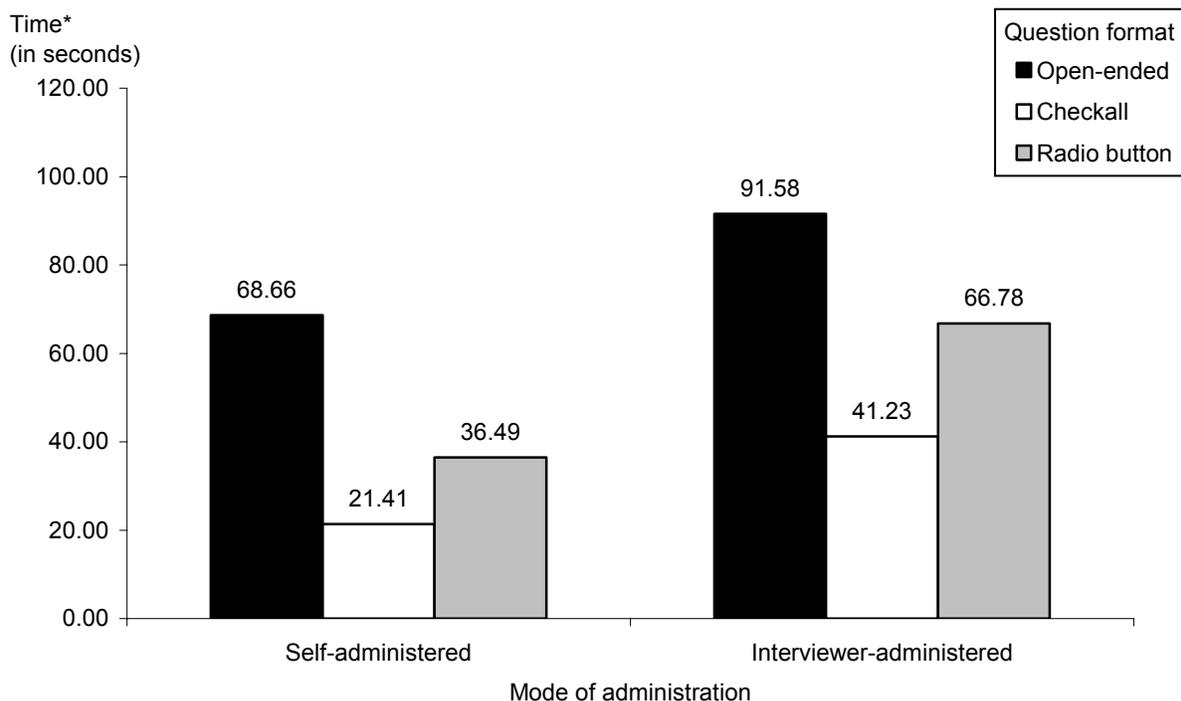
**Figure 15. Mean total time required to administer experimental questions, by response format: 2008**



\* All mean question administration times are statistically significantly different at  $p < .001$ .

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

To test for statistical differences in the administration time by mode across the three formats, the items were combined into self-administered responses and interviewer-administered responses. There were too few cases per mode in each individual item, but since the pattern was the same across formats, they were combined to allow sufficient sample size to test for differences. The average form times by mode are shown in figure 16.

**Figure 16. Mean total time required to administer experimental questions across items, by response format: 2008**

\* All mean question administration times are statistically significantly different at  $p < .001$ .

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

The question format experiment was designed to determine if information was gained or lost in using a radio button, checkall, or open-ended question format. Previous research has shown that using the radio button yields the most complete data, but costs in terms of burden on respondents since answering separate yes/no questions, whether read by the respondent or by an interviewer, is time consuming (Cominole et al. 2008) (Smyth et al. 2006). The present results confirmed that radio button formats do yield more data than either the checkall or the open-ended formats, but they also require more time than the most common alternate format, checkall 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 BPS data collection methodology, telephone and field interviewers would have read the questions as if in an open-ended format, 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 BPS:04/09 experiment evoked broader types of responses, there should have been more new categories added and possibly more uncodeable responses than evoked by the other two formats but there were not. Further investigation with larger sample sizes is warranted.

## 4.3 Online Coding

Coding systems used to categorize students' institution, major, occupation, and employer's industry were standardized into predetermined categories (see section 2.2.1 for a discussion of the BPS:04/09 coding systems). Coding system results were evaluated as described below.

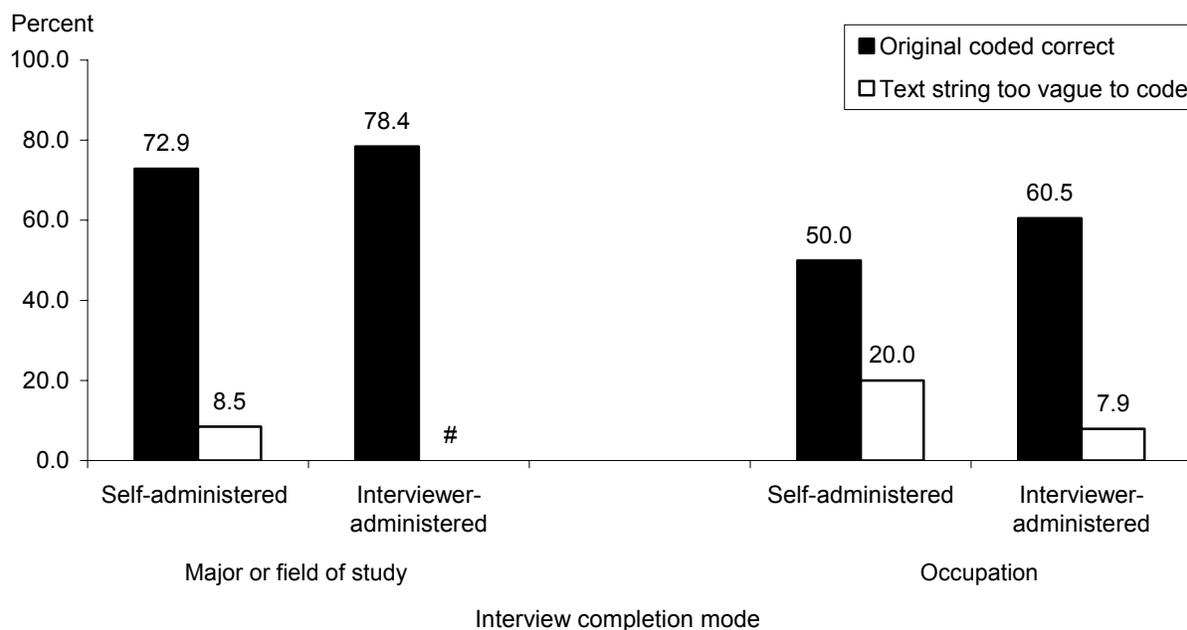
### 4.3.1 Recoding

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 drop-down boxes containing general areas and, as applicable, secondary areas of study. As shown in figure 17, 73 percent of self-administered respondents coded their major correctly, while 78 percent of the interviewer-administered respondents coded their major correctly; however, there was no statistical difference between the two ( $\chi = .61, p > .10$ ). While no interviewer-administered text strings were too vague to code accurately and approximately 9 percent of self-administered respondents' text strings were too vague to code accurately, there was also no statistical difference ( $\chi = 1.82, p < .10$ ).

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 drop-down boxes containing general areas, secondary areas, and a detailed occupation classification. Although interviewer-administered respondents coded occupation correctly seemingly more often (61 percent) than self-administered respondents (50 percent), there was no statistical difference ( $\chi = 1.10, p > .10$ ). Self-administered respondents were no more likely to have a text string that was too vague to code accurately (20 percent) than were interviewer-administered respondents (8 percent) ( $\chi = 1.70, p < .10$ ).

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



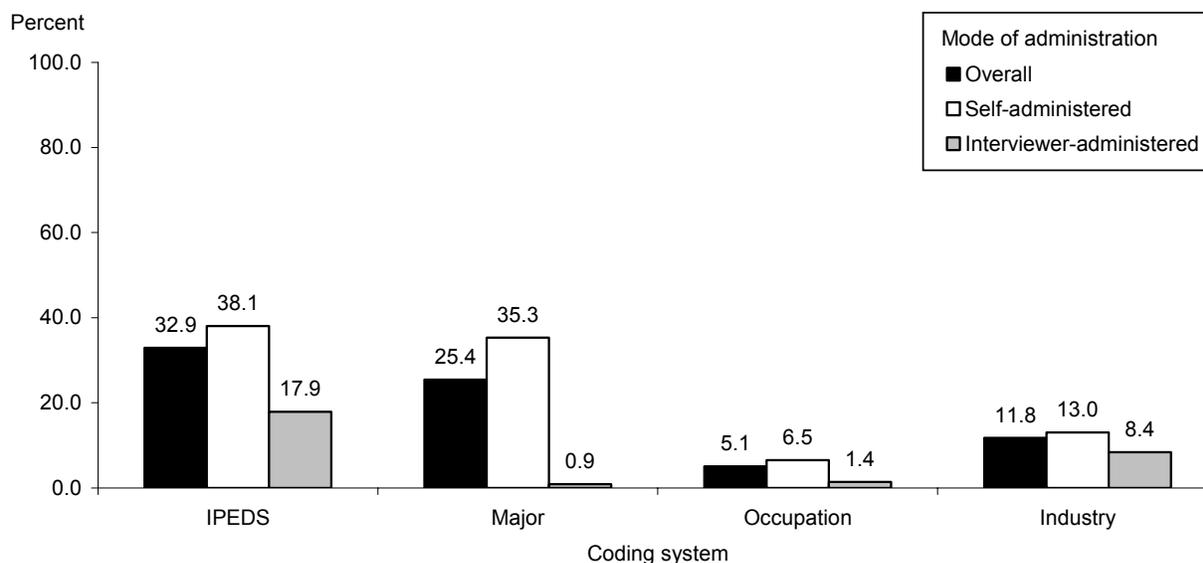
# Rounds to zero.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

### 4.3.2 Upcoding

In addition to evaluating the accuracy of coding done during the interview, project staff reviewed all text strings that were not coded during the interview and coded them as part of data processing. Results of the upcoding process are shown in figure 18.

**Figure 18. Summary of upcoding results, by coding system and administration mode: 2008**



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

Approximately 33 percent of all institutions that were entered into the coder needed upcoding. For institutions, the upcoding rate among self-administered interviews (38 percent) was higher than for interviewer-administered interviews (18 percent) ( $\chi = 4.56, p < .01$ ). Of the 21 percent of majors or fields of study that needed upcoding, there was 21 percent of self-administered and less than 1 percent of interviewer-administered interviews needed upcoding ( $\chi = 7.15, p < .01$ ). The coding systems for industry and occupation had lower rates of upcoding. Approximately 5 percent of occupations needed upcoding (7 percent of self-administered occupations and 1 percent of interviewer-administered occupations) ( $\chi = 2.38, p > .05$ ), while 12 percent of industries needed upcoding.

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

Another important part of data quality evaluation is to identify items that may be difficult for respondents to answer. To do this, different aspects of interview response data are monitored. First, rates of help text usage are presented, to indicate the items that required clarification. Next, the results of conversion text are discussed, followed by a presentation of items with the highest rates of nonresponse. Information from the analyses discussed below will be used to refine the full-scale interview.

### 4.4.1 Help Text Analysis

The BPS:04/09 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.

The number of times respondents 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.

Table 22 presents the rates of help text access for the three interview forms with the highest rates of help text access. It should be noted that interviewers were trained and encouraged to use help text as needed.

**Table 22. Rates of help text access, by administration mode: 2008**

Form	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
Ever taken any distance education course for credit while enrolled	390	5.4	290	2.8	100	13.3
Undergraduate level during last term of enrollment	40	11.4	30	#	10	38.5
Industry coder, verbatim string	540	6.7	390	#	150	24.9

# Rounds to zero.

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, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) field test.

The item that asked about the undergraduate level during the last term of enrollment had the highest rate of help text access, at 11 percent. For this item, respondents were asked to classify their last term of enrollment in terms of the number of credits completed. Approximately 39 percent of interviewer-administered respondents who received this form accessed the help text while no self-administered respondents utilized the help text ( $\chi = 3.67, p < .01$ ).

The industry coder consisted of two forms, one in which the respondent entered their industry as a text string and one in which the respondent coded that text string. The text string component of the industry coder was found to have a 7 percent rate of help text usage. All of the help text usage for this form was among the interviewer-administered respondents. Approximately 25 percent of interviewer-administered respondents accessed the help text, but none of the self-administered respondents used help text for this form ( $\chi = 10.2, p < .01$ ). The question related to distance education, *ever taken any distance education course for credit while enrolled*, had an overall rate of help text access of 5 percent. Interviewer-administered respondents were more likely to utilize the help text for this form than self-administered respondents (13 percent and 3 percent, respectively [ $\chi = 3.95, p < .01$ ]).

#### 4.4.2 Conversion Text

To minimize nonresponse, particularly for critical items, conversion text was used. During the instrument development phase, key items were identified to include conversion text. If left blank, these items were displayed again, often with a new “Don’t Know” option and additional text emphasizing the importance of the item. Overall, the conversion rate was greater than 75 percent for all items that had conversion text (table 23).

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. Table 23 presents the total percent converted from missing, which includes both valid responses and “don’t know” responses (when “don’t know” was an available option). For the questions about months enrolled and undergraduate loans, 78 and 80 percent, respectively, provided a response upon viewing the conversion text after initially leaving the

item blank. The questions about rent or mortgage payments and parents' income both had high conversion rates from missing (78 and 86 percent, respectively); however, many of the responses obtained after viewing the conversion text were "don't know."

**Table 23. Use of conversion text to minimize item nonresponse: 2008**

Description	Total number of cases	Total number converted	Total percent converted	Percent valid response	Percent don't know
Months enrolled	30	20	77.8	100.0	†
Any undergraduate loans	10	#	80.0	100.0	#
Monthly rent or mortgage amount	20	10	77.8	64.3	35.7
Parents' income in 2007	80	70	86.4	45.7	54.3

† 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 that saw the conversion text.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

#### 4.4.3 Item-level Nonresponse

The item-level nonresponse analysis presented here focuses on the rates of nonresponse to BPS:04/09 field test interview items. Missing data for items in the field test interview were associated with a number of factors: (1) a true refusal, (2) an unknown answer, (3) an inappropriate question for that respondent that he or she could not answer, (4) confusion related to the question wording or response options, or (5) hesitation to provide a best-guess response. Overall, however, item-level nonresponse rates were relatively low, with 37 items out of approximately 258 having more than 5 percent missing data. Twenty-two of these 37 items however were part of three individual questions. The item-level nonresponse was calculated uniformly for all items that were part of a single question. Item nonresponse rates were based on the number of interview respondents to whom the item was applicable and asked.<sup>9</sup> Item-level nonresponse is examined overall. Results are also presented by mode if differences exist.

Table 24 shows the nonresponse rates for the three items with rates of nonresponse greater than 5 percent in the enrollment characteristics section. At 22 percent, the total number of months or terms worked had the highest rate of nonresponse within this section. Respondents who completed the interviewer-administered interview had a higher rate of item nonresponse for cumulative GPA than respondents who completed the self-administered interview (15 percent and 3 percent, respectively) ( $\chi = 4.04, p < .01$ ).

<sup>9</sup> Partial interview completions and interview nonrespondents were excluded from this analysis.

**Table 24. BPS:04/09 interview item nonresponse, enrollment characteristics: 2008**

Item name	Item description	Overall		Self-administered		Interviewer-administered	
		Number administered to	Total percent missing	Number administered to	Total percent missing	Number administered to	Total percent missing
MCGPA	Cumulative GPA	400	6.3	300	3.4	100	14.6
MCERNS	Number of months or terms worked	70	21.9	60	22.6	10	18.2
MCUGLAM	Amount borrowed for undergraduate education	460	5.6	330	6.4	130	3.7

NOTE: Detail may not sum to totals because of rounding. GPA = grade point average.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

Five items within the employment section had rates of nonresponse higher than 5 percent. Table 25 shows that the specific code for license or certificate had the highest rate of nonresponse (14 percent). In addition, self-administered respondents were less likely to provide information about their longest period of unemployment (11 percent) than interviewer-administered respondents (2 percent) ( $\chi = 2.12, p < .05$ ).

**Table 25. BPS:04/09 interview item nonresponse, employment: 2008**

Item name	Item description	Overall		Self-administered		Interviewer-administered	
		Number administered to	Total percent missing	Number administered to	Total percent missing	Number administered to	Total percent missing
MDLICT4	License/certification: specific code	130	14.4	90	11.7	40	21.1
MDUNCMP	Unemployment compensation	60	6.7	40	10.0	20	#
MDLTMPMY	Date of last employment	90	8.0	60	8.9	30	6.5
MDUNTIM	Longest period of unemployment: total number of months	170	7.7	110	10.9	60	1.7
MDLTMPN	When last employed: no employment after undergraduate enrollment	100	7.0	70	7.7	40	5.7

# Rounds to zero.

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

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

Table 26 displays the nonresponse rates for the seven items with rates of nonresponse greater than 5 percent in the background section. Household income estimate in 2007 had the highest rate of nonresponse, with 29 percent missing data. Approximately 16 percent of respondents did not provide a response when asked their main disability or impairment. Self-administered respondents were less likely to provide their main disability or impairment (22 percent) than interviewer-administered respondents (3 percent) ( $\chi = 2.41, p < .05$ ).

**Table 26. BPS:04/09 interview item nonresponse, background: 2008**

Item name	Item description	Overall		Self-administered		Interviewer-administered	
		Number administered to	Total percent missing	Number administered to	Total percent missing	Number administered to	Total percent missing
MEPARINC	Parent income in 2007	710	8.1	510	6.1	200	13.2
MEINCOM	Household income in 2007	800	10.4	570	10.2	230	10.7
MEINEST	Household income estimate in 2007	80	28.9	60	32.8	30	20.0
MEINCSP	Spouse income in 2007	200	7.0	140	5.7	60	10.2
MECRDBAL	Balance due on all credit cards	290	6.5	220	5.1	80	10.7
MEMAIN	Main disability or impairment	100	15.8	60	22.2	30	3.1
MESPAMT	Spouse total student loan amount	60	10.0	40	9.1	20	12.5

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

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

Table 27 presents the results for the set of items characterizing respondents' current job. This question was part of the response format experiment and included three different response versions. The nonresponse rate is uniform across the item set since nonresponse occurred only if all items in the set were left unanswered.<sup>10</sup> For this question, 6 percent of the respondents who saw the question did not provide an answer. Further, all of the nonresponse was attributable to self-administered respondents. The nonresponse rate was 8 percent among self-administered respondents, while all of the interviewer administered respondents provided a response ( $\chi = 2.19$ ,  $p < .05$ ).

The question displayed in table 27, whether loan debt influenced enrollment, was also a part of the response option experiment. For this set of items, 6 percent of those who were administered this question declined to provide a response to any item. There was no statistically significant difference in the rate of item nonresponse across modes.

Table 27 shows item nonresponse rates for the question inquiring whether loan debt influenced employment. This set of items was also part of the response option experiment. Approximately 6 percent of respondents provided no response to this question. There was no difference in the rate of item nonresponse across modes.

To help minimize nonresponse and mode differences in the full-scale study, items with high nonresponse rates will be reviewed to clarify wording and help text to assist respondents as they answer the items.

<sup>10</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 27. BPS:04/09 interview item nonresponse, job description and loan debt influence: 2008**

Item name	Item description	Overall		Self-administered		Interviewer-administered	
		Number administered to	Total percent missing	Number administered to	Total percent missing	Number administered to	Total percent missing
Job description							
MDNTCA	Job description: combined: helped explore options	180	5.6	120	8.1	60	#
MDNTCB	Job description: combined: established career	180	5.6	120	8.1	60	#
MDNTCC	Job description: combined: allowed freedom for other interests	180	5.6	120	8.1	60	#
MDNTCD	Job description: combined: paid the bills	180	5.6	120	8.1	60	#
MDNTCE	Job description: combined: experience for more education	180	5.6	120	8.1	60	#
MDNTCF	Job description: combined: experience for career	180	5.6	120	8.1	60	#
MDNTCG	Job description: combined: other	180	5.6	120	8.1	60	#
Loan debt influenced enrollment							
MCLNFA	Loan debt influenced enrollment: combined: increased classes	200	5.6	140	7.2	60	1.8
MCLNFB	Loan debt influenced enrollment: combined: enrolled during summer	200	5.6	140	7.2	60	1.8
MCLNFC	Loan debt influenced enrollment: combined: changed major	200	5.6	140	7.2	60	1.8
MCLNFD	Loan debt influenced enrollment: combined: decreased number of courses	200	5.6	140	7.2	60	1.8
MCLNFE	Loan debt influenced enrollment: combined: took terms off	200	5.6	140	7.2	60	1.8
MCLNFF	Loan debt influenced enrollment: combined: postponed enrolling	200	5.6	140	7.2	60	1.8
MCLNFG	Loan debt influenced enrollment: combined: lived at home	200	5.6	140	7.2	60	1.8
MCLNFH	Loan debt influenced enrollment: combined: other	200	5.6	140	7.2	60	1.8
Loan debt influenced employment							
MDLNIA	Loan debt influenced employment: combined: took job outside field	160	6.1	120	5.9	40	6.8
MDLNIB	Loan debt influenced employment: combined: took less desirable job	160	6.1	120	5.9	40	6.8
MDLNIC	Loan debt influenced employment: combined: looked for higher paid job	160	6.1	120	5.9	40	6.8
MDLNID	Loan debt influenced employment: combined: worked sooner	160	6.1	120	5.9	40	6.8
MDLNIE	Loan debt influenced employment: combined: worked more hours	160	6.1	120	5.9	40	6.8
MDLNIF	Loan debt influenced employment: combined: worked more than one job	160	6.1	120	5.9	40	6.8
MDLNIG	Loan debt influenced employment: combined: other	160	6.1	120	5.9	40	6.8

# Rounds to zero.

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

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

## 4.5 Question Delivery and Data Entry Error Rates

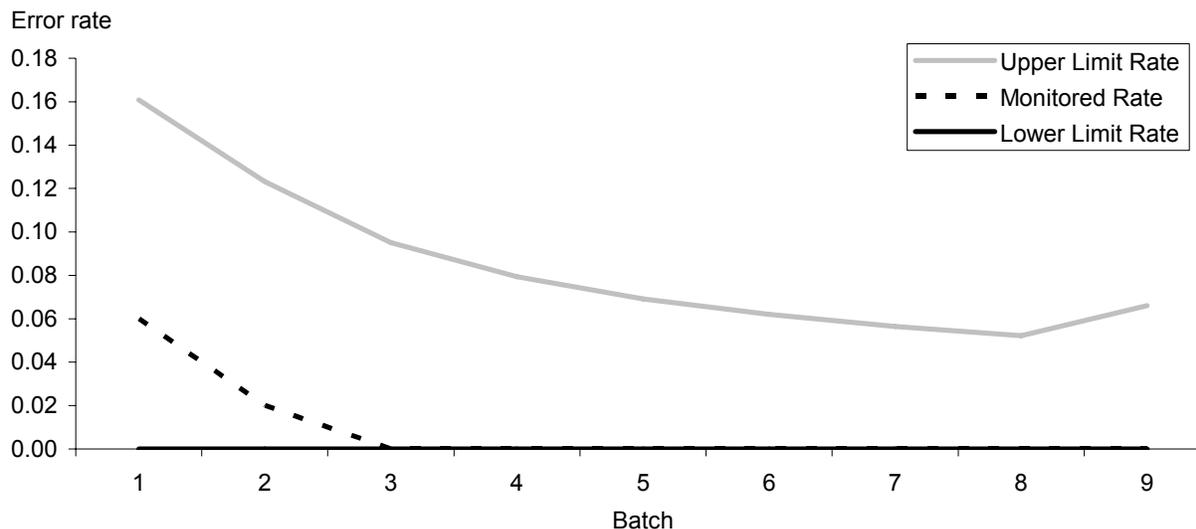
Regular monitoring of interviewer-administered interviews improves interviewing and enhances data quality. Monitoring throughout the BPS:04/09 field test data collection helped to meet the following important quality objectives:

- 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 interviews 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 two aspects of the interviewer-respondent interchange: (1) whether the interviewer delivered the question correctly and (2) whether the interviewer keyed the response appropriately. To guarantee an accurate reflection of data collection activities, monitors conducted their evaluations throughout the entire data collection period, including day, evening, and weekend shifts.

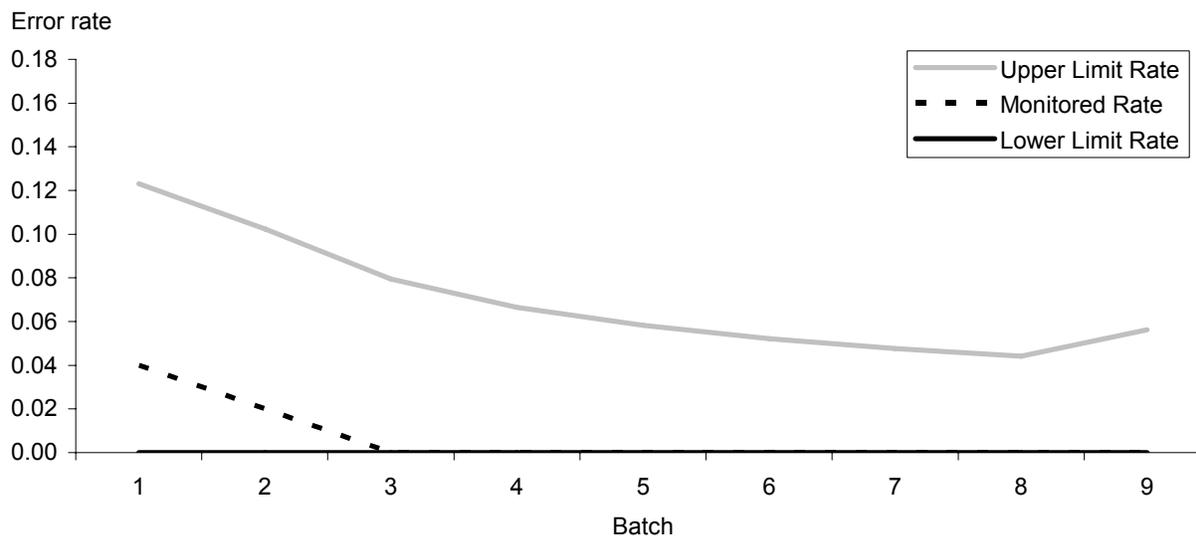
Question delivery and data entry outcomes were measured in batches (each with approximately 50 observations) and made available to project staff. During the data collection period, 426 items were monitored. Of these items, call center staff observed only seven total errors, yielding very low error rates overall. All seven errors occurred during the first week of data collection. Four of these errors were associated with question delivery; the remaining three were associated with data entry. Figures 19 and 20 illustrate the question delivery and data entry error rates, respectively. The initial errors are attributable to the addition of new interviewer staff, who are more prone to errors because of their experience level. Monitoring efforts were reduced during the final weeks of data collection because of lighter caseloads.

**Figure 19. Question delivery error rate, by batch 2008**



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

**Figure 20. Data entry error rate, by batch 2008**



SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

## 4.6 Data Collection Evaluations

Evaluations related to the data collection process are presented below. Analyses include a review of calls to the help desk and a summary of quality circle (QC) meetings. The help desk calls are first reviewed and analyzed for patterns. The major topics of the QC meetings are then discussed.

### 4.6.1 Help Desk

To gain a better understanding of the problems encountered by sample members attempting to complete the self-administered interview, a software application was developed to record each help desk incident that occurred during data collection. Help desk agents (HDAs) were trained to answer incoming calls to the toll-free help desk line and to take calls for telephone interviewers if all other interviewers were busy with calls. For each help desk incident, an HDA confirmed contact information for the sample member, recorded the type of problem, provided a description of the problem and resolution, identified the incident status (pending or resolved), indicated the approximate time required to assist the caller, and scheduled an appointment to follow up if the HDA was unable to resolve the problem immediately. Documenting this information helped determine how many calls were taken each week and the type of inquiries that arose most often.

Table 28 provides a summary of help desk incidents. HDAs handled 43 incidents during field test data collection. The most common type of incident recorded by the help desk was from sample members requesting their Study ID or password (49 percent), with an additional 14 percent of calls related to problems with pop-up blockers. Seven percent of incidents were website contact requests (sample members requested through the BPS website that an interviewer call them). Questions about the study made up approximately 5 percent of all calls. Further, problems with browser settings and questionnaire content each accounted for 2 percent of help desk calls.

**Table 28. Help desk requests, by type of incident reported: 2008**

Type of incident reported	Number of requests	Percent of requests
Total	43	100.0
Study ID/password	21	48.8
Pop-up blocker issue	6	13.9
Website contact request	3	7.0
Questions about the study	2	4.7
Browser setting/computer	1	2.3
Questionnaire content	1	2.3
Other problems, not classifiable	9	20.9

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

### 4.6.2 Quality Circle Meetings

QC meetings were vital components for ensuring that project staff, call center supervisory staff, and telephone 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 instrument design and interview cooperation tactics, motivating the group toward the goals of the study, and acquiring feedback on data collection issues. Meetings were held weekly at the call center, and an agenda was provided to those in attendance. For interviewing staff unable to attend the meeting, a summary of the meeting discussion was distributed electronically to call center supervisory staff and passed along accordingly. A summary of issues addressed in the meetings is outlined below:

- clarification of questions and item responses;

- submission of problem sheets;
- the importance of providing detailed case comments;
- help desk operations;
- methods of gaining cooperation from sample members and gatekeepers; and
- general morale boosting and reinforcement of positive interviewing techniques.

Throughout 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 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 by which staff learned to recognize and manage the different problems they might encounter.

**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 BPS:04/09 field test data collection. For example, difficulty in obtaining new contact information from parents (for sample members no longer living at home) was often brought up by the interviewers. They shared tips for overcoming parents' concerns, such as reminding the parent that the sample member had participated in a prior interview in 2003, 2005, or both years.

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

**Interviewer Debriefing.** At the conclusion of the BPS:04/09 field test, project staff held a debriefing meeting with the telephone and field interviewers to learn more about the field test experience. The interviewer debriefing focused on what worked well and what could be improved with respect to

- interviewer training sessions;
- help desk operations;
- tracing strategies;
- refusal conversion; and
- interview questions and coding systems that were difficult for the respondents to answer or for the interviewers to code.

A summary of the telephone and field interviewer debriefing meetings was prepared and will be considered when planning the BPS:04/09 full-scale data collection.

## 4.7 Respondent Debriefing

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 BPS full-scale study. Respondents were informed that these additional items were optional. Table 29 displays the response rates to the debriefing section by mode of administration. Nearly all respondents completed this optional section.

**Table 29. Debriefing response rates for student interview respondents, by mode of administration: 2008**

Mode of administration	Total interview respondents	Completed debriefing section	
		Number	Percent
Total respondents	790	790	99.7
Self-administered	560	560	99.6
Interviewer-administered	230	230	100.0

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

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

### 4.7.1 Problems Reported by Debriefing Respondents

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 30 shows the percentage of respondents who cited technical difficulties in completing the self-administered web interview.

**Table 30. Problems reported by self-administered debriefing respondents: 2008**

Problem	Number	Percent
Accessing the survey because of a pop-up blocker	100	18.0
Connecting to the BPS website or survey	20	3.8
Moving backward or forward through the survey	10	2.5
Entering answers to the survey questions	10	1.1
Restarting the survey after already completing some of the survey questions	#	0.7
Some other difficulty	20	3.0
None of the above	350	63.1

# Rounds to zero.

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

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

Respondents were asked how the BPS:04/09 field test instrument performed in terms of speed compared with other online surveys. The majority of self-administered respondents reported that the BPS interview performed the same as (52 percent) or faster than (21 percent) other online

surveys. Only 4 percent reported that the BPS 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. Nearly one quarter (24 percent) of interviewer-administered respondents reported that they attempted to complete the self-administered interview at some point during data collection. Table 31 presents the reasons interviewer-administered respondents provided for choosing to complete the BPS interview over the telephone rather than on their own over the Internet. Convenience and connection issues were cited as the most common reasons for doing a telephone interview.

**Table 31. Reasons for completing the interview via telephone versus the Web: 2008**

Problem	Number	Percent
Telephone interview was more convenient	60	32.8
Could not connect to the BPS website or survey	20	10.4
No access to a computer	20	9.4
Prefer not to use computers	10	5.2
Difficulty accessing the web survey because of a pop-up blocker	10	3.6
Encountered error in web survey	10	3.6
Interview took too long on the website	10	2.6
Web interview was too difficult to complete	#	1.6
Privacy concerns regarding the Internet	#	1.0
Website was too confusing	#	0.5
Other	90	48.4

# Rounds to zero.

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

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

### 4.7.2 Text Messaging

A set of questions related to text messaging was added to the debriefing section to gauge the use of text messages and whether they would be a useful reminder for sample members to complete future surveys. Nearly two-thirds of respondents (63 percent), both self-administered and interviewer-administered, reported that they use text messaging. Of those respondents, 67 percent reported receiving and sending text messages multiple times a day.

Respondents also reported the type of texting plan they have: unlimited texting at a fixed price, a set number of messages at a fixed price, by the message, or some other plan. More than one-half of the respondents who used text messaging (55 percent) reported using an unlimited texting plan. Table 32 shows the number and percentage of respondents using each type of texting plan.

To learn whether sample members would be amenable to receiving text message reminders, a question was asked in the debriefing section. Approximately 38 percent indicated that they would be amenable to receiving a text message.

Respondents who reported using text messages were compared by texting plan to determine whether there were any differences in willingness to receive a text message reminder related to

texting plan. Table 32 presents these results and shows that willingness was significantly higher among respondents with an unlimited texting plan (46 percent) than those with a set number of messages (32 percent;  $z = 2.93, p < .01$ ) and those with a by-the-message plan (16 percent;  $z = 3.98, p < .01$ ).

**Table 32. Willingness to receive a text message reminder, by texting plan: 2008**

Texting plan	Total		Receive text reminder			
			Willing		Not willing	
	Number	Percent	Number	Percent	Number	Percent
Overall	500	100.0	190	37.6	310	62.2
Unlimited texting at a fixed price	270	55.2	130	46.2	150	53.8
Set number of messages at a fixed price	150	30.7	50	31.6	100	68.4
By the message	50	10.1	10	16.0	40	84.0
None of the above	20	3.6	#	16.7	20	83.3

# Rounds to zero.

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

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

Respondents were also compared by mode of completion to determine whether there were any differences in reminder willingness relating to mode of completion. Table 33 shows that respondents who completed a telephone interview (52 percent) were more likely to be willing to receive a text message reminder than were self-administered respondents (31 percent). This difference is statistically significant ( $\chi^2 = 20.53, p < .01$ ).

**Table 33. Willingness to receive a text message reminder, by mode of completion: 2008**

Mode of completion	Total		Receive text reminder			
			Willing		Not willing	
	Number	Percent	Number	Percent	Number	Percent
Overall	500	100.0	190	37.6	310	62.2
Self-administered	340	68.7	110	30.9	230	68.8
Telephone	160	31.3	80	52.3	70	47.7

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

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Field Test.

## 4.8 Data Files

The following section describes the procedures used and tested to prepare the field test data files.

### 4.8.1 Overview of the BPS:04/09 Field Test Files

The field test data files for BPS:04/09 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 800 respondents. Topics include enrollment history, education characteristics, employment, and background.
- **CPS 2006–07 Data File.** Contains data received from the Central Processing System (CPS)<sup>11</sup> for the approximately 300 sample members who matched to the 2006–07 federal aid application files.
- **CPS 2007–08 Data File.** Contains data received from the CPS for the approximately 230 sample members who matched to the 2007–08 federal aid application files.
- **NSLDS File.** Contains raw loan-level data received from the National Student Loan Data System (NSLDS) for the nearly 560 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 Data File.** Contains raw grant-level data received from the NSLDS for the approximately 740 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.
- **SMART Grant Data File.** Contains raw grant-level data received from the NSLDS for the fewer than five 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.

## 4.8.2 Online Coding and Editing

As noted in section 2.2.1 the BPS:04/09 field test study used a single web-based instrument for both self-administered and interviewer-administered interviews. The web instrument included online coding systems used for the collection of data on the respondent's major or field of study, occupation, industry, and license/professional certification. The instrument also included a coding module used to obtain information for all postsecondary institutions that the student attended since the second follow-up interview. Below is a description of the coding systems used in the BPS:04/09 field test instrument.

- **Institution.** All postsecondary institutions in which the sample member had been enrolled between 2005 and the time of the interview in 2008 were selected from the Integrated Postsecondary Education Data System (IPEDS) coder. In this coder, a text string for the institution name was entered, a state from a drop-down list was selected, and a city was selected from a list populated by the state the sample member selected. After selecting the “Search for School” button, a list of institutions corresponding to the respondent's text string, city, and state appeared, and the respondent selected the

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<sup>11</sup> CPS is a database maintained by the U.S. Department of Education and contains FAFSA data for all students who applied for federal aid. See chapter 2 for a more detailed summary.

- appropriate institution. (The institution's level and control were also inserted into the database once the selection of the institution was made by the respondent.) If the respondent did not find the appropriate institution in the list provided, he or she could choose a "None of the above" option. Choosing this option brought up two new questions on the screen, prompting the respondent to manually select the control and level of the uncoded institution. If the search yielded no results, or the school was located outside of the United States or its territories, the respondent was automatically prompted to manually code the school's level and control.
- **Major/Field of Study.** The sample member's primary and secondary (if any) major/field of study were collected using a coding system similar to that used for the IPEDS coder. The major was entered as a text string by the respondent. After selecting the "Search for Major" button, the sample member was asked to choose from the provided list of possible majors/fields of study. Each major/field of study was listed with both a "General Description" and a "Specific Description." The respondent could then choose one of the listed categories or choose the "None of the above" option. Choosing that option brought up two drop-down menus on the screen. The first drop-down menu asked the respondent to manually select a "General Area" corresponding to his or her major/field of study. Once a "General Area" was selected, the respondent could select from a "Specific Discipline" list that was populated based on the respondent's "General Area" selected. If the respondent's text string did not provide any results from the database, the two drop-down menus were automatically displayed.
  - **Occupation.** This coder collected information about the respondent's current occupation in a similar fashion to the IPEDS and major/field of study coders. Respondents were asked to enter two text strings: the sample member's "Job Title" and his or her "Job Duties." The "Search for Occupation" button then yielded possible occupation matches based on these text strings. Each occupation match had a "Title" and a "Description" to help the respondent discern the appropriate occupation. If none was found, the respondent selected "None of the above," and three drop-down lists appeared on the screen. Respondents were first asked to select a "General Area" for their occupation. Once a "General Area" was selected, the respondent could select an "Occupation" from a list populated based on the "General Area" selection. Once an "Occupation" was chosen, the respondent could select a tailored "Detailed Occupation Classification" for fields that had them. If the respondent's two text strings did not produce any results from the database, the three drop-down menus were automatically displayed.
  - **Industry.** The industry classification screens collected the primary industry of the respondent's employer. This coder was composed of two forms, the first of which asked the respondent to enter the primary industry as a text string. The second form displayed this text string at the top of the screen and asked the respondent to choose the category that best described that industry. The choices were laid out in general categories across the screen. When the respondent selected a category, examples of businesses within that

industry were displayed, allowing the respondent to determine the appropriateness of the industry chosen. A “None Listed” option was also provided for the respondent.

- **License or Professional Certification.** For respondents with jobs requiring license or professional certification, a form with two drop-down menus was used to collect the “General Area” and “Specific Discipline” of the license or professional certification. These drop-downs functioned like the drop-downs described above. Once a “General Area” was chosen, the “Specific Discipline” was populated for those licenses or professional certifications that had them.
- **Online editing.** The web-based student instrument included edit checks to ensure that 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 such that only valid numeric responses could be entered.
  - 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 unchecked the “None of the above” option automatically.
  - If a respondent clicked an “Other” box and did not type a response into the “Other, Specify” textbox, an edit check was activated that reminded the respondent to enter text.
  - Consistency checks were also used for cross-item comparisons. For example, one item in the Background section asked, “What is the highest level of education you ever expect to complete?” If respondents answered with a level of education below what they stated they had earned or were working toward in the Enrollment History section, they were asked to verify this information.

### 4.8.3 Post-Data-Collection Editing

The BPS:04/09 field test data were edited using procedures developed and implemented for previous studies sponsored by the National Center for Education Statistics, including the base-year study (2004 National Postsecondary Student Aid Study) and first follow-up study (BPS:04/06). These procedures were tested again during the BPS:04/09 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 skipped the item entirely. Table 34 lists the set of consistency codes used to assist analysts in understanding the nature of missing data associated with BPS data elements.

**Table 34. 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, 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) 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 BPS:04/09 field test data files involved a multistage process that consisted of the following steps:

**Step 1.** Blank or missing data were replaced with -9s 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 SAS 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 as YYYYMM) and standardization of time units, for items that collected amount 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 was not currently repaying any education loans, the monthly payment on education loans was coded as \$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 respondents could skip any item, -9 remained a valid value.

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 C.

## 4.9 Conclusions

This chapter evaluated the quality of data collected by the BPS:04/06 field test instrument, and analyzed the quality control procedures, coding processes, and item-level nonresponse. In addition, this chapter also detailed the field test file preparation process.

The recode analysis yielded no statistical differences in the error rate between coding variants in both the *major or field of study* and *occupation* coders. The low percentage of help text hits, the successful administration of conversion text, and low item nonresponse rates suggest that the complete interview is successful at obtaining 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 quality assurance, CATI monitoring, and range and consistency checks.

# Chapter 5.

## Recommendations for the Full-scale Study

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The purpose of the 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) field test was to evaluate procedures and inform planning for the full-scale study. Chapters 3 and 4 of this report documented key field test outcomes and evaluation results. Overall, essential aspects of the field test data collection, including the design and implementation of a single web-based instrument for self-, telephone, and in-person interviewing, were conducted successfully, while some results warranted procedural or substantive modifications to the full-scale study design. Recommended changes to the process of locating and contacting sample members, and to data collection plans and the instrument, are summarized in this chapter.

### 5.1 BPS:04/09 Full-scale Sample

The BPS:04/09 sample will consist of all sample members determined to be eligible for BPS:04/06 and included on the BPS:04/06 data file (regardless of their BPS:04/06 response status). Table 35 shows the sample distribution by prior response status (i.e., whether the student responded to the 2004 National Postsecondary Student Aid Study [NPSAS:04] interview and the BPS:04/06 interview). This table also shows that the BPS:04/09 interview will have an expected 14,920 respondents. The estimated response rate for the BPS:04/09 full-scale study was calculated using the response rates obtained in the BPS:96/01 field test and full-scale studies.

**Table 35. BPS:04/09 full-scale study sample size and expected number of respondents, by response status to NPSAS:04 and BPS:04/06: 2008**

NPSAS:04 study respondent	NPSAS:04 interview respondent	BPS:04/06 respondent	Number of cases	Percent expected response rate <sup>1</sup>	Expected number of respondents
Total			18,640	80.0	14,920
Yes	Yes	Yes	14,750	85.0	12,540
Yes	Yes	No	3,510	60.0	2,110
Yes	No	Yes	140	75.0	100
Yes	No	No	220	70.0	150
No	No	Yes	10	60.0	10
No	No	No	20	40.0	10

<sup>1</sup> The estimated response rate for the BPS:04/09 full-scale study was estimated using the response rates obtained in the BPS:96/01 field test and full-scale studies.

NOTE: Detail may not sum to totals because of rounding. This table shows the distribution of the BPS:04/09 sample and expected number of respondents by response status to the NPSAS:04 interview and the BPS:04/06 interview.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2004 National Postsecondary Student Aid Study (NPSAS:04) and 2004/06 Beginning Postsecondary Students Longitudinal Study (BPS:04/06).

### 5.2 Locating and Contacting Sample Members

The BPS:04/09 field test included two experiments that involved contacting sample members. The first experiment, the use of Priority Mail to send initial mailing materials to sample members, tested the effectiveness of using this mailing type rather than First Class Mail. While the

results of the BPS:04/09 field test mailout experiment were not robust due to the small sample sizes, it is recommended that Priority mail be used for all sample members in the full-scale. Results from the NPSAS:08 field test showed that U.S. Priority Mail envelopes were more effective than regular envelopes in obtaining interviews during the early response period. Hence, we plan to use the U. S. Priority Mail envelopes during the BPS full-scale data collection. The price of the envelopes and mailing is low relative to the cost of locating and attempting to contact sample members with professional staff.

The second experiment involved the use of prompting calls to remind sample members to complete the interview during the early response phase of data collection. While not statistically significant, the use of prompting calls is recommended for prior round nonrespondents in the full-scale study. Prompting has shown mixed results. In the BPS:04/09 field test, it showed no effect, possibly because, first, so many sample members had already completed the interview before the prompting calls began and, second, there were a limited number of successful prompts (i.e., talked to the sample member, left a message with another person, left a message on an identified answering machine). In contrast, prompting was shown to have raised the nonrespondent participation rate to that of respondents during the BPS:04/06 field test. The major advantage of prompting is that it provides early information that telephone numbers are obsolete, allowing RTI to begin intensive tracing sooner, with little additional cost to the contract since the staff doing the prompting are already working the Help Desk.

The BPS:04/09 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 in the form of e-mails, postcards, flyers, regular envelopes, Priority Mail, and Federal Express. The full-scale study will also use text messaging as a means to notify the sample about the study. Sample members who grant permission to send a text message on address update forms will receive text message reminders to complete the BPS:04/09 full-scale study.

### **5.3 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 \$5 and promised them an additional \$25 on completion of the interview during the early response phase. The remaining sample members were promised the entire \$30 on completion of the interview. After careful consideration and review of the field test results, the use of prepaid incentives is not recommended for the full-scale study. Sample members will instead be offered a \$30 incentive during the early response phase.

Further, to increase response rates during the production interviewing phase, sample members who complete an interview will be offered an incentive of \$20. Our recommendation for the production incentive is based on the fact that it was used in the last survey of this cohort. While the results of the field test did not find an increase in response rates during the production interviewing period when a \$20 incentive was offered, it is recommended so we are able to retain respondents who remember receiving an incentive after the early response period during the prior survey and expect to receive it again.

Sample members will become eligible for the nonresponse incentive (\$30) after 10 failed computer-assisted telephone interview attempts. Finally, we recommend continuation of the \$20 differential added to incentives offered to prior round nonrespondents.

## 5.4 Instrumentation

The BPS:04/09 field test conducted an experiment testing three different question formats: radio button, checkall, and open-ended. This experiment found 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 checkall and radio formats will be determined on a question-by-question basis.

The BPS 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.

## 5.5 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.

## 5.6 Conclusion

The purpose of the BPS:04/09 field test was to fully test all data collection procedures in preparation for the full-scale study. The instrument was effective for both self-administered and interviewer-administered interviews. The full-scale study will require a relatively small number of modifications.

As described in this chapter, the BPS:04/09 full-scale sample will consist of all sample members who were determined to be eligible in the BPS:04/06 full-scale study. To maximize response rates, all sample members will receive their initial study materials in Priority Mail envelopes. Halfway through the early response period, we intend to prompt prior round nonrespondents, reminding them of the end date of the early response phase. Sample members who grant permission on address update forms will receive text message reminders to complete the interview. In addition, it is recommended that the incentive plan be modified to add a production interviewing incentive, and that BPS:04/09 respondents who were prior round (BPS:04/06) nonrespondents be paid a supplemental incentive amount to compensate for the additional burden of providing background information otherwise collected during the previous interview. All incentives will be promised rather than prepaid for the full-scale study. Additional modifications to the full-scale study include the omission of the open-ended question response format and the revisions to difficult items.



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