

# Upward Bound and Upward Bound Math-Science Programs

## Postsecondary Outcomes Report



U.S. Department of Education Office of Postsecondary Education

**Upward Bound and Upward Bound  
Math-Science Programs  
*Postsecondary Outcomes Report***

**September 2016**

*Prepared for*

**Student Service  
Office of Postsecondary Education  
U.S. Department of Education**

*Prepared by*

Ruth Heuer  
Marcinda Mason  
Erich Lauff  
**RTI International**

This report was produced under U.S. Department of Education Contract No. ED-OPE-12-C-0066 with RTI International. Daveta Brown served as the contracting officer's representative. The views expressed herein do not necessarily represent the positions or policies of the Department of Education. No official endorsement by the U.S. Department of Education of any product, commodity, service, or enterprise mentioned in this publication is intended or should be inferred.

**U.S. Department of Education**

John B. King, Jr.

*Secretary*

**Office of Postsecondary Education**

Lynn B. Mahaffie

*Deputy Assistant Secretary for*

*Policy, Planning and Innovation*

*Delegated the Duties of*

*Assistant Secretary for Postsecondary Education*

**Office of Postsecondary Education**

**Higher Education Programs**

James T. Minor

*Deputy Assistant Secretary*

**Office of Postsecondary Education**

**Higher Education Programs**

**Student Service**

Linda Byrd-Johnson

*Senior Director*

September 2016

This report is in the public domain. Authorization to reproduce it in whole or in part is granted. While permission to reprint this publication is not necessary, the citation should be U.S. Department of Education, Office of Postsecondary Education, Student Service, *Upward Bound and Upward Bound Math-Science Programs: Postsecondary Outcomes Report*, Washington, D.C., 2016.

This report is available only online. To download, view, and print the report as a PDF file, go to <http://www2.ed.gov/programs/trioupbound/resources.html>.

**Availability of Alternate Formats**

Requests for documents in alternate formats such as Braille or large print should be submitted to the Alternate Format Center by calling 202-260-0852 or by contacting the 504 coordinator via email at [om\\_eos@ed.gov](mailto:om_eos@ed.gov).

**Notice to Limited English Proficient Persons**

If you have difficulty understanding English you may request language assistance services for Department information that is available to the public. These language assistance services are available free of charge. If you need more information about interpretation or translation services, please call 1-800-USA-LEARN (1-800-872-5327) (TTY: 1-800-437-0833), or email us at [Ed.Language.Assistance@ed.gov](mailto:Ed.Language.Assistance@ed.gov). Or write to U.S. Department of Education, Information Resource Center, LBJ Education Building, 400 Maryland Ave. SW, Washington, DC 20202.

# Contents

List of Tables .....	iv
List of Figures .....	v
Executive Summary .....	vi
Highlights.....	vi
Data Limitations .....	vii
Foreword.....	ix
Acknowledgments.....	x
Introduction.....	1
Background and Purpose of the Report .....	1
Outcome Measures .....	3
Program Outcomes.....	4
Immediate Postsecondary Enrollment .....	4
Postsecondary Degree Completion.....	7
Postsecondary Enrollment and Postsecondary Degree Completion at the UB/UBMS Grantee Institution .....	10
Conclusion .....	14
<b>Appendices</b>	
Appendix A. Data Sources and Measures.....	A-1
Appendix B. Tables Showing the Participant Outcomes of UB and UBMS Participants.....	B-1
Appendix C. National Rates of Immediate Postsecondary Enrollment and Postsecondary Degree Completion .....	C-1



## List of Tables

Table B-1.	Number of Upward Bound and Upward Bound Math-Science participants in the 2008–09 through 2013–14 high school graduation cohorts, and number and percentage who immediately enrolled in postsecondary education, by high school graduation cohort year.....	B-1
Table B-2.	Number of Upward Bound and Upward Bound Math-Science participants in the 2013–14 high school graduation cohort, and number and percentage who immediately enrolled in postsecondary education, by sector of their first-attended postsecondary institution, sector of UB/UBMS grantee institution, and participant characteristics.....	B-2
Table B-3.	Number and percentage of Upward Bound and Upward Bound Math-Science participants in the 2008 postsecondary graduation cohort, by highest degree earned, UB/UBMS program type, sector of UB/UBMS grantee institution, and participant characteristics .....	B-4
Table B-4.	Number of Upward Bound and Upward Bound Math-Science participants in the 2008 postsecondary graduation cohort, and number and percentage who completed bachelor’s and associate degrees, by time to degree, UB and UBMS program type, sector of UB/UBMS grantee institution, and participant characteristics .....	B-8
Table B-5.	Number of Upward Bound and Upward Bound Math-Science participants in the 2013–14 high school graduation cohort and number and percentage who immediately enrolled at any postsecondary institution and at their grantee institution, by the sector of UB/UBMS grantee institution .....	B-12
Table B-6.	Number of Upward Bound and Upward Bound Math-Science participants in the 2008 postsecondary graduation cohort, and number and percentage who completed bachelor’s and associate degrees at their grantee institution, by time to degree and sector of UB/UBMS grantee institution.....	B-13

## List of Figures

Figure 1.	Percentage of Upward Bound and Upward Bound Math-Science participants who immediately enrolled in postsecondary education, by high school graduation cohort year: 2008–09 through 2013–14.....	4
Figure 2.	Percentage of Upward Bound and Upward Bound Math-Science participants in the 2013–14 high school graduation cohort who immediately enrolled in postsecondary education, by program eligibility status.....	5
Figure 3.	Percentage of Upward Bound and Upward Bound Math-Science participants in the 2013–14 high school graduation cohort who enrolled immediately in postsecondary education, by sector of Upward Bound/Upward Bound Math-Science grantee institution and sector of first postsecondary institution attended.....	6
Figure 4.	Percentage of Upward Bound and Upward Bound Math-Science participants in the 2008 postsecondary enrollment cohort who completed a bachelor’s degree in six years or an associate degree in three years, or did not complete a degree, by gender and race/ethnicity.....	8
Figure 5.	Percentage of Upward Bound and Upward Bound Math-Science participants in the 2008 postsecondary enrollment cohort who completed a bachelor’s degree, by time to degree.....	10
Figure 6.	Percentage of Upward Bound and Upward Bound Math-Science participants in the 2013–14 high school graduation cohort who immediately enrolled at their grantee institution, by sector of grantee institution.....	11
Figure 7.	Percentage of Upward Bound and Upward Bound Math-Science participants in the 2008 postsecondary enrollment cohort who completed a bachelor’s degree at the grantee institution in six years or an associate degree at the grantee institution in three years, by sector of grantee institution.....	13
Figure C-1.	Percentage of 2013 high school completers who immediately enrolled in two-year and four-year colleges, by income level: 2013.....	C-2
Figure C-2.	Percentage of students who graduated high school with a regular high school diploma and enrolled in a postsecondary institution for the first time in 2003–04 and who completed a bachelor’s degree or an associate degree in six years, or did not complete a degree, by family income level and parental education level: 2004–09.....	C-4

## Executive Summary

This report presents postsecondary outcomes for the regular Upward Bound (UB) and Upward Bound Math-Science (UBMS) programs<sup>1</sup>—two of the federal TRIO programs. The goal of UB and UBMS programs is to increase the rate at which participants complete secondary education and enroll in and graduate from a program of postsecondary education. The UBMS program has an additional goal of helping students recognize and develop their potential to excel in math and science, as well as encouraging them to pursue both postsecondary degrees and, ultimately, careers in math and science.

This report began as an attempt by the Office of Postsecondary Education (OPE) to assess the ability of the UB and UBMS programs to bolster enrollment and completion at institutions of higher education. Pursuant to this goal, a thorough review of potential comparative data sources that included students similarly disadvantaged to those in UB and UBMS programs was undertaken. This review revealed significant limitations with the potential data sources. As a result, the objectives of this report were scaled back considerably.

In its current form, this report presents the immediate postsecondary enrollment rates for participants who graduated from high school with a regular diploma between 2008–09 and 2013–14, and the postsecondary degree completion rates for participants who completed high school in 2007–08 and immediately enrolled in a program of postsecondary education by fall 2008. Contextual information is provided where appropriate. In addition, this report presents information related to participants' postsecondary enrollment and degree completion at the institution of higher education (IHE) that hosted their UB/UBMS project (i.e., the grantee institution). The main source of data for this report was UB/UBMS annual performance report (APR) data. Additionally, National Student Loan Data System data were used to supplement the postsecondary enrollment information reported in the APR data, and National Student Clearinghouse data were used to supplement the postsecondary degree completion information reported in the APR data. Appendix A, Data Sources and Measures, provides additional information on the data sources and how the outcome measures were calculated.

## Highlights

### Immediate Postsecondary Enrollment

- Collectively, 86 percent of UB and UBMS participants in the 2013–14 high school graduation cohort enrolled immediately in a program of postsecondary education.<sup>2</sup>
- Among all UB and UBMS participants in the 2013–14 high school graduation cohort, the immediate postsecondary enrollment rate for those who were both low-income and potentially first-generation was 85 percent. In contrast, those who were low-income only or potentially first-generation only had postsecondary enrollment rates of 88 percent and 87 percent, respectively.

---

<sup>1</sup> There are three types of Upward Bound program projects: regular UB, UBMS, and Veterans Upward Bound. This report focuses on the outcomes of participants served by UB and UBMS projects.

<sup>2</sup> See Appendix A, Data Sources and Measures, for further specification of high school graduation cohort and immediate postsecondary enrollment.

- The immediate postsecondary enrollment rate has remained fairly consistent across the last six high school graduation cohorts: For each high school graduation cohort between 2008–09 and 2013–14, the overall combined UB and UBMS immediate postsecondary enrollment rate was between 83 and 86 percent.
- For each high school graduation cohort between 2008–09 and 2013–14, the immediate postsecondary enrollment rate for UBMS participants was 3 to 6 percentage points higher than the corresponding rate for UB participants.

### **Postsecondary Degree Completion**

- Among all UB and UBMS participants in the 2008 postsecondary education enrollment cohort,<sup>3</sup> 35 percent earned a bachelor’s degree within six years of postsecondary enrollment, and an additional 4 percent earned an associate degree within three years of postsecondary enrollment.<sup>4</sup>
- Sixty percent of UB and UBMS participants in the 2008 postsecondary education enrollment cohort earned neither a bachelor’s degree within six years nor an associate degree within three years of postsecondary enrollment.<sup>5</sup>

### **Immediate Postsecondary Enrollment and Postsecondary Degree Completion at the UB/UBMS Grantee Institution**

- Among UB and UBMS participants in the 2013–14 high school graduation cohort who received services from projects that were hosted by IHEs (i.e., grantee institutions),<sup>6</sup> 24 percent immediately enrolled at their grantee institution.
- Among UB and UBMS participants in the 2008 postsecondary education enrollment cohort who received services from grantee institutions, 8 percent earned either a bachelor’s degree within six years or an associate degree within three years from their grantee institution.

### **Data Limitations**

This report presents results for the UB and UBMS programs’ postsecondary enrollment and degree completion outcomes. The results do not address project impacts, such as the extent to which postsecondary enrollment and postsecondary degree completion are a direct result of participation in UB/UBMS and not influenced by other factors. The report cannot and does not address project impacts for two basic reasons: (1) The information that the Office of Postsecondary Education is empowered to collect relative to these programs and the population for whom it is empowered to collect it is insufficient for these purposes; and (2) One or more

---

<sup>3</sup> The 2008 postsecondary education enrollment cohort includes participants who completed high school during the 2007–08 academic year and immediately enrolled in a program of postsecondary education by the 2008 fall term.

<sup>4</sup> See Appendix A, Data Sources and Measures, for further specification of the 2008 postsecondary education enrollment cohort and postsecondary degree completion.

<sup>5</sup> The percentages referenced do not sum to 100 due to rounding.

<sup>6</sup> The analyses of immediate postsecondary enrollment at the grantee institution and postsecondary degree completion at the grantee institution exclude participants who received services from secondary schools, nonprofit agencies, or institutions other than two- or four-year IHEs. See Appendix A for more detailed information.



data sources containing comparably disadvantaged students not participating in UB and UBMS or similar federal programs do not exist at this time.

Not all participants who graduated with a regular diploma between 2008–09 and 2013–14 were included in the postsecondary enrollment measure calculations. Because a single year of APR data was used to identify cohort participants and determine postsecondary enrollment, participants who did not have an APR record in the year they graduated from high school were excluded from the results.<sup>7</sup> Similarly, the results for the postsecondary degree completion measures include only those participants who were served by projects that were funded in both the 2007–12 and the 2012–17 funding cycles and who had a record in the 2013–14 APR data.

---

<sup>7</sup> See Appendix A for more detailed information.

## Foreword

The mission of the U.S. Department of Education (the Department) is to promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access. In keeping with this mission, the Upward Bound (UB) and Upward Bound Math-Science (UBMS) programs of the federal TRIO Programs (TRIO) assist high school students from disadvantaged backgrounds to prepare for and succeed in postsecondary education. The goal of the UB program is to increase the rate at which participants complete secondary education, and enroll in and graduate from institutions of postsecondary education. The UBMS program has an additional goal of helping students recognize and develop their potential to excel in math and science as well as encouraging them to pursue both postsecondary degrees and, ultimately, careers in math and science.

On behalf of the Department's Office of Postsecondary Education's Student Service, we are pleased to present this report, *Upward Bound and Upward Bound Math-Science Programs: Postsecondary Outcomes Report*. The body of this report provides postsecondary enrollment information for participants who graduated from high school with a regular diploma between 2008–09 and 2013–14, and the postsecondary degree completion information for participants who completed high school in 2007–08 and immediately enrolled in a program of postsecondary education by the fall of 2008. To provide context to the findings, the report also presents postsecondary enrollment rates and postsecondary degree completion rates of students in nationally representative longitudinal surveys.

While the data from the national sample add valuable context, they do not allow for direct comparisons because students in these national samples did not necessarily share the same demographic and academic characteristics as the UB and UBMS participants included in the report's findings. A rigorous program evaluation would be required to make direct comparisons. The inability to make such comparisons—due to the lack of existing comparable data sources—remains a challenge for the Department, policymakers, and UB/UBMs grantees, since it prevents a systematic assessment of the programs' ability to improve student outcomes.

We hope that documenting these challenges, in addition to reporting on the performance of the UB and UBMS programs, will foster communication among stakeholders aimed at assessing our mission and furthering the president's 2020 goal of increasing postsecondary persistence and degree completion.

Linda Byrd-Johnson  
Senior Director  
Student Service

## Acknowledgments

The authors would like to thank the people and organizations that assisted with various aspects of this report. First, we want to express our gratitude to the staff at the National Student Clearinghouse for their helpfulness and professionalism in handling our requests for supplemental postsecondary data for Upward Bound and Upward Bound Math-Science participants. We also thank the staff at Computer Business Methods, Inc. for their continued support with collecting annual performance report data from Upward Bound/Upward Bound Math-Science grantees. Finally, we would like to thank Julie Laurel, Kathy Morgan, and Nate Ramsey at the U.S. Department of Education for their invaluable contributions to this report.

# Introduction

## Background and Purpose of the Report

The Upward Bound (UB) program—the first of the federal TRIO programs—was originally authorized in 1965 by the *Economic Opportunity Act of 1964*. The goal of UB is to increase the rate at which participants complete secondary education, and enroll in and graduate from institutions of postsecondary education. The Department of Education created the Upward Bound Math-Science (UBMS) program in 1990 to address the need for specific instruction in the fields of math and science, and to encourage students to pursue postsecondary degrees and careers in math and science.

Program services are offered by postsecondary degree-granting institutions, secondary schools, and community organizations that receive grants awarded through a competitive process. There were 816 UB- and 162 UBMS-funded grantees in 2013–14, serving approximately 73,000 high school students. To participate in UB or UBMS, a student must qualify on the basis of one of the eligibility categories (low-income, potentially first-generation,<sup>8</sup> or at high risk for academic failure) and must need academic support in order to successfully pursue a program of postsecondary education. At least two-thirds of participants served by each grantee must be both potentially first-generation and low-income students. The remaining one-third must be low-income individuals, potentially first-generation college students, or individuals who have a high risk for academic failure.

UB and UBMS projects provide academic instruction in mathematics, laboratory sciences, composition, literature, and foreign languages. Additionally, they provide tutoring, counseling, mentoring, cultural enrichment, work-study programs, and education or counseling services designed to improve the financial and economic literacy of students.<sup>9</sup> Other services include the dissemination of information on the full range of Federal Student Aid programs and benefits, guidance and assistance on secondary school reentry, alternative education programs, or entry into general educational development programs and postsecondary education. UBMS grantees provide additional services that include summer programs with intensive math and science training, exposure to university faculty members who do research in mathematics and the sciences, and computer training.

Each UB and UBMS grantee is required to submit to the TRIO program office an annual performance report (APR) that details the academic progress of each student who received program services from the time of recruitment and acceptance into the project through high school graduation and for six years after enrollment in a program of postsecondary education. In addition to information on participants' academic progress, the APR contains information on participants' demographic and eligibility characteristics and types of services received.

---

<sup>8</sup> In this report, “low income” refers to an individual whose family’s taxable income did not exceed 150 percent of the poverty level in the calendar year preceding the year in which the individual initially participated in the project. “First-generation” means an individual neither of whose natural or adoptive parents received a baccalaureate degree.

<sup>9</sup> These programs and activities are specially designed for students who are limited English proficient, from groups that are traditionally underrepresented in postsecondary education, living with disabilities, homeless, in foster care or aging out of the foster care system, or otherwise disconnected.

The *Higher Education Opportunity Act* (Public Law 110-315) (*HEOA*) was enacted on August 14, 2008. This law reauthorized and extended the *Higher Education Act of 1965*, as amended. The *HEOA* requires reports to Congress documenting the performance of the TRIO programs and, where possible, the reports should compare the outcomes for TRIO program participants to the outcomes for a comparison group of students who have a similar risk profile as TRIO participants.

To comply with the *HEOA* reporting requirements, a comparative analysis of the UB and UBMS programs was initiated in the winter of 2014–15 using data from the Educational Longitudinal Study of 2002 (ELS:2002). This involved a thorough review of existing data sources that could allow for a detailed assessment of the UB and UBMS programs by comparing participant outcomes with those of similar non-participants. ELS:2002 was determined to be the most suitable among the existing data sources in this regard. ELS:2002, a longitudinal study conducted by the National Center for Education Statistics (NCES), followed a nationally representative cohort of 10th-grade students through their high school years and into early adulthood. With approval from the Office of Postsecondary Education and NCES, UB and UBMS participants were identified in the ELS:2002 data. The intent was to perform a propensity score matching (PSM) analysis<sup>10</sup> to match UB and UBMS participants in the ELS:2002 data to a comparable group of students in the ELS:2002 data who had not received services from the UB and UBMS programs or a similar program. Using this matched sub-sample, the next step would be to compare the outcomes of UB and UBMS participants to the outcomes of the comparison students to assess the impact of the UB and UBMS programs. However, this comparative analysis was canceled due to two insurmountable problems:

1. Only about 120 UB and UBMS participants were identified among the set of ELS:2002 sample members. This relatively small number of participants posed difficulties when disaggregating the three UB and UBMS eligibility categories (low-income and first-generation; low-income only; and first-generation only),<sup>11</sup> and increased the risk of bias in the event that “atypical” students were included among the small set of identified UB and UBMS participants.
2. The ELS:2002 base-year data collection occurred during the spring of the students’ 10th-grade year, whereas roughly half of UB and UBMS participants entered the program as either ninth-graders or rising ninth-graders. As such, some of the ELS:2002 variables proposed for the analysis could have been affected by UB and UBMS program participation, thereby limiting the ability to establish baseline equivalence prior to assessing the impact of UB and UBMS program participation on outcomes.

Although the comparative analysis was canceled, there is a continued interest in sharing information about the performance of the UB and UBMS programs with interested parties. To address this need, this report employs descriptive analyses to document (1) the postsecondary enrollment for six cohorts of UB and UBMS high school graduates; (2) the postsecondary

---

<sup>10</sup> Propensity score matching is a statistical technique that identifies a subsample of cases that match the treatment group on observable characteristics, and thereby enables comparison of outcomes for the two groups.

<sup>11</sup> The analysis focused on the UB and UBMS program eligibility criteria that were in place during the time ELS:2002 students could have received UB and UBMS program services (i.e., prior to the 2004–05 academic year). At the beginning of the 2012–17 funding cycle, an additional eligibility criterion of high risk for academic failure was added to meet *HEOA* requirements.



completion results of UB and UBMS participants who first enrolled in college in 2008; and (3) participants' postsecondary enrollment and postsecondary degree completion at the institutions of higher education (IHEs) that hosted their UB or UBMS project (i.e., grantee institutions).

## Outcome Measures

This report focuses on two program outcome measures: immediate postsecondary enrollment and postsecondary degree completion.<sup>12</sup> An appropriate cohort of students was selected for each measure.

- *Immediate postsecondary enrollment.* The cohort of participants for the immediate postsecondary enrollment measure consisted of students who completed a regular high school diploma between 2008–09 and 2013–14. Cohort participants were considered to have immediately enrolled in a program of postsecondary education if there was evidence of postsecondary enrollment in the APR data or in the National Student Loan Data System (NSLDS) data by the November immediately following the academic year of high school graduation. For example, participants in the 2013–14 high school graduation cohort needed to have evidence of postsecondary enrollment by November 2014 to have achieved the outcome.
- *Postsecondary degree completion.* The postsecondary degree completion measures were calculated for participants who completed high school during the 2007–08 academic year and enrolled in a program of postsecondary education by November 2008. This report examines the following measures of postsecondary degree completion:
  - completion of a bachelor's degree within four years;
  - completion of a bachelor's degree within six years;
  - completion of an associate degree within two years;
  - completion of an associate degree within three years; and
  - completion of either a bachelor's degree within six years or an associate degree within three years.

To determine whether cohort participants achieved the postsecondary degree completion outcomes, APR and National Student Clearinghouse (NSC) data were examined for evidence of bachelor's and associate degree completion within the specified time frame.

In addition, this report examines the extent to which UB and UBMS participants both enrolled at their grantee institution and completed a postsecondary degree at their grantee institution. Although participant enrollment and degree completion at grantee institutions are not goals of the UB and UBMS programs, this information may be of interest to policymakers and other UB and UBMS stakeholders.

---

<sup>12</sup> See Appendix A, Data Sources and Measures, for more detailed information.

## Program Outcomes

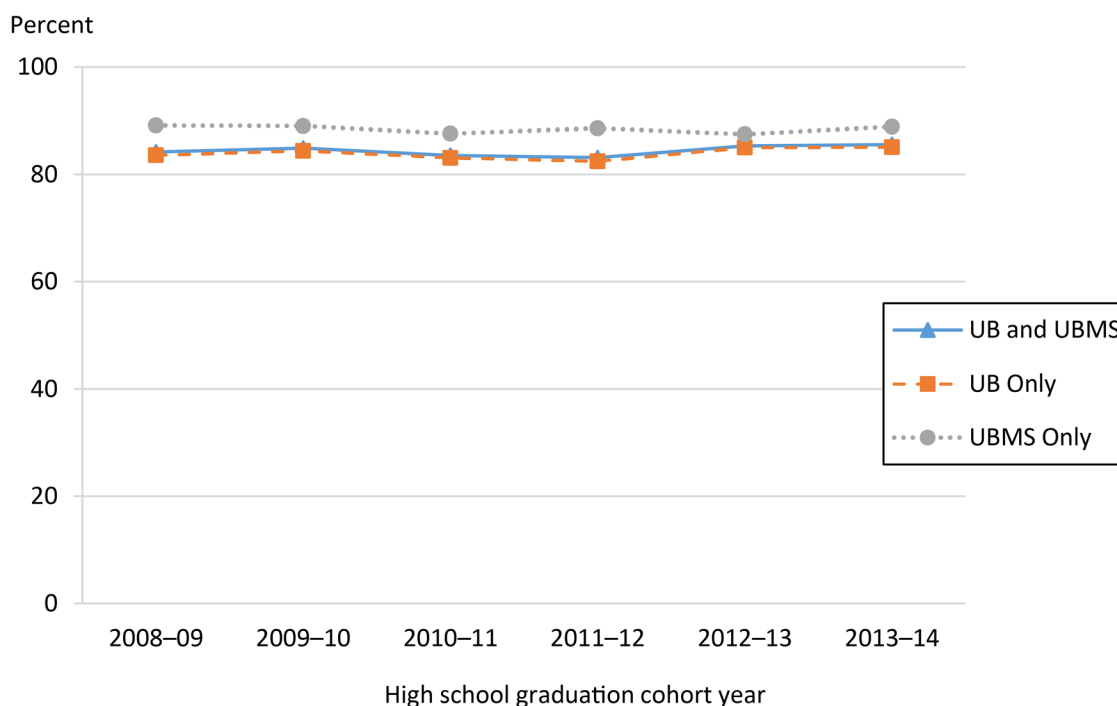
This section presents the achievements of UB and UBMS participants related to postsecondary enrollment and degree completion. Additional results are presented in Appendix B.

### Immediate Postsecondary Enrollment

As detailed in the Outcome Measures section, this report calculates immediate postsecondary enrollment relative to individual high school graduation cohorts. Cohort participants who had evidence of postsecondary enrollment in either the APR or the NSLDS by the November immediately following the academic year of high school graduation were considered to have immediately enrolled in a program of postsecondary education.

To examine trends in the immediate postsecondary enrollment of UB and UBMS participants, rates were calculated for six recent high school graduation cohorts and are summarized in Figure 1.

**Figure 1. Percentage of Upward Bound and Upward Bound Math-Science participants who immediately enrolled in postsecondary education, by high school graduation cohort year: 2008–09 through 2013–14**



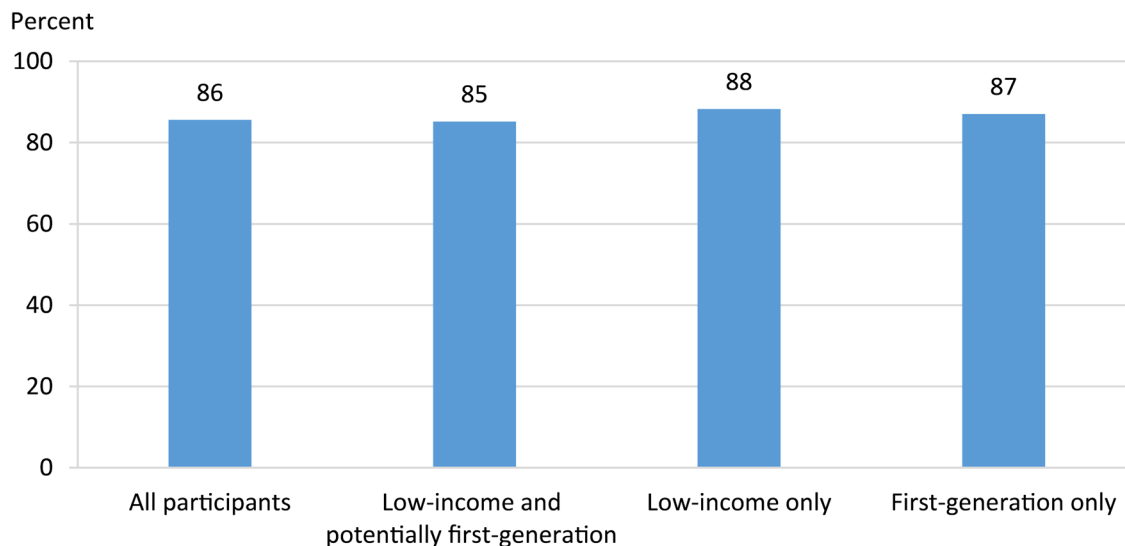
NOTE: Upward Bound (UB) and Upward Bound Math-Science (UBMS) high school graduation cohort participants who enrolled in a program of postsecondary education by the end of November following their high school graduation year were considered to have achieved the immediate postsecondary enrollment outcome. Participants who graduated with a regular high school diploma were assigned to a high school graduation cohort year based on the date of high school graduation, using September through August as the academic year.

SOURCE: U.S. Department of Education, Federal TRIO Programs, UB/UBMS Longitudinal File: 2000–14; and National Student Loan Data System data: Fall 2008 through fall 2014.

- The immediate postsecondary enrollment rate has remained fairly consistent across six recent high school graduation cohorts: For each high school graduation cohort between 2008–09 and 2013–14, the immediate postsecondary enrollment rate for UB and UBMS cohort participants combined was between 83 and 86 percent.
- For each high school graduation cohort between 2008–09 and 2013–14, the immediate postsecondary enrollment rate for UBMS participants was three to six percentage points higher than the corresponding rate for UB participants.

The most recent cohort for which immediate postsecondary enrollment rates can be calculated is the 2013–14 high school graduation cohort. For the 2013–14 high school graduation cohort, immediate postsecondary enrollment rates have been disaggregated by UB and UBMS program eligibility status (i.e., low-income, potentially first-generation, or both)<sup>13</sup> and by institutional sector (both the sector of the UB/UBMS grantee institution and the sector of the postsecondary institution in which the participant enrolled). These results are summarized in figures 2 and 3 (further detail is provided in Appendix B).

**Figure 2. Percentage of Upward Bound and Upward Bound Math-Science participants in the 2013–14 high school graduation cohort who immediately enrolled in postsecondary education, by program eligibility status**

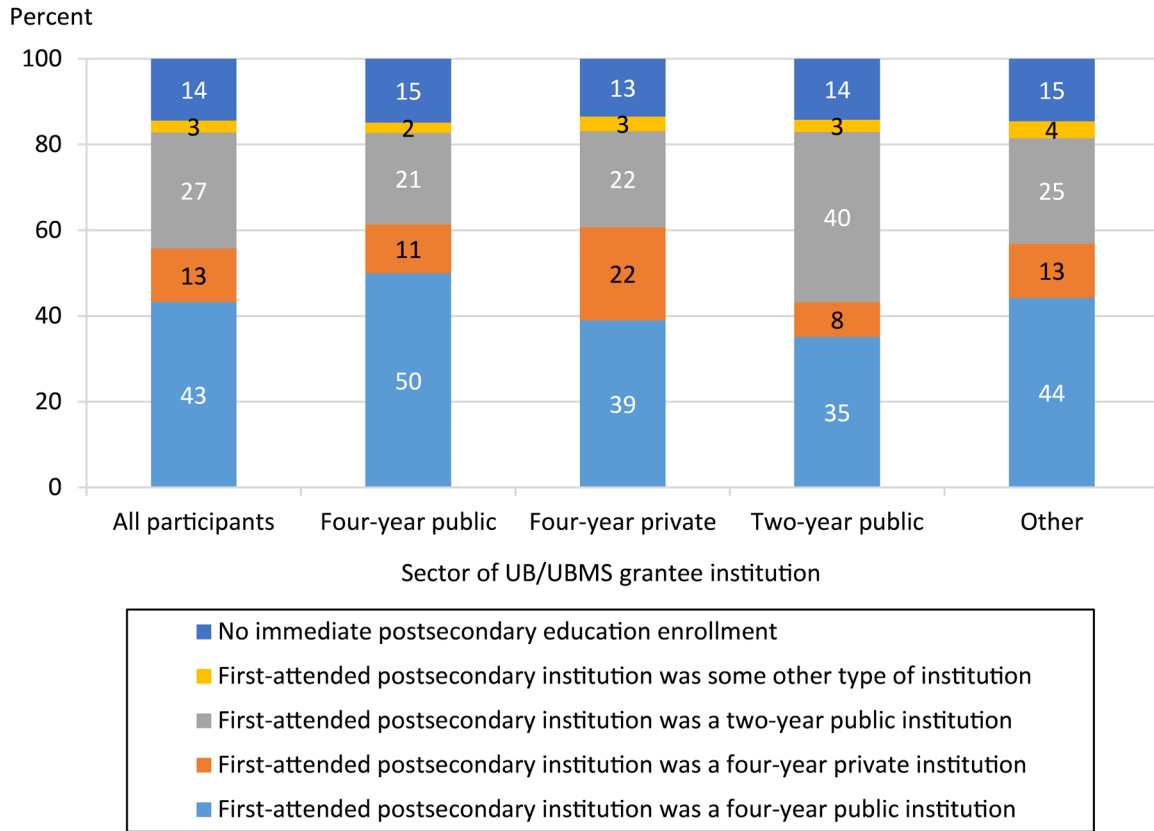


NOTE: Figure includes Upward Bound (UB) and Upward Bound Math-Science (UBMS) participants who graduated with a regular high school diploma between Sept. 1, 2013 and Aug. 31, 2014 (i.e., 2013–14 high school graduation cohort). Participants in the 2013–14 high school graduation cohort who enrolled in a program of postsecondary education by Nov. 30, 2014, were considered to have achieved the immediate postsecondary enrollment outcome. .

SOURCE: U.S. Department of Education, Federal TRIO Programs, UB/UBMS Longitudinal File: 2000–14; and National Student Loan Data System data: Fall 2013 through fall 2014.

<sup>13</sup> The analysis focused on the UB and UBMS program eligibility criteria that were in place during the time when the majority of 2013–14 high school graduation cohort participants entered the UB and UBMS projects (i.e., prior to 2012–13). At the beginning of the 2012–17 funding cycle, an additional eligibility criterion of high risk for academic failure was added.

**Figure 3. Percentage of Upward Bound and Upward Bound Math-Science participants in the 2013–14 high school graduation cohort who enrolled immediately in postsecondary education, by sector of Upward Bound/Upward Bound Math-Science grantee institution and sector of first postsecondary institution attended**



NOTE: Figure includes Upward Bound (UB) and Upward Bound Math-Science (UBMS) participants who graduated with a regular high school diploma between Sept. 1, 2013, and Aug. 31, 2014 (i.e., 2013–14 high school graduation cohort). Participants in the 2013–14 high school graduation cohort who enrolled in a program of postsecondary education by Nov. 30, 2014, were considered to have achieved the immediate postsecondary enrollment outcome. The sector of UB/UBMS grantee institution category of “other” includes two-year private and two- and four-year private for-profit institutions of higher education (IHEs), secondary schools, nonprofit organizations, and other organizations. The sector of first postsecondary institution attended category of “some other type of institution” includes two-year private IHEs, less-than-two-year IHEs, and unknown institution type. The category of “no immediate postsecondary education enrollment” includes those who delayed postsecondary enrollment and those who had no evidence of postsecondary enrollment. Detail may not sum to totals due to rounding. SOURCE: U.S. Department of Education, Federal TRIO Programs Funded Projects Database, 2013–14 and UB/UBMS Longitudinal File: 2000–14; U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), fall 2013; and National Student Loan Data System data: Fall 2013 through fall 2014.

- Overall, 86 percent of UB and UBMS participants in the 2013–14 high school graduation cohort immediately enrolled in a program of postsecondary education.
- Among UB and UBMS participants in the 2013–14 high school graduation cohort, the immediate postsecondary enrollment rate was 85 percent for those who were both low-income and potentially first-generation. In contrast, those who were low-income only or potentially first-generation only had immediate enrollment rates of 88 percent and 87 percent, respectively.

- Among UB and UBMS participants in the 2013–14 high school graduation cohort, 43 percent immediately enrolled at a four-year public institution, 13 percent enrolled at a four-year private institution, 27 percent enrolled at a two-year public institution, 3 percent immediately enrolled at another type of institution (i.e., two-year private, less-than-two-year private, less-than-two-year public, or an unknown type of institution), and 14 percent did not have immediate postsecondary enrollment.
- The sector of the postsecondary institution at which participants enrolled varied according to the sector of the grantee institution administering the UB or UBMS program in which they participated. For example, rates of immediate enrollment at four-year public institutions were highest among those who participated in a UB or UBMS program administered by a four-year public institution (50 percent); likewise, rates of immediate enrollment at two-year public institutions were highest among those who participated in a UB or UBMS program administered by a two-year public institution (40 percent).

Appendix C presents information on national rates of immediate postsecondary enrollment.

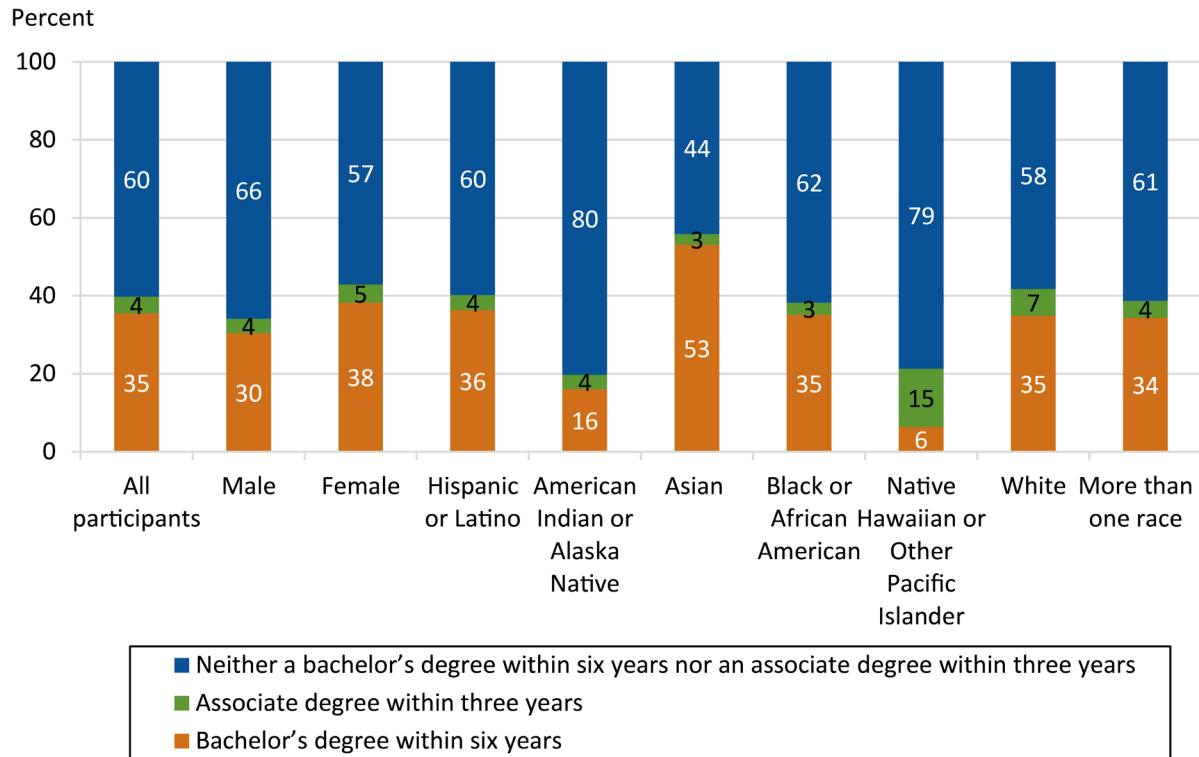
### **Postsecondary Degree Completion**

As described in the Outcome Measures section, this report calculates postsecondary degree completion for participants in the 2008 postsecondary education enrollment cohort. Both APR and NSC data were examined for evidence of bachelor’s degree completion within six years of first enrollment in postsecondary education and for evidence of associate degree completion within three years of postsecondary enrollment.

The most recent cohort for which six years of postsecondary data are available is the 2008 postsecondary enrollment cohort. The highest degree completed among UB and UBMS participants in the 2008 postsecondary enrollment cohort—either bachelor’s degree completion within six years of postsecondary entry or associate degree completion within three years of postsecondary entry—is summarized in Figure 4 (further detail is also provided in Appendix B).



**Figure 4. Percentage of Upward Bound and Upward Bound Math-Science participants in the 2008 postsecondary enrollment cohort who completed a bachelor’s degree in six years or an associate degree in three years, or did not complete a degree, by gender and race/ethnicity**



NOTE: Figure includes Upward Bound (UB) and Upward Bound Math-Science (UBMS) participants who graduated with a regular diploma between Sept. 1, 2007, and Aug. 31, 2008, and enrolled in a program of postsecondary education by Nov. 30, 2008. Includes (1) bachelor’s degrees that were completed within six years of the postsecondary education enrollment cohort year (i.e., completed by Aug. 31, 2014), and (2) associate degrees that were completed within three years of the postsecondary education enrollment cohort year (i.e., completed by Aug. 31, 2011). For participants who achieved both degrees in the time frame, the highest degree is given. The results presented for each of the participant characteristics exclude participants who had an unknown response for the given characteristic. Of the 12,535 participants in the 2008 postsecondary education enrollment cohort whose race/ethnicity was known, 3,012 were Hispanic or Latino (any race), 5,200 were black or African American, 2,944 were white, 724 were Asian, 310 were American Indian or Alaska Native, 204 were more than race, and 141 were Native Hawaiian or other Pacific Islander. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, Federal TRIO Programs, UB/UBMS Longitudinal File 2000–14; and National Student Clearinghouse data: Fall 2007 through fall 2014.

- Among UB and UBMS participants in the 2008 postsecondary education enrollment cohort, 35 percent earned a bachelor’s degree within six years of postsecondary enrollment.
- Four percent of all UB and UBMS participants in the 2008 postsecondary education enrollment cohort did not earn a bachelor’s degree within six years but earned an associate degree within three years of postsecondary enrollment.

- Sixty percent of participants in the 2008 postsecondary education enrollment cohort earned neither a bachelor’s degree within six years nor an associate degree within three years of postsecondary enrollment.<sup>14</sup>
- Forty percent of UB and UBMS participants in the same cohort (2008) completed either a bachelor’s degree within six years or an associate degree within three years of postsecondary enrollment. The degree completion rate was 34 percent for males and 43 percent for females, 56 percent for Asians, 42 percent for whites, 40 percent for Hispanics or Latinos, 39 percent for more than one race, 38 percent for blacks or African Americans, 21 percent for American Indians or Alaska Natives, and 21 percent for Native Hawaiians or other Pacific Islanders.
- The six-year bachelor’s degree completion rate was 30 percent for male and 38 percent for female participants. Results by race/ethnicity<sup>15</sup> show that 53 percent of Asian participants earned a bachelor’s degree within six years. The six-year bachelor’s degree completion rate was around 35 percent for Hispanic or Latino (any race), black or African American, white, and more than one race participants. The six-year bachelor’s degree completion rate was lowest for American Indian or Alaska Native and Native Hawaiian or other Pacific Islander participants (16 percent and 6 percent, respectively).

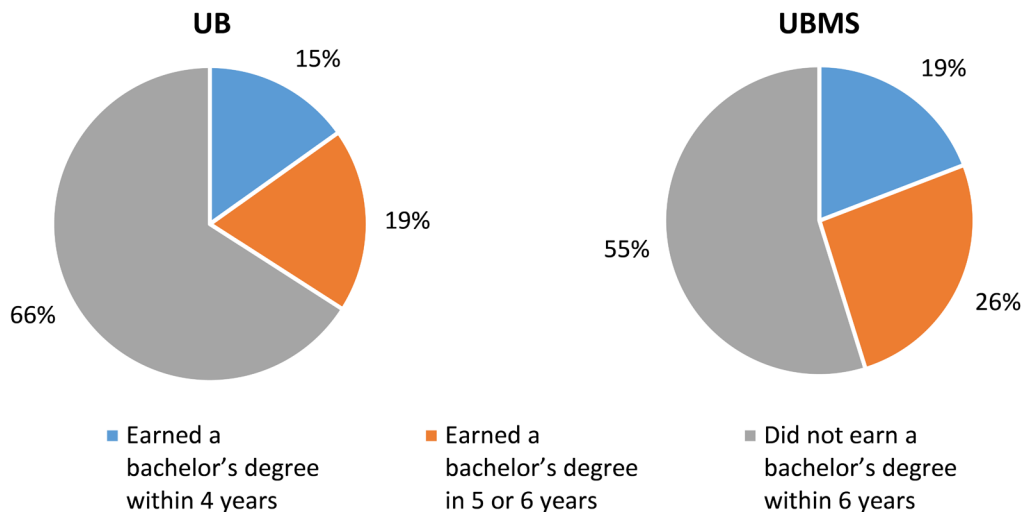
Finally, Figure 5 provides bachelor’s degree completion rates separately for students who participated in the UB or UBMS program (further detail is also provided in Appendix B).

---

<sup>14</sup> The percentages referenced do not sum to 100 due to rounding.

<sup>15</sup> Of the 12,535 participants in the 2008 postsecondary education enrollment cohort whose race/ethnicity was known, 3,012 were Hispanic or Latino, any race; 5,200 were black or African American, non-Hispanic; 2,944 were white, non-Hispanic; 724 were Asian, non-Hispanic; 310 were American Indian or Alaska Native, non-Hispanic; 204 were more than one race, non-Hispanic; and 141 were Native Hawaiian or other Pacific Islander, non-Hispanic.

**Figure 5. Percentage of Upward Bound and Upward Bound Math-Science participants in the 2008 postsecondary enrollment cohort who completed a bachelor’s degree, by time to degree**



NOTE: Figure includes Upward Bound (UB) and Upward Bound Math-Science (UBMS) participants who completed high school during the 2007–08 academic year and enrolled in a program of postsecondary education by the fall term immediately following high school graduation (by Nov. 30, 2008). Timing of postsecondary degree completion is calculated relative to the postsecondary education enrollment cohort year. For the 2008 postsecondary education enrollment cohort, “within four years” means by Aug. 31, 2012, and “in five or six years” means between Sept. 1, 2013, and Aug. 31, 2014. Participants categorized as “did not earn a bachelor’s degree within six years” may have earned a sub-baccalaureate credential (e.g., an associate degree). SOURCE: U.S. Department of Education, Federal TRIO Programs, UB/UBMS Longitudinal File 2000–14; and National Student Clearinghouse data: Fall 2007 through fall 2014.

- Among UB participants in the 2008 postsecondary education enrollment cohort, 34 percent earned a bachelor’s degree within six years of postsecondary entry. More specifically, 15 percent of cohort participants earned a bachelor’s degree within four years of postsecondary entry, and 19 percent did not earn a bachelor’s degree within four years but did earn one within six years.
- As for UBMS participants in the 2008 postsecondary education enrollment cohort, 45 percent earned a bachelor’s degree within six years of postsecondary entry. Nineteen percent earned a bachelor’s degree within four years of postsecondary entry, and 26 percent did not earn a bachelor’s degree within four years but did earn one within six years.

Appendix C presents information on national rates of postsecondary degree completion.

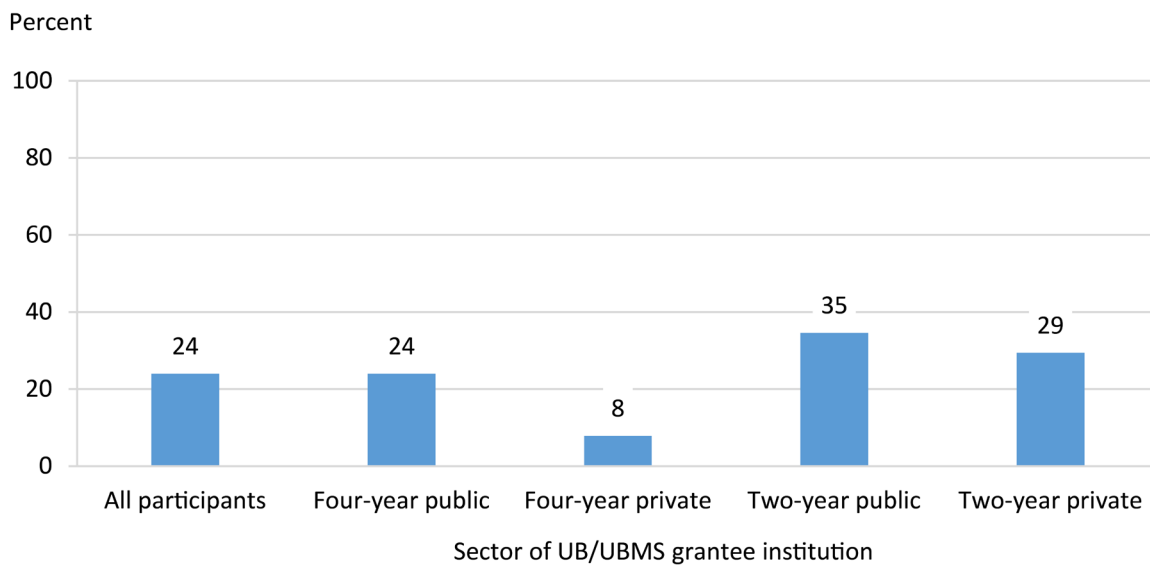
### **Postsecondary Enrollment and Postsecondary Degree Completion at the UB/UBMS Grantee Institution**

This section presents information on the rate at which UB and UBMS participants in the 2013–14 high school graduation cohort immediately enrolled at the IHE that hosted their UB/UBMS project (i.e., grantee institution) and the rate at which participants in the 2008 postsecondary

education enrollment cohort completed a postsecondary degree at their grantee institution. Because the results presented in this section focus on the outcomes of participants who received services from grantee institutions, the findings do not include cohort participants who received UB/UBMS services from secondary schools, nonprofit agencies, or institutions other than two- or four-year IHEs.<sup>16</sup>

Figure 6 shows the percentage of UB and UBMS participants in the 2013–14 high school graduation cohort who immediately enrolled at their grantee institution, both overall and by the sector of their grantee institution.

**Figure 6. Percentage of Upward Bound and Upward Bound Math-Science participants in the 2013–14 high school graduation cohort who immediately enrolled at their grantee institution, by sector of grantee institution**



NOTE: Figure includes Upward Bound (UB) and Upward Bound Math-Science (UBMS) participants who graduated with a regular high school diploma between Sept. 1, 2013, and Aug. 31, 2014 (i.e., 2013–14 high school graduation cohort) and received services from projects that were hosted by institutions of higher education (i.e., grantee institutions). Results exclude 2013–14 high school graduation cohort participants who received services from secondary schools, nonprofit agencies, or institutions other than two- or four-year institutions of higher education. Participants in the 2013–14 high school graduation cohort who enrolled in a program of postsecondary education at their grantee institution by Nov. 30, 2014, were considered to have immediately enrolled at their grantee institution. A total of 8,609 participants were served by four-year public grantee institutions; 3,566 were served by four-year private grantee institutions; 5,410 were served by two-year public grantee institutions; and 51 were served by two-year private grantee institutions. Because of the small number of cohort participants who received services from two-year private grantee institutions (51 participants), the results for this group of participants should be interpreted with caution.

SOURCE: U.S. Department of Education, Federal TRIO Programs Funded Projects Database, 2013–14 and UB/UBMS Longitudinal File: 2000–14; and National Student Loan Data System data: Fall 2013 through fall 2014.

<sup>16</sup> See Appendix A, Data Sources and Measures, for further specification of the calculations used to produce the rates of immediate postsecondary enrollment and degree completion at the grantee institution.

- Twenty-four percent of UB and UBMS participants in the 2013–14 high school graduation cohort immediately enrolled at their grantee institution.<sup>17</sup>
- Among 2013–14 high school graduation cohort participants, those who received services from a two-year public grantee institution were most likely to enroll at their grantee institution (35 percent), and those who received services from a four-year private grantee institution were least likely to enroll at their grantee institution (8 percent).<sup>18</sup>

Figure 7 presents information on the percentage of UB and UBMS participants in the 2008 postsecondary education enrollment cohort who earned postsecondary degrees from their grantee institution, both overall and by the sector of their grantee institution.<sup>19</sup>

---

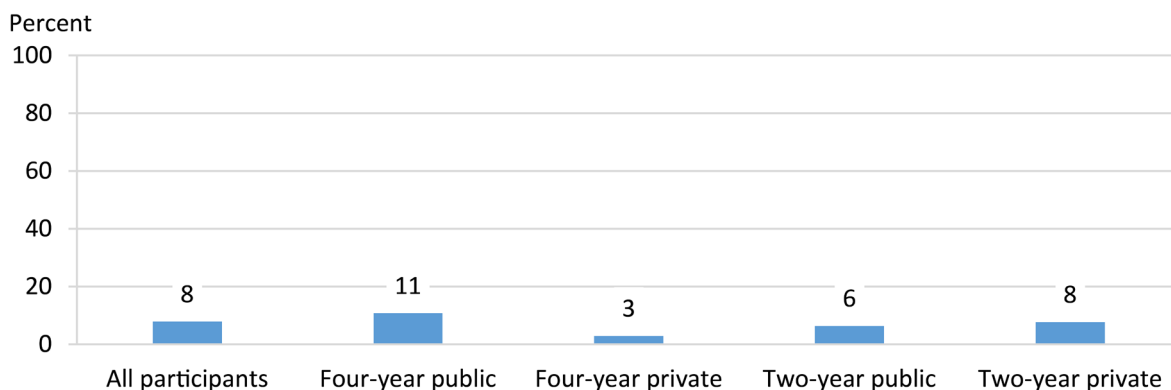
<sup>17</sup> Results include all participants in the 2013–14 high school graduation cohort who received UB/UBMS services from grantee IHEs.

<sup>18</sup> Results include all participants in the 2013–14 high school graduation cohort who received UB/UBMS services from grantee IHEs. A total of 8,609 participants in the 2013–14 high school graduation cohort received UB/UBMS services from four-year public grantee institutions; 3,566 were served by four-year private grantee institutions; 5,410 were served by two-year public grantee institutions; and 51 were served by two-year private grantee institutions.

<sup>19</sup> Because the APR data do not contain information on the institution that granted the degree, NSC data were used to determine whether the postsecondary degree was completed at the grantee institution. As such, the degree completion rates reported in this section were computed differently from those reported in the Postsecondary Degree Completion section, which are based on APR and NSC data, and include all 2008 postsecondary education enrollment cohort participants (i.e., those served by grantee institutions and non-grantee institutions).



**Figure 7. Percentage of Upward Bound and Upward Bound Math-Science participants in the 2008 postsecondary enrollment cohort who completed a bachelor’s degree at the grantee institution in six years or an associate degree at the grantee institution in three years, by sector of grantee institution**



NOTE: Figure includes Upward Bound (UB) and Upward Bound Math-Science (UBMS) participants who received UB/UBMS services from projects that were hosted by institutions of higher education (i.e., grantee institutions), and who graduated with a regular diploma between Sept. 1, 2007, and Aug. 31, 2008, and enrolled in a program of postsecondary education by Nov. 30, 2008. The degree completion rates include (1) bachelor’s degrees that were completed at the grantee institution within six years of the postsecondary education enrollment cohort year (i.e., completed by Aug. 31, 2014), and (2) associate degrees that were completed at the grantee institution within three years of the postsecondary education enrollment cohort year (i.e., completed by Aug. 31, 2011). Results exclude 2008 postsecondary education enrollment cohort participants who received services from secondary schools, nonprofit agencies, or institutions other than two- or four-year institutions of higher education. A total of 6,212 participants were served by four-year public grantee institutions; 2,530 were served by four-year private grantee institutions; 3,353 were served by two-year public grantee institutions; and 39 were served by two-year private grantee institutions. Because of the small number of cohort participants who received services from two-year private grantee institutions (39 participants), the results for this group of participants should be interpreted with caution.

SOURCE: U.S. Department of Education, Federal TRIO Programs Funded Projects Database, 2013–14 and UB/UBMS Longitudinal File 2000–14; and National Student Clearinghouse data: Fall 2007 through fall 2014.

- Eight percent of UB and UBMS participants in the 2008 postsecondary enrollment cohort earned either a bachelor’s degree within six years or an associate degree within three years from their grantee institution.<sup>20</sup>
- Eleven percent of participants in the 2008 postsecondary enrollment cohort whose grantee institution was a four-year public school earned a bachelor’s degree within six years from their grantee institution. The corresponding rate for those whose grantee institution was a four-year private school was 3 percent.<sup>21</sup>
- Six percent of participants in the 2008 postsecondary enrollment cohort whose grantee institution was a two-year public school received an associate degree within three years from their grantee institution and this was the case for 8 percent of participants whose grantee institution was a two-year private school.<sup>22</sup>

<sup>20</sup> Results include all participants in the 2008 postsecondary enrollment cohort who received UB/UBMS services from grantee IHEs.

<sup>21</sup> Results include all participants in the 2008 postsecondary enrollment cohort who received UB/UBMS services from grantee IHEs.

<sup>22</sup> Results include all participants in the 2008 postsecondary enrollment cohort who received UB/UBMS services from grantee IHEs. Because of the small number of cohort participants who received services from two-year private grantee institutions (39 participants), the results for this group of participants should be interpreted with caution.

## Conclusion

This report is a descriptive examination of immediate postsecondary enrollment rates and postsecondary completion rates among UB and UBMS participants. Immediate postsecondary enrollment rates are examined for the 2008–09 through 2013–14 high school graduation cohorts, and postsecondary degree completion rates are examined for the 2008 postsecondary education enrollment cohort. The primary data source for this report, UB/UBMS annual performance report data, was supplemented with information from both the NSLDS and the NSC to obtain a more complete picture of postsecondary enrollment and completion. To the extent that participants had incomplete postsecondary education information reported in the APR data and did not match to NSLDS or NSC data because of inconsistent information across the data sources in the fields used for matching, the reported rates on the examined outcomes may be underreported. This report provides descriptive information on the immediate postsecondary enrollment rates and postsecondary degree completion rates by select grantee and participant characteristics but does not examine causal relationships between these characteristics and program outcomes. Because this report did not use standard evaluation methodologies, such as experimental and quasi-experimental designs, it does not draw conclusions regarding the impact of the UB and UBMS programs.

Calculating and contextualizing college enrollment and graduation rates allows readers to better understand the state of the UB and UBMS programs relative to these important student outcome measures. Tabulating college enrollment and graduation rates enables the trajectory of the programs to be tracked by comparing outcomes of more recent participants to those from earlier cohorts. These benefits aside, however, UB and UBMS stakeholders should recognize what this report does not and cannot say. As previously noted, this report was originally designed to employ a rigorous evaluation methodology (propensity score modeling) using a comparable outside data source (ELS:2002). The goal was to draw conclusions about the effectiveness of the UB and UBMS programs in fulfilling their mission of improving student academic outcomes among low-income and potentially first-generation student participants. However, the absence of an established outside data source that collects information on a similarly situated group of disadvantaged students (for purposes of creating a control group) means that stakeholders will be unable to draw conclusions about the impact of these important federal programs.

## Appendix A. Data Sources and Measures

This appendix provides information about (1) the data sources used in this report; (2) the calculation for the postsecondary enrollment outcome; (3) the calculation for the postsecondary degree completion measures; (4) the calculations for postsecondary enrollment and degree completion at the grantee institution analyses; and (5) the limitations of the data and analyses.

### Data Sources

#### Annual Performance Reports

UB/UBMS grantees annually submit APR data, including postsecondary enrollment and degree completion data, on participants served during the reporting year as well as participants served in prior years. Grantees are currently required to follow UB and UBMS participants for six years after enrollment in postsecondary education. A longitudinal data file is maintained with UB/UBMS APR data from 2000–01 through 2013–14. The Federal TRIO Programs Funded Projects Database provided information on the sector of the UB/UBMS grantees.

UB and UBMS projects sometimes lose touch with participants after they leave the program or may, for other reasons, not be aware of the postsecondary enrollment and degree completion status of every past program participant. Therefore, this analysis used the National Student Loan Data System (NSLDS) data to supplement the postsecondary enrollment information reported in the APRs<sup>23</sup> and the National Student Clearinghouse (NSC) data to supplement the postsecondary degree completion information reported in the APRs.

#### National Student Loan Data System

The NSLDS maintains student-level data on the type and amount of Pell Grants, Academic Competitiveness Grants (ACG), Science and Mathematics Access to Retain Talent (SMART) Grants, and federal student loans. The NSLDS data files used for this analysis included complete federal grant or loan history available for each student through summer 2015.

To supplement the APR data on participants' postsecondary enrollment, a record for every UB and UBMS participant with data in any of the 2007–08 through 2013–14 APRs was submitted for NSLDS matching.<sup>24</sup> For participants who successfully matched to the NSLDS file, information on the school code of the postsecondary institution enrolled in and the academic term enrolled were added to the UB/UBMS longitudinal file for each period of enrollment between fall 2003 and fall 2014. Information on term-by-term postsecondary enrollment supports the calculation of the UB/UBMS program performance outcome of postsecondary enrollment

---

<sup>23</sup> While the NSC data also provides supplementary postsecondary enrollment information, participants in the 2010–11 through 2013–14 high school graduation cohorts (71 percent of the cohort participants included in the postsecondary enrollment calculation) were not included in files sent to NSC for matching.

<sup>24</sup> Because each of the criteria for NSLDS matching required either a Social Security Number (SSN) or date of birth, those records with missing or invalid data in both SSN and date-of-birth fields were excluded from the match file (n = 46).

that measures whether students enrolled by the fall term immediately following high school graduation.

### **National Student Clearinghouse**

NSC collects student-level enrollment and degree completion data from postsecondary institutions in the United States. More than 3,600 institutions submit data to the NSC, accounting for 98 percent of all students enrolled in a program of postsecondary education in the United States.<sup>25</sup> NSC shares this enrollment data with the National Student Loan Data System; thus there is an emphasis on the quality of enrollment data. For each period of enrollment, NSC data contains school information (Office of Postsecondary Education identification number [OPEID], name, city, state, level, and public or private), enrollment term start and end dates, and enrollment status (full-time, half-time, less than half-time). Institutions also are supposed to report degree completion, including graduation date; however, some schools fail to report this information. A subset of schools also report degree type and major field for degrees earned.<sup>26</sup>

There are limitations to the NSC data to consider:

- Participation in the NSC data collection is voluntary. Some institutions do not participate in NSC (2 percent of postsecondary institutions).
- Some institutions that are new to NSC may be missing historical data.
- Institutions generally provide enrollment and degree completion data; however, some do not provide data on type of degree (certificate, associate, bachelor's) and details, such as major field of study, are relatively new (first collected in 2012).
- The matching process is not perfect. NSC matching uses only name and date of birth (social security number is not used), and tends to err on the side of “false negatives” (see Dynarski et al in note 26 below). Misspelled names, name changes (not unusual in this marrying-age population), and missing dates of birth hamper the ability to match.
- The *Family Educational Rights and Privacy Act (FERPA)* allows both students and schools to block enrollment and degree information. NSC cannot release student-level information if the record is “*FERPA*-blocked.” An NSC study found that nearly 5 percent of students had *FERPA* blocks on their data, and this is most prevalent at two-year institutions.<sup>27</sup>

To supplement the APR data on participants' postsecondary enrollment and completion, a record (with first name, last name, date of birth, and a unique identifier) was submitted to NSC for matching in the fall of 2014 for every UB and UBMS participant whose APR data (high school graduation status and actual date of high school graduation fields) indicated that they graduated from high school between Sept. 1, 2007, and Dec. 31, 2010. Matching all UB and UBMS participant records to NSC was cost prohibitive; thus the study focused on high school graduates

---

<sup>25</sup> [http://www.studentclearinghouse.org/about/clearinghouse\\_facts.php](http://www.studentclearinghouse.org/about/clearinghouse_facts.php)

<sup>26</sup> For more information on the National Student Clearinghouse, see Dynarski, S. M., Hemelt, S. W., & Hyman, J. M. (2013). *The missing manual: Using National Student Clearinghouse data to track postsecondary outcomes*. Cambridge, MA: National Bureau of Economic Research. <http://www.nber.org/papers/w19552>.

<sup>27</sup> National Student Clearinghouse (2012). Impact of Directory Information Blocks on Student Tracker Results. [http://nscresearchcenter.org/wp-content/uploads/NSC\\_Directory\\_Block\\_Rates.pdf](http://nscresearchcenter.org/wp-content/uploads/NSC_Directory_Block_Rates.pdf)

(i.e., those who had the credentials to enroll in postsecondary education) in cohorts with higher-quality APR data and who had sufficient time to complete a postsecondary degree.

For participants who successfully matched to the NSC file, the start and end dates for each period of attendance and the school associated with that period of attendance were added to the UB/UBMS longitudinal file. For some students, completion data were also available. For each degree reported, the student's major (CIP code and string), degree type, degree date, and school were added to the longitudinal file.

### **Integrated Postsecondary Education Data System**

The U.S. Department of Education established the Integrated Postsecondary Education Data System (IPEDS) as the core postsecondary education data collection program for the National Center for Education Statistics (NCES). IPEDS is a system of surveys designed to collect institution-level data, such as enrollment, program completion, faculty, staff, and finances from all primary providers of postsecondary education, as defined by *Title IV of the Higher Education Act of 1965*, as amended. IPEDS gathers information from every college, university, and technical and vocational institution that participates in the federal student financial aid programs. More than 7,500 institutions complete IPEDS surveys each year.

This report used IPEDS to gather institution-level information on the colleges first attended by UB and UBMS participants. Institutional information used for this study included the level (four-year, two-year, or less-than-two-year institution) and control (private or public institution). The APRs included a field that collected information on the school code for the postsecondary institution attended. These school codes reported in the APR data were merged with school codes from the IPEDS data (2009–10 through 2013–14) to obtain information on the sector (level and control) of the postsecondary institutions first attended by UB and UBMS participants.

### **Immediate Postsecondary Enrollment Calculation**

The postsecondary education enrollment measure is calculated for high school graduation cohort participants. This measure focuses on postsecondary enrollments that occurred by the fall semester immediately following the academic year the participant graduated from high school.

*Cohort of participants (denominator).* The denominator used in the postsecondary enrollment calculation is high school graduation cohort participants. To identify participants' high school graduation year, the high school graduation date and the high school graduation status APR fields were used. Because grantees sometimes changed the high school graduation date between reporting years, some participants qualified for more than one high school graduation cohort depending on the year of data examined. To ensure that participants were included in the postsecondary enrollment results for only one cohort, a high school graduation cohort field was created on the UB/UBMS longitudinal file. Cohort assignments were made in descending order starting with the 2013–14 cohort year and ending with the 2008–09 cohort year. To make assignments to the 2013–14 high school graduation cohort, the date in the actual date of high school graduation field in the 2013–14 data was checked to see if the participant graduated high school during the 2013–14 academic year (i.e., date was between September 2013 and August 2014). To determine whether participants who graduated during the academic year 2013–14 had

earned a regular high school diploma, the high school graduation status field in the 2013–14 data was examined for a response of “received regular secondary school diploma.” Next, 2012–13 data was used to identify participants who graduated with a regular diploma during the 2012–13 academic year (i.e., date in the actual date of high school graduation field was between September 2012 and August 2013). A similar process was used to make assignments to the remaining cohort years. Once a participant was assigned to a cohort year, the participant remained in that cohort year even if data in earlier years indicated that the participant qualified for an earlier cohort year.

*Postsecondary enrollment status (numerator).* For the numerator, both APR and NSLDS data were examined for evidence of postsecondary enrollment by the fall semester immediately following the academic year the participant graduated from high school. Participants who had evidence in either of the data sources were considered to have achieved the outcome. In the APR data, two fields were used to determine participants’ immediate postsecondary enrollment status: date of first postsecondary enrollment and source of postsecondary enrollment information.<sup>28</sup> For each high school graduation cohort, the APR data collected during the academic year that the participant graduated high school was used to check for evidence of immediate postsecondary enrollment (e.g., 2013–14 APR data were used for the 2013–14 high school graduation cohort). For the 2013–14 high school graduation cohort, postsecondary enrollment dates between September 2013 and November 2014<sup>29</sup> or a response indicating that the participant received notification from an institution of higher education (IHE) of acceptance but deferred enrollment until the next academic semester<sup>30</sup> were considered evidence of immediate postsecondary enrollment. For the source of postsecondary enrollment information field, responses that indicated a particular source (i.e., official college transcript, other institutional data, self-reported by participant, and other third-party verification [e.g., NSC]) provided the participant’s postsecondary education was considered evidence of postsecondary enrollment. A similar process was used to determine whether participants in the other high school graduation cohorts had evidence of immediate postsecondary enrollment in the APR data.

In the NSLDS data, evidence of postsecondary enrollment included having enrollment data in any term between fall term of a participant’s academic year of high school graduation and the fall term immediately following high school graduation (e.g., for the 2013–14 cohort, between fall 2013 and fall 2014).

---

<sup>28</sup> The first postsecondary enrollment date is sometimes reported as unknown in the date of first postsecondary enrollment field. Thus, the source of postsecondary enrollment information field is also checked to see if the response indicated that the participant enrolled in a program of postsecondary education.

<sup>29</sup> For the 2013–14 high school graduation cohort, the earliest month participants could have graduated high school was in September 2013 (the beginning of the 2013–14 academic year), so September 2013 was used as the earliest postsecondary enrollment date. Because the measure focused on immediate postsecondary enrollments (by the fall term immediately following high school graduation), the latest date that counted as evidence of postsecondary enrollment was November 2014.

<sup>30</sup> The response option of “participant received notification from an institution of higher education of acceptance but deferred enrollment until the next academic semester” was added to the date of first postsecondary enrollment field in 2012–13; therefore, this response option counted as evidence of postsecondary enrollment for only the 2012–13 and 2013–14 high school graduation cohorts.

## Postsecondary Degree Completion Calculation

Several postsecondary degree completion measures were calculated for participants in the 2008 postsecondary education enrollment cohort as follows:

- The percentage of students in the 2008 postsecondary education enrollment cohort who completed a bachelor’s degree within six years;
- The percentage of students in the 2008 postsecondary education enrollment cohort who completed a bachelor’s degree within four years (on-time completion);
- The percentage of students in the 2008 postsecondary education enrollment cohort who completed an associate degree within three years; and
- The percentage of students in the 2008 postsecondary education enrollment cohort who completed an associate degree within two years (on-time completion).

*Cohort participants (denominator).* The cohort for the postsecondary degree completion outcome measures includes participants who were in the 2008 postsecondary education enrollment cohort. The APR includes a postsecondary education enrollment cohort field that identifies participants’ assigned cohort. Participants who completed high school during the 2007–08 academic year and enrolled in a program of postsecondary education by the fall term immediately following the year they graduated from high school qualified for the 2008 postsecondary education enrollment cohort.

*Numerator.* To determine whether cohort participants achieved success in the postsecondary completion measures, APR data and NSC data were examined, and participants who had evidence from either of these sources were considered to have achieved the outcome. The APR was redesigned in 2012–13 to include the new fields of associate degree attained, date of associate degree, bachelor’s degree attained, and date of bachelor’s degree. These fields provide the information needed to determine whether cohort participants completed an associate degree and/or bachelor’s degree within the specified time frame. For the postsecondary associate degree completion measures, a response of “yes, attained associate degree” in the “associate degree attained” field and a date in the “date of associate degree” field that was prior to September 2010 for the “completion within two years” measure and prior to September 2011 for the “completion within three years” measure was required. Evidence of completing a bachelor’s degree required having a response of “yes, attained bachelor’s degree” in the “bachelor’s degree attained” field and having a date in the “date of bachelor’s degree field” that was prior to September 2012 for the four-year measure and prior to September 2014 for the six-year measure.

In the NSC data, information reported in the “level of degree that was earned” field was used to identify any associate and/or bachelor’s degrees that were earned. The information in the “date that degree was earned” field that was associated with each earned degree was used to determine the earliest date that an associate degree and/or bachelor’s degree was earned and whether the earliest completion date was within the time frame specified for the given “postsecondary degree completion” measure.

## **Calculation of Immediate Postsecondary Enrollment and Degree Completion at the Grantee Institution**

### **Immediate Postsecondary Enrollment at the Grantee Institution**

*Cohort of participants (denominator).* The denominator for this calculation was the number of students in the 2013–14 high school graduation cohort (as described above in the Immediate Postsecondary Enrollment Calculation section) whose UB/UBMS grantee institution was a four-year public, four-year private, two-year public, or two-year private IHE. Participants who were in the 2013–14 high school graduation cohort and received UB/UBMS services from secondary schools, nonprofit agencies, or institutions other than two- or four-year IHEs were not included in the calculation.

*Numerator.* Cohort participants who immediately enrolled in a program of postsecondary education (as described above in the Immediate Postsecondary Enrollment Calculation section) at their UB/UBMS grantee institution were included in the numerator for this calculation. To determine whether cohort participants enrolled at their grantee institution, the OPEID of the institution at which the student immediately enrolled was compared to the OPEID of the participant’s grantee institution. If these two OPEIDs matched, cohort participants were considered to have immediately enrolled at their grantee institution.

### **Postsecondary Degree Completion at the Grantee Institution**

*Cohort of participants (denominator).* The denominator for this calculation was the number of students in the 2008 postsecondary education enrollment cohort (as described above in the Postsecondary Degree Completion Calculation section) whose UB/UBMS grantee institution was a four-year public, four-year private, two-year public, or two-year private IHE. Participants who were in the 2008 postsecondary education enrollment cohort and received UB/UBMS services from secondary schools, nonprofit agencies, or institutions other than two- or four-year IHEs were not included in the calculation.

*Numerator.* To determine whether cohort participants had completed a bachelor’s degree within six years and/or an associate degree within three years, NSC data were examined.<sup>31</sup> In the NSC data, information reported in the “level of degree that was earned” field was used to identify any associate and/or bachelor’s degrees that were earned. The information in the “date that degree was earned” field that was associated with each earned degree was used to determine the earliest date that an associate degree and/or bachelor’s degree was earned and whether the earliest completion date was within the time frame specified for the given “postsecondary degree completion” measure. To determine whether the degree was earned at the grantee institution, the OPEID (Office of Postsecondary Education identification number) of the institution from which the student received a degree reported in the NSC data was compared to the OPEID of the participant’s grantee institution. If these two OPEIDs matched, cohort participants were included in the numerator for this calculation.

---

<sup>31</sup> APR data do not provide information on the institution that granted the degree.



## Limitations of Data and Analyses

Not all participants who graduated with a regular diploma between 2008–09 and 2013–14 were included in the postsecondary enrollment measure calculations. Because a single year of APR data was used to identify cohort participants and check for evidence of postsecondary enrollment, participants who did not have an APR record in the year that they graduated from high school were excluded from the results. Key reasons for participants not having an APR record in the year they graduated include the following: 1) the project that provided services to a participant was no longer receiving UB/UBMS funding in that year;<sup>32</sup> and 2) projects sometimes drop participants' records from the APR reports after they leave the program because they have difficulty tracking them. Similarly, the results for the postsecondary degree completion measures include only those participants who were served by projects that were funded in both the 2007–08 through 2011–12 and the 2012–13 through 2016–17 funding cycles and who had a 2013–14 APR record.

It is possible that some cohort participants achieved the program outcomes presented in this report but did not have evidence of doing so in either source. Grantees sometimes have difficulty tracking participants once they leave the project and in such cases are unable to provide updated postsecondary enrollment and degree completion information. Further, while the APR data were supplemented with NSLDS and NSC data, participants may not have been matched to these external data sources if the personal information (name, SSN, and date of birth) reported in the APR data did not match the information reported in these other data sources.

This report presents results for the UB and UBMS program outcomes of postsecondary enrollment and postsecondary degree completion. The results do not address project impacts, such as the extent to which the postsecondary enrollment rate and postsecondary degree completion rate is a direct result of participation in UB or UBMS programs and not influenced by other factors.

---

<sup>32</sup> A grant competition is held for the UB and UBMS programs every five years. The last two grant competitions were conducted in 2007 and 2012.

## Appendix B. Tables Showing the Participant Outcomes of UB and UBMS Participants

**Table B-1. Number of Upward Bound and Upward Bound Math-Science participants in the 2008–09 through 2013–14 high school graduation cohorts, and number and percentage who immediately enrolled in postsecondary education, by high school graduation cohort year**

UB/UBMS program type and high school graduation cohort year <sup>1</sup>	Total high school graduation cohort participants	Total with immediate postsecondary enrollment <sup>2</sup>	
		Number	Percent
<b>UB and UBMS participants</b>			
2008–09	16,851	14,186	84.2
2009–10	19,398	16,472	84.9
2010–11	23,752	19,844	83.5
2011–12	20,613	17,140	83.2
2012–13	18,208	15,537	85.3
2013–14	19,196	16,427	85.6
<b>UB participants only</b>			
2008–09	14,996	12,533	83.6
2009–10	17,206	14,521	84.4
2010–11	21,292	17,689	83.1
2011–12	18,247	15,044	82.4
2012–13	15,851	13,475	85.0
2013–14	16,658	14,171	85.1
<b>UBMS participants only</b>			
2008–09	1,855	1,653	89.1
2009–10	2,192	1,951	89.0
2010–11	2,460	2,155	87.6
2011–12	2,366	2,096	88.6
2012–13	2,357	2,062	87.5
2013–14	2,538	2,256	88.9

<sup>1</sup> Participants who graduated with a regular high school diploma were assigned to a high school graduation cohort year based on the date of high school graduation, using September through August as the academic year.

<sup>2</sup> Participants who enrolled in a program of postsecondary education by the end of November following their high school graduation year are considered to have enrolled immediately in postsecondary education.

NOTE: UB = regular Upward Bound and UBMS = Upward Bound Math-Science.

SOURCE: U.S. Department of Education, Federal TRIO Programs, UB/UBMS Longitudinal File: 2000–14; and National Student Loan Data System data: Fall 2008 through fall 2014.

**Table B-2. Number of Upward Bound and Upward Bound Math-Science participants in the 2013–14 high school graduation cohort, and number and percentage who immediately enrolled in postsecondary education, by sector of their first-attended postsecondary institution, sector of UB/UBMS grantee institution, and participant characteristics**

		Sector of first-attended postsecondary institution <sup>3</sup>									
		Total with immediate postsecondary enrollment <sup>2</sup>		Four-year public		Four-year private		Two-year public		Other <sup>4</sup>	
Sector of UB/UBMS grantee institution and participant characteristics	Total cohort participants <sup>1</sup>	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	19,196	16,427	85.6	8,300	50.5	2,401	14.6	5,184	31.6	542	3.3
Sector of UB/UBMS grantee institution											
Four-year public	8,609	7,325	85.1	4,299	58.7	983	13.4	1,841	25.1	202	2.8
Four-year private	3,566	3,086	86.5	1,389	45.0	778	25.2	796	25.8	123	4.0
Two-year public	5,410	4,640	85.8	1,899	40.9	437	9.4	2,150	46.3	154	3.3
Other <sup>5</sup>	1,611	1,376	85.4	713	51.8	203	14.8	397	28.9	63	4.6
Eligibility status											
Low-income and potentially first-generation	15,684	13,359	85.2	6,729	50.4	1,886	14.1	4,306	32.2	438	3.3
Low-income only	1,242	1,096	88.2	588	53.6	198	18.1	282	25.7	28	2.6
Potentially first-generation only	2,238	1,948	87.0	969	49.7	316	16.2	589	30.2	74	3.8
Gender											
Male	6,959	5,718	82.2	2,853	49.9	846	14.8	1,834	32.1	185	3.2
Female	12,232	10,705	87.5	5,445	50.9	1,554	14.5	3,349	31.3	357	3.3

See notes at end of table on next page.

**Table B-2. Number of Upward Bound and Upward Bound Math-Science participants in the 2013–14 high school graduation cohort, and number and percentage who immediately enrolled in postsecondary education, by sector of their first-attended postsecondary institution, sector of UB/UBMS grantee institution, and participant characteristics—Continued**

		Sector of first-attended postsecondary institution <sup>3</sup>									
		Total with immediate postsecondary enrollment <sup>2</sup>		Four-year public		Four-year private		Two-year public		Other <sup>4</sup>	
Sector of UB/UBMS grantee institution and participant characteristics	Total cohort participants <sup>1</sup>	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>Race/ethnicity</b>											
Hispanic or Latino	5,607	4,987	88.9	2,610	52.3	611	12.3	1,584	31.8	182	3.6
American Indian or Alaska Native	406	287	70.7	183	63.8	23	8.0	69	24.0	12	4.2
Asian	1,104	1,030	93.3	667	64.8	136	13.2	217	21.1	10	1.0
Black or African American	7,003	5,985	85.5	2,919	48.8	1,010	16.9	1,861	31.1	195	3.3
Native Hawaiian or other Pacific Islander	182	156	85.7	48	30.8	12	7.7	89	57.1	7	4.5
White	4,301	3,483	81.0	1,621	46.5	528	15.2	1,217	34.9	117	3.4
More than one race	429	354	82.5	179	50.6	52	14.7	108	30.5	15	4.2

<sup>1</sup> Participants who graduated with a regular high school diploma were assigned to a high school graduation cohort year based on the date of high school graduation, using September through August as the academic year.

<sup>2</sup> For the 2013–14 high school graduation cohort, these data include those who enrolled in a program of postsecondary education by Nov. 30, 2014.

<sup>3</sup> Among those with immediate postsecondary enrollment.

<sup>4</sup> “Other” includes two-year private, less-than-two-year public/private, and unknown sector information for the first postsecondary institution.

<sup>5</sup> “Other” includes two-year private and two- and four-year private for-profit postsecondary institutions, secondary schools, nonprofit organizations, and other organizations  
NOTE: UB = regular Upward Bound and UBMS = Upward Bound Math-Science. The results presented for each of the participant characteristics exclude participants who had an unknown response for the given characteristic. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, Federal TRIO Programs Funded Projects Database, 2013–14 and UB/UBMS Longitudinal File: 2000–14; U.S. Department of Education, National Center for Education Statistics, *Integrated Postsecondary Education Data System (IPEDS)*, fall 2013; and National Student Loan Data System data: Fall 2013 through fall 2014.

**Table B-3. Number and percentage of Upward Bound and Upward Bound Math-Science participants in the 2008 postsecondary graduation cohort, by highest degree earned, UB/UBMS program type, sector of UB/UBMS grantee institution, and participant characteristics**

UB/UBMS program type, sector of UB/UBMS grantee institution, and participant characteristics	Total cohort participants <sup>1</sup>	Highest degree earned <sup>3</sup>							
		Total degree completers <sup>2</sup>		Bachelor's degree within six years		Associate degree within three years		Did not complete BA within six years or AA within three years	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>Overall (UB and UBMS participants)</b>									
Total	12,802	5,093	39.8	4,538	35.4	555	4.3	7,709	60.2
Sector of UB/UBMS grantee institution									
Four-year public	6,218	2,441	39.3	2,240	36.0	201	3.2	3,777	60.7
Four-year private	2,530	1,127	44.5	1,024	40.5	103	4.1	1,403	55.5
Two-year public	3,353	1,253	37.4	1,024	30.5	229	6.8	2,100	62.6
Other <sup>4</sup>	701	272	38.8	250	35.7	22	3.1	429	61.2
Eligibility									
Low-income and potentially first-generation	10,214	3,971	38.9	3,500	34.3	471	4.6	6,243	61.1
Low-income only	722	310	42.9	292	40.4	18	2.5	412	57.1
Potentially first-generation only	1,853	808	43.6	742	40.0	66	3.6	1,045	56.4
Gender									
Male	4,510	1,538	34.1	1,371	30.4	167	3.7	2,972	65.9
Female	8,292	3,555	42.9	3,167	38.2	388	4.7	4,737	57.1
Race/ethnicity									
Hispanic or Latino, any race	3,012	1,210	40.2	1,093	36.3	117	3.9	1,802	59.8
American Indian or Alaska Native	310	61	19.7	50	16.1	11	3.5	249	80.3
Asian	724	404	55.8	384	53.0	20	2.8	320	44.2
Black or African American	5,200	1,985	38.2	1,826	35.1	159	3.1	3,215	61.8
Native Hawaiian or other Pacific Islander	141	30	21.3	9	6.4	21	14.9	111	78.7
White	2,944	1,229	41.7	1,025	34.8	204	6.9	1,715	58.3
More than one race	204	79	38.7	70	34.3	9	4.4	125	61.3

See notes at end of table on p. B-7.

**Table B-3. Number and percentage of Upward Bound and Upward Bound Math-Science participants in the 2008 postsecondary graduation cohort, by highest degree earned, UB/UBMS program type, sector of UB/UBMS grantee institution, and participant characteristics—Continued**

UB/UBMS program type, sector of UB/UBMS grantee institution, and participant characteristics	Total cohort participants <sup>1</sup>	Highest degree earned <sup>3</sup>							
		Total degree completers <sup>2</sup>		Bachelor's degree within six years		Associate degree within three years		Did not complete BA within six years or AA within three years	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>UB participants only</b>									
Total	11,278	4,358	38.6	3,847	34.1	511	4.5	6,920	61.4
<b>Sector of UB grantee institution</b>									
Four-year public	5,269	1,991	37.8	1,813	34.4	178	3.4	3,278	62.2
Four-year private	2,207	974	44.1	877	39.7	97	4.4	1,233	55.9
Two-year public	3,138	1,139	36.3	923	29.4	216	6.9	1,999	63.7
Other <sup>4</sup>	664	254	38.3	234	35.2	20	3.0	410	61.7
<b>Eligibility</b>									
Low-income and potentially first- generation	9,014	3,403	37.8	2,971	33.0	432	4.8	5,611	62.2
Low-income only	621	262	42.2	246	39.6	16	2.6	359	57.8
Potentially first-generation only	1,633	690	42.3	627	38.4	63	3.9	943	57.7
<b>Gender</b>									
Male	3,948	1,304	33.0	1,150	29.1	154	3.9	2,644	67.0
Female	7,330	3,054	41.7	2,697	36.8	357	4.9	4,276	58.3
<b>Race/ethnicity</b>									
Hispanic or Latino, any race	2,633	1,007	38.2	904	34.3	103	3.9	1,626	61.8
American Indian or Alaska Native	277	47	17.0	36	13.0	11	4.0	230	83.0
Asian	592	325	54.9	310	52.4	15	2.5	267	45.1
Black or African American	4,587	1,714	37.4	1,564	34.1	150	3.3	2,873	62.6
Native Hawaiian or other Pacific Islander	134	28	20.9	7	5.2	21	15.7	106	79.1
White	2,613	1,078	41.3	889	34.0	189	7.2	1,535	58.7
More than one race	181	67	37.0	59	32.6	8	4.4	114	63.0

See notes at end of table on p. B-7.

**Table B-3. Number and percentage of Upward Bound and Upward Bound Math-Science participants in the 2008 postsecondary graduation cohort, by highest degree earned, UB/UBMS program type, sector of UB/UBMS grantee institution, and participant characteristics—Continued**

UB/UBMS program type, sector of UB/UBMS grantee institution, and participant characteristics	Total cohort participants <sup>1</sup>	Highest degree earned <sup>3</sup>							
		Total degree completers <sup>2</sup>		Bachelor's degree within six years		Associate degree within three years		Did not complete BA within six years or AA within three years	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>UBMS participants only</b>									
Total	1,524	735	48.2	691	45.3	44	2.9	789	51.8
<b>Sector of UBMS grantee institution</b>									
Four-year public	949	450	47.4	427	45.0	23	2.4	499	52.6
Four-year private	323	153	47.4	147	45.5	6	1.9	170	52.6
Two-year public	215	114	53.0	101	47.0	13	6.0	101	47.0
Other <sup>4</sup>	37	18	48.6	16	43.2	‡	‡	16	43.2
<b>Eligibility</b>									
Low-income and potentially first- generation	1,200	568	47.3	529	44.1	39	3.3	632	52.7
Low-income only	101	48	47.5	46	45.5	‡	‡	53	52.5
Potentially first-generation only	220	118	53.6	115	52.3	3	1.4	102	46.4
<b>Gender</b>									
Male	562	234	41.6	221	39.3	13	2.3	328	58.4
Female	962	501	52.1	470	48.9	31	3.2	461	47.9
<b>Race/ethnicity</b>									
Hispanic or Latino, any race	379	203	53.6	189	49.9	14	3.7	176	46.4
American Indian or Alaska Native	33	14	42.4	14	42.4	‡	‡	19	57.6
Asian	132	79	59.8	74	56.1	5	3.8	53	40.2
Black or African American	613	271	44.2	262	42.7	9	1.5	342	55.8
Native Hawaiian or other Pacific Islander	7	‡	‡	‡	‡	‡	‡	5	71.4
White	331	151	45.6	136	41.1	15	4.5	180	54.4
More than one race	132	79	59.8	74	56.1	5	3.8	53	40.2

See notes at end of table on p. B-7.

**Table B-3. Number and percentage of Upward Bound and Upward Bound Math-Science participants in the 2008 postsecondary graduation cohort, by highest degree earned, UB/UBMS program type, sector of UB/UBMS grantee institution, and participant characteristics—Continued**

‡ Not reported to protect subgroups with fewer than three participants.

<sup>1</sup> Includes those who completed high school during the 2007–08 academic year and enrolled in a program of postsecondary education by the fall term immediately following high school graduation (by Nov. 30, 2008).

<sup>2</sup> Includes (1) bachelor’s degrees that were completed within six years of the postsecondary enrollment cohort year (i.e. completed by Aug. 31, 2014) and (2) associate degrees that were completed within three years of the postsecondary enrollment cohort year (i.e., completed by Aug. 31, 2011).

<sup>3</sup> Among those in the 2008 postsecondary education enrollment cohort.

<sup>4</sup> “Other” includes two-year private and two- and four-year private for-profit postsecondary institutions, secondary schools, nonprofit organizations, and other organizations.

NOTE: UB = regular Upward Bound and UBMS = Upward Bound Math-Science. The results presented for each of the participant characteristics exclude participants who had an unknown response for the given characteristic. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, Federal TRIO Programs Funded Projects Database, 2013–14 and UB/UBMS Longitudinal File: 2000–14; and National Student Clearinghouse data: Fall 2007 through fall 2014.



**Table B-4. Number of Upward Bound and Upward Bound Math-Science participants in the 2008 postsecondary graduation cohort, and number and percentage who completed bachelor's and associate degrees, by time to degree, UB and UBMS program type, sector of UB/UBMS grantee institution, and participant characteristics**

UB/UBMS program type, sector of UB/UBMS grantee institution, and participant characteristics	Total cohort participants <sup>1</sup>	Degree type and timing of degree completion <sup>2</sup>							
		Bachelor's degree				Associate degree			
		Earned within four years		Earned within six years		Earned within two years		Earned within three years	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>Overall (UB and UBMS participants)</b>									
Total	12,802	2,004	15.7	4,538	35.4	434	3.4	909	7.1
<b>Sector of UB/UBMS grantee institution</b>									
Four-year public	6,218	967	15.6	2,240	36.0	137	2.2	318	5.1
Four-year private	2,530	490	19.4	1,024	40.5	64	2.5	155	6.1
Two-year public	3,353	436	13.0	1,024	30.5	215	6.4	398	11.9
Other <sup>3</sup>	701	111	15.8	250	35.7	18	2.6	38	5.4
<b>Eligibility status</b>									
Low-income and potentially first- generation	10,214	1,508	14.8	3,500	34.3	334	3.3	731	7.2
Low-income only	722	141	19.5	292	40.4	23	3.2	45	6.2
Potentially first-generation only	1,853	354	19.1	742	40.0	77	4.2	133	7.2
<b>Gender</b>									
Male	4,510	582	12.9	1,371	30.4	126	2.8	259	5.7
Female	8,292	1,422	17.1	3,167	38.2	308	3.7	650	7.8
<b>Race/ethnicity</b>									
Hispanic or Latino, any race	3,012	435	14.4	1,093	36.3	94	3.1	204	6.8
American Indian or Alaska Native	310	11	3.5	50	16.1	10	3.2	18	5.8
Asian	724	162	22.4	384	53.0	10	1.4	32	4.4
Black or African American	5,200	786	15.1	1,826	35.1	102	2.0	267	5.1
Native Hawaiian or other Pacific Islander	141	3	2.1	9	6.4	4	2.8	21	14.9
White	2,944	544	18.5	1,025	34.8	199	6.8	335	11.4
More than one race	204	29	14.2	70	34.3	6	2.9	14	6.9

See notes at end of table on p. B-11.

**Table B-4. Number of Upward Bound and Upward Bound Math-Science participants in the 2008 postsecondary graduation cohort, and number and percentage who completed bachelor's and associate degrees, by time to degree, UB and UBMS program type, sector of UB/UBMS grantee institution, and participant characteristics—Continued**

UB/UBMS program type, sector of UB/UBMS grantee institution, and participant characteristics	Total cohort participants <sup>1</sup>	Degree type and timing of degree completion <sup>2</sup>							
		Bachelor's degree				Associate degree			
		Earned within four years		Earned within six years		Earned within two years		Earned within three years	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>UB participants only</b>									
Total	11,278	1,711	15.2	3,847	34.1	391	3.5	827	7.3
Sector of UB grantee institution									
Four-year public	5,269	790	15.0	1,813	34.4	120	2.3	279	5.3
Four-year private	2,207	420	19.0	877	39.7	59	2.7	146	6.6
Two-year public	3,138	399	12.7	923	29.4	195	6.2	368	11.7
Other <sup>3</sup>	664	102	15.4	234	35.2	17	2.6	34	5.1
Eligibility status									
Low-income and potentially first-generation	9,014	1,290	14.3	2,971	33.0	302	3.4	666	7.4
Low-income only	621	120	19.3	246	39.6	21	3.4	41	6.6
Potentially first-generation only	1,633	300	18.4	627	38.4	68	4.2	120	7.3
Gender									
Male	3,948	486	12.3	1,150	29.1	117	3.0	236	6.0
Female	7,330	1,225	16.7	2,697	36.8	274	3.7	591	8.1
Race/ethnicity									
Hispanic or Latino, any race	2,633	355	13.5	904	34.3	83	3.2	183	7.0
American Indian or Alaska Native	277	8	2.9	36	13.0	8	2.9	14	5.1
Asian	592	132	22.3	310	52.4	8	1.4	26	4.4
Black or African American	4,587	677	14.8	1,564	34.1	96	2.1	249	5.4
Native Hawaiian or other Pacific Islander	134	‡	‡	7	5.2	4	3.0	21	15.7
White	2,613	479	18.3	889	34.0	177	6.8	304	11.6
More than one race	181	25	13.8	59	32.6	6	3.3	12	6.6

See notes at end of table on p. B-11.

**Table B-4. Number of Upward Bound and Upward Bound Math-Science participants in the 2008 postsecondary graduation cohort, and number and percentage who completed bachelor's and associate degrees, by time to degree, UB and UBMS program type, sector of UB/UBMS grantee institution, and participant characteristics—Continued**

UB/UBMS program type, sector of UB/UBMS grantee institution, and participant characteristics	Total cohort participants <sup>1</sup>	Degree type and timing of degree completion <sup>2</sup>								
		Bachelor's degree				Associate degree				
		Earned within four years		Earned within six years		Earned within two years		Earned within three years		
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	
<b>UBMS participants only</b>										
Total	1,524	293	19.2	691	45.3	43	2.8	82	5.4	
Sector of UBMS grantee institution										
Four-year public	949	177	18.7	427	45.0	17	1.8	39	4.1	
Four-year private	323	70	21.7	147	45.5	5	1.5	9	2.8	
Two-year public	215	37	17.2	101	47.0	20	9.3	30	14.0	
Other <sup>3</sup>	37	9	24.3	16	43.2	‡	‡	4	10.8	
Eligibility status										
Low-income and potentially first-generation	1,200	218	18.2	529	44.1	32	2.7	65	5.4	
Low-income only	101	21	20.8	46	45.5	‡	‡	4	4.0	
Potentially first-generation only	220	54	24.5	115	52.3	9	4.1	13	5.9	
Gender										
Male	562	96	17.1	221	39.3	9	1.6	23	4.1	
Female	962	197	20.5	470	48.9	34	3.5	59	6.1	
Race/ethnicity										
Hispanic or Latino, any race	379	80	21.1	189	49.9	11	2.9	21	5.5	
American Indian or Alaska Native	33	3	9.1	14	42.4	‡	‡	4	12.1	
Asian	132	30	22.7	74	56.1	‡	‡	6	4.5	
Black or African American	613	109	17.8	262	42.7	6	1.0	18	2.9	
Native Hawaiian or other Pacific Islander	7	‡	‡	‡	‡	7	100.0	‡	‡	
White	331	65	19.6	136	41.1	22	6.6	31	9.4	
More than one race	23	4	17.4	11	47.8	‡	‡	‡	‡	

See notes at the end of table on p. B-11.

**Table B-4. Number of Upward Bound and Upward Bound Math-Science participants in the 2008 postsecondary graduation cohort, and number and percentage who completed bachelor's and associate degrees, by time to degree, UB and UBMS program type, sector of UB/UBMS grantee institution, and participant characteristics—Continued**

‡ Not reported to protect subgroups with fewer than three participants.

<sup>1</sup> Includes those who completed high school during the 2007–08 academic year and enrolled in a program of postsecondary education by the fall term immediately following high school graduation (by Nov. 30, 2008).

<sup>2</sup> Among those in the 2008 postsecondary education enrollment cohort. Timing of degree completion is calculated relative to the postsecondary education enrollment cohort year. For the 2008 postsecondary education enrollment cohort, “within two years” means by Aug. 31, 2010; “within three years” means by Aug. 31, 2011; “within four years” means by Aug. 31, 2012; and “within six years” means by Aug. 31, 2014. Participants who earned both a bachelor's degree and an associate degree are included in the results for both of these degree types; therefore, the sum of the degree type columns do not equal the number reported in the Total column in each row.

<sup>3</sup> “Other” includes two-year private and two- and four-year private for-profit postsecondary institutions, secondary schools, nonprofit organizations, and other organizations  
NOTE: UB = regular Upward Bound; and UBMS = Upward Bound Math-Science. The results presented for each of the participant characteristics exclude participants who had an unknown response for the given characteristic. Details may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, Federal TRIO Programs Funded Projects Database, 2013–14 and UB/UBMS Longitudinal File: 2000–14; and National Student Clearinghouse data: Fall 2007 through fall 2014.

**Table B-5. Number of Upward Bound and Upward Bound Math-Science participants in the 2013–14 high school graduation cohort and number and percentage who immediately enrolled at any postsecondary institution and at their grantee institution, by the sector of UB/UBMS grantee institution**

Sector of UB/UBMS grantee institution	Total 2013–14 high school graduation cohort participants <sup>1</sup>	Total with immediate postsecondary enrollment at institutions <sup>2</sup>				
		Any		Grantee		
		Number	Percent	Number	Percent of cohort	Percent of enrollees
Total	17,636	15,093	85.6	4,236	24.0	28.1
Sector of UB/UBMS grantee institution						
Four-year public grantee	8,609	7,325	85.1	2,069	24.0	28.2
Four-year private grantee	3,566	3,086	86.5	280	7.9	9.1
Two-year public grantee	5,410	4,640	85.8	1,872	34.6	40.3
Two-year private	51	42	82.4	15	29.4	35.7

<sup>1</sup> Participants who graduated with a regular high school diploma were assigned to a high school graduation cohort year based on the date of high school graduation, using September through August as the academic year. Count includes cohort participants who received services from projects that were hosted by institutions of higher education (i.e., grantee institution). Results exclude 2013–14 high school graduation cohort participants who received services from secondary schools, nonprofit agencies, or institutions other than two- or four-year institutions of higher education.

<sup>2</sup> For the 2013–14 high school graduation cohort, the data include those who enrolled in program of postsecondary education by Nov. 30, 2014.

NOTE: UB = regular Upward Bound; and UBMS = Upward Bound Math-Science. Because of the small number of cohort participants who received services from two-year private grantee institutions (51 participants), the results for this group of participants should be interpreted with caution.

SOURCE: U.S. Department of Education, Federal TRIO Programs Funded Projects Database, 2013–14 and UB/UBMS Longitudinal File: 2000–14; and National Student Loan Data System data: Fall 2013 through fall 2014.

**Table B-6. Number of Upward Bound and Upward Bound Math-Science participants in the 2008 postsecondary graduation cohort, and number and percentage who completed bachelor’s and associate degrees at their grantee institution, by time to degree and sector of UB/UBMS grantee institution**

Sector of UB/UBMS grantee institution	Total 2008 postsecondary education cohort participants <sup>1</sup>	Total degree completers at grantee institution <sup>2</sup>		Degree type and timing of degree completion at grantee institution <sup>3</sup>							
				Bachelor’s degree				Associate degree			
				Earned within four years		Earned within six years		Earned within two years		Earned within three years	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Total	12,140	958	7.9	277	2.3	750	6.2	123	1.0	226	1.9
Sector of grantee institution											
Four-year public	6,218	667	10.7	232	3.7	657	10.6	12	0.2	25	0.4
Four-year private	2,530	74	2.9	43	1.7	74	2.9	‡	‡	‡	‡
Two-year public	3,353	214	6.4	‡	‡	19	0.6	108	3.2	198	5.9
Two-year private	39	3	7.7	‡	‡	‡	‡	3	7.7	3	7.7

‡ Not reported to protect subgroups with fewer than three participants.

<sup>1</sup> Includes those who completed high school during the 2007–08 academic year and enrolled in a program of postsecondary education by the fall term immediately following high school graduation (by Nov. 30, 2008), and who received services from projects that were hosted by institutions of higher education (i.e., grantee institutions). Results exclude 2008 postsecondary education enrollment cohort participants who received services from secondary schools, nonprofit agencies, or institutions other than two- or four-year institutions of higher education.

<sup>2</sup> Includes (1) bachelor’s degrees that were completed at the grantee institution within six years of the postsecondary enrollment cohort year (i.e. completed by Aug. 31, 2014) and (2) associate degrees that were completed at the grantee institution within three years of the postsecondary enrollment cohort year (i.e. completed by Aug. 31, 2011).

<sup>3</sup> Among those in the 2008 postsecondary education enrollment cohort. Timing of degree completion is calculated relative to the postsecondary education enrollment cohort year. For the 2008 postsecondary education enrollment cohort, “within two years” means by Aug. 31, 2010; “within three years” means by Aug. 31, 2011; “within four years” means by Aug. 31, 2012; and “within six years” means by Aug. 31, 2014. Participants who earned both a bachelor’s degree and an associate degree are included in the results for both of these degree types; therefore, the sums of the degree type columns do not equal the number reported in the Total 2008 postsecondary education cohort participants column in each row. Because of the small number of cohort participants who received services from two-year private grantee institutions (39 participants), the results for this group of participants should be interpreted with caution.

NOTE: UB = Upward Bound; and UBMS = Upward Bound Math-Science.

SOURCE: U.S. Department of Education, Federal TRIO Programs Funded Projects Database, 2013–14 and UB/UBMS Longitudinal File 2000–14; and National Student Clearinghouse data: Fall 2007 through fall 2014.

## Appendix C. National Rates of Immediate Postsecondary Enrollment and Postsecondary Degree Completion

### National rates of immediate postsecondary enrollment

As described in the Program Outcomes section of this report, the immediate postsecondary enrollment rate among all UB and UBMS participants in the 2013–14 high school graduation cohort was 86 percent, and the corresponding rates by UB and UBMS eligibility criteria were as follows:

- 85 percent among those who were both low-income and first-generation;
- 88 percent among those who were low-income only; and
- 87 percent among those who were first-generation only.

To provide context for the immediate postsecondary enrollment rates reported for UB and UBMS participants, this report presents national rates of immediate postsecondary enrollment drawn from the 2013 Current Population Survey (CPS).<sup>33</sup> The CPS-based immediate enrollment rates presented below include individuals who were 16 to 24 years of age who graduated from high school or completed the General Educational Development (GED) test in 2013. Readers are cautioned to not directly compare the CPS rates to those reported for UB and UBMS participants in this report for several reasons. Compared to participants in the UB and UBMS 2013–14 high school graduation cohort, the individuals included in the CPS immediate postsecondary enrollment rates were in an earlier cohort, and in some cases were older and did not graduate with a regular high school diploma. Additionally, individuals included in the CPS rate may not share the same risk characteristics (such as being both low-income and potentially first-generation college students) as UB and UBMS participants, and they may have different motivations and expectations. In terms of family income, readers should note an additional comparability issue when interpreting CPS-based immediate enrollment rates relative to those reported for UB and UBMS participants. Specifically, “low income” as defined in the CPS-based immediate enrollment rates refers to the bottom 20 percent of all family incomes, while the “low income” status for UB and UBMS participants is based on federal poverty levels, which are determined by a family’s taxable income relative to the number of members included in the family.

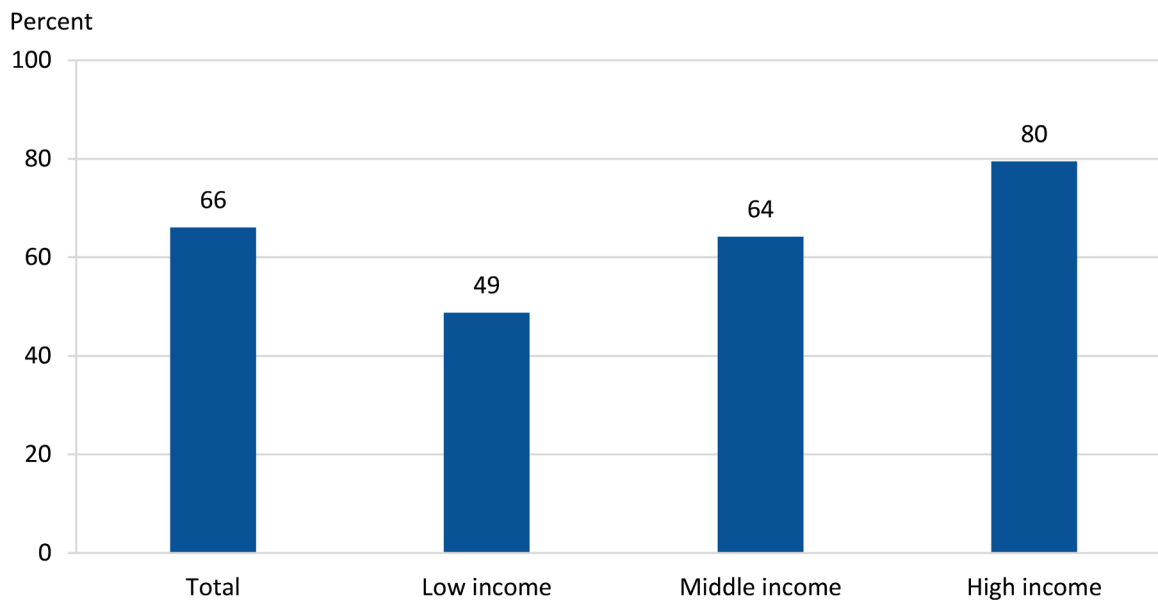
Figure C-1 presents the CPS immediate postsecondary enrollment rates for individuals who graduated from high school or completed the GED test in 2013.<sup>34</sup> Results are presented overall and by level of family income.

---

<sup>33</sup> The CPS is a monthly household survey—conducted by the Bureau of the Census for the Bureau of Labor Statistics—that collects data from a random sample of 60,000 households via personal and telephone interviews. The CPS postsecondary enrollments reported are from the *Digest of Education Statistics 2014*, Table 302.30, retrieved March 10, 2016 from [http://nces.ed.gov/programs/digest/d14/tables/dt14\\_302.30.asp](http://nces.ed.gov/programs/digest/d14/tables/dt14_302.30.asp).

<sup>34</sup> The calculation included individuals 16 to 24 years of age who graduated from high school or completed the GED test in 2013 (January through October); those who enrolled in a program of postsecondary education at a two- or four-year college in the fall immediately after completing high school were considered to have immediately enrolled in a program of postsecondary education. The 2013 CPS immediate postsecondary enrollment rate was a two-year moving average (i.e., an average of the 2012 and 2013 rates). Moving averages produce more stable estimates.

**Figure C-1. Percentage of 2013 high school completers who immediately enrolled in two-year and four-year colleges, by income level: 2013**



Note: Figure includes individuals ages 16 to 24 who graduated from high school or completed the General Educational Development (GED) test in 2013 (January through October). Those who enrolled in a program of postsecondary education at a two- or four-year college in the fall immediately after completing high school were considered to have immediately enrolled in a program of postsecondary education. The immediate postsecondary enrollment rates are based on a two-year moving average (reflects the average of 2012 and 2013). Moving averages produce more stable estimates. “Low income” refers to the bottom 20 percent of all family incomes; “high income” refers to the top 20 percent of all family incomes; and “middle income” refers to the 60 percent in between.

Source: U.S. Department of Commerce, Census Bureau, Current Population Survey (CPS), October Supplement, 1990–2013. See *Digest of Education Statistics 2014*, table 302.30.

- Of the 3 million high school completers in 2013,<sup>35</sup> 66 percent enrolled in a two- or four-year college the following fall.
- In 2013, the immediate college enrollment rate for high school completers from high-income families (80 percent) was 31 percentage points higher than the rate for those from low-income families (49 percent).<sup>36</sup>

## National rates of postsecondary degree completion

The Program Outcomes section of this report provided postsecondary degree completion rates for UB and UBMS participants. Among all UB and UBMS participants in the 2008 postsecondary enrollment cohort

<sup>35</sup> Includes GED recipients.

<sup>36</sup> “Low income” refers to the bottom 20 percent of all family incomes, “high income” refers to the top 20 percent of all family incomes, and “middle income” refers to the 60 percent in between.



- 40 percent completed either a bachelor’s degree within six years or an associate degree within three years of postsecondary enrollment;
- 35 percent completed a bachelor’s degree within six years; and
- 4 percent did not complete a bachelor’s degree within six years but did complete an associate degree within three years.

To provide context for the postsecondary degree completion rates reported for UB and UBMS participants, national rates of postsecondary degree completion are presented below. The national rates are based on data from the 2004 Beginning Postsecondary Students Longitudinal Study (BPS:04); the BPS:04 was a longitudinal study that follows a nationally representative cohort of students who enrolled in a program of postsecondary education for the first time during 2003–04. These national rates are not directly comparable to the degree completion rates reported for UB and UBMS participants because they may not share the same demographic and academic background characteristics as UB and UBMS participants in the 2008 postsecondary education enrollment cohort, or the same motivation and expectations as UB and UBMS participants in the 2008 postsecondary education enrollment cohort; therefore, readers are cautioned to not directly compare the BPS rates to those reported for UB and UBMS participants.

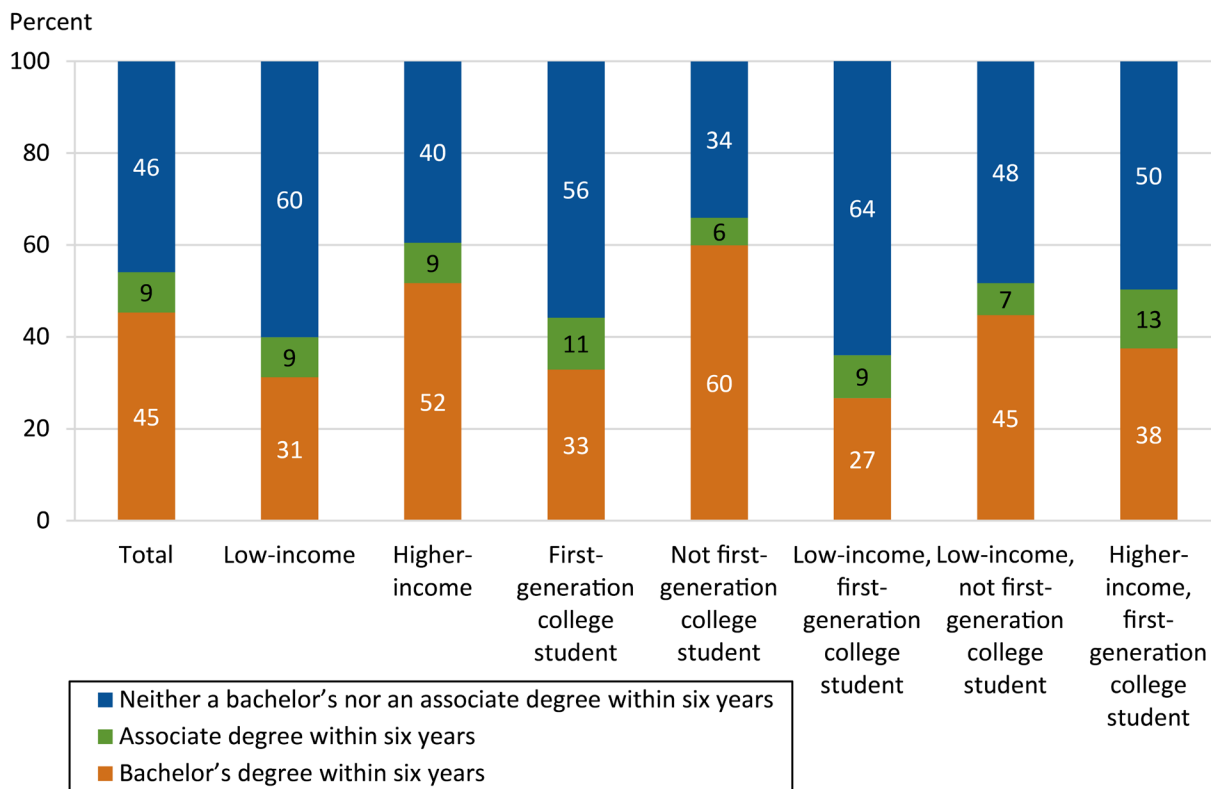
Figure C-2 summarizes the national postsecondary degree completion rates for students who graduated with a regular high school diploma in 2003 and enrolled in a program of postsecondary education for the first time in 2003–04.<sup>37</sup> Students who completed both a bachelor’s degree and an associate degree within six years are shown in the highest degree earned category (i.e., bachelor’s degree).

Figure C-2 also presents national postsecondary degree completion rates by family income level and parental education level. In terms of family income, readers should note an additional comparability issue when interpreting these BPS-based postsecondary degree completion rates relative to those reported for UB and UBMS participants; specifically, “low income,” as defined in the BPS-based postsecondary degree completion rates, refers to 2002 adjusted gross incomes less than \$32,000, while UB and UBMS “low income” status is based on federal poverty levels, which are determined by a family’s taxable income relative to the number of members included in the family.

---

<sup>37</sup> Results include students who graduated with a regular diploma during 2003 and enrolled in a program of postsecondary education for the first time during 2003–04 at *Title IV*-eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. The reported results are based on the U.S. Department of Education, National Center for Education Statistics, 2003–04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09). Results were computed using NCES PowerStats (at <https://nces.ed.gov/datalab>) on March 21, 2016.

**Figure C-2. Percentage of students who graduated high school with a regular high school diploma and enrolled in a postsecondary institution for the first time in 2003–04 and who completed a bachelor’s degree or an associate degree in six years, or did not complete a degree, by family income level and parental education level: 2004–09**



NOTE: Results include students who graduated with a regular diploma during 2003 and enrolled in a program of postsecondary education for the first time during 2003–04 at *Title IV*-eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. Students who completed both an associate degree and a bachelor’s degree within six years of entry into postsecondary education (i.e., by 2009) are shown in the “highest degree earned” category (i.e., bachelor’s degree). “Low income” includes students whose adjusted family income in 2002 was less than \$32,000; “higher income” includes students whose adjusted family income in 2002 was \$32,000 or higher. For dependent students, income values reflect the student’s parents’ adjusted gross income; for independent students, income values reflect the student’s adjusted gross income (plus their spouse’s adjusted gross income, if applicable). “First-generation college student” includes those whose parents’ highest level of education was less than a bachelor’s degree; “not first-generation college students” are those whose parents had earned a bachelor’s degree or higher. Parental education information reflects the highest level of education completed by the student’s mother or father; results exclude students who did not know their parents’ highest level of education. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09). Results computed using NCES PowerStats (at <https://nces.ed.gov/datalab>) on March 21, 2016.

- Among recent high school graduates who were also 2003–04 first-time postsecondary students, 54 percent had completed an associate degree or higher within six years of entering a program of postsecondary education.<sup>38</sup>

<sup>38</sup> The BPS associate degree completion rates are calculated using a six-year period, whereas the associate degree rates reported for UB and UBMS participants are based on two-year and three-year periods.

- The rate of earning a bachelor's or associate degree within six years varied by income level and parental education level.
  - Among recent high school graduates who were also 2003–04 first-time postsecondary students and low income (i.e., adjusted income was less than \$32,000), 40 percent had completed an associate degree or higher within six years of entering a program of postsecondary education. For higher income students (i.e., adjusted income was \$32,000 or more), 60 percent had completed an associate degree or higher within six years.
  - Among recent high school graduates who were also 2003–04 first-time postsecondary students and first-generation college students,<sup>39</sup> 44 percent had completed an associate degree or higher within six years, compared to 66 percent of students who were not first-generation college students.
  - For recent high school graduates who were also 2003–04 first-time postsecondary students from low-income families and were first-generation college students, 36 percent had completed an associate degree or higher within six years.

---

<sup>39</sup> First-generation college students include those whose parents' highest level of education was less than a bachelor's degree; students who were not first-generation college students are those whose parents (mother and/or father) had earned a bachelor's degree or higher.



The Department of Education's mission is to promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access.

[www.ed.gov](http://www.ed.gov)