



**Persistence and Completion in
Postsecondary Education of
Participants in the TRIO Student Support
Services Program**

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

Persistence and Completion in Postsecondary Education of Participants in the TRIO Student Support Services Program

August 2015

Prepared for:

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

Prepared by:

Kristina L. Zeiser
Tsze Chan
American Institutes for Research

Ruth Heuer
Melissa Cominole
RTI International

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Higher Education Programs

Student Service

Linda Byrd-Johnson
Senior Director

August 2015

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Executive Summary

Numerous studies have documented academic achievement gaps between students from disadvantaged populations (e.g., students from low-income families, students demonstrating academic need, first-generation college students, and students with disabilities) and students from non-disadvantaged populations. The Student Support Services (SSS) program — one of the federal TRIO programs — was created to help address and close these gaps. SSS provides funding to two-year and four-year postsecondary institutions (grantees) to assist eligible students in persisting and ultimately completing a postsecondary education program of study.

This report describes academic achievements attained by students who first participated in the SSS program as college freshmen in 2007–08. The methods of analysis are to calculate two academic achievement indicators: (1) persistence in postsecondary education and (2) completion rates for SSS participants who entered two-year and four-year institutions as freshmen. To provide some context for these outcomes, data from the *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)* was used to draw a national sample of freshmen from both two-year and four-year institutions who began college during the 2003–04 academic year — the most recent year for which national data on college completion were available. The *BPS:04/09* students selected for this sample were low-income, first-generation college students, or students with disabilities who also demonstrated some form of academic need, thereby meeting the same criteria that students must meet to be eligible for SSS program services.

Highlights

Persistence in Postsecondary Institutions

- Among SSS students who enrolled as freshmen in two-year institutions in 2007–08, 86 percent either continued to enroll or had received an associate degree or certificate (including transfers) by the fall of the following year (Table 1). Sixty-five percent of the students drawn from the national sample who entered two-year institutions in 2003–04 attained the same success (Table C1).
- Among SSS students who enrolled as freshmen in four-year institutions in 2007–08, 93 percent were still enrolled in the following fall semester (Table 2). Seventy-nine percent of the students drawn from the national sample who entered four-year institutions in 2003–04 persisted to the following fall (Table C2).

Completions

Two-Year Institutions

- Two years after entering postsecondary institutions as freshmen, 29 percent of SSS participants transferred to four-year institutions, received an associate degree, and/or received a certificate. This completion rate increased to 41 percent by the end of the third year of college and to 50 percent by the end of the fourth year of college (Figure 1). The completion rates for the national student sample who entered two-year institutions in 2003–04 were 12 percent, 21 percent, and 28 percent within two, three, and four years of college entry, respectively (Figure C1).

Four-Year Institutions

- Among SSS students who enrolled as freshmen at a four-year institution in 2007–08, 48 percent had received a bachelor’s degree by the end of their sixth year of college (Table 4). Forty percent of students in the national sample who entered a four-year institution in 2003–04 received a bachelor’s degree during this same time span (Figure C3).

Data Limitations

As discussed further in Appendix B, data and methodological limitations preclude direct comparisons between SSS participants and the national student sample. As a result, the data presented in this report cannot be used to measure the impact of the SSS program on student achievements. Data limitations include:

- Data collection timeframes: The national data collection period and the SSS data collection period occurred four years apart, which has the potential to increase or decrease any real differences between SSS participants and those in the national sample.
- Differences in institutional characteristics: A larger percentage of SSS grantees (both two-year and four-year) than institutions in the *BPS:04/09* sample were public institutions. Additionally, SSS is a competitive program, meaning that institutions self-select to apply to the program and only the top-rated applications are funded. This could introduce bias when making comparisons with institutions without SSS grants.
- Difference in student characteristics: Sixty-five percent of SSS participants were both “low-income and first-generation” at both two-year and four-year institutions, while 32 percent of the *BPS:04/09* students in the national sample at two-year institutions and 26 percent of the *BPS:04/09* students in the national sample at four-year institutions were “low-income and first generation.” In addition, 18 percent of SSS participants were first-generation only, while 50 percent of the *BPS:04/09* students in the national sample were first-generation only.

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 Student Support Services (SSS) program of the federal TRIO Programs (TRIO) assists college students from disadvantaged backgrounds who need academic support to complete their education. The goals of the SSS program are to increase rates of college persistence, graduation, and transfer from two-year to four-year institutions for eligible students, and to foster an institutional climate that supports the success of low-income students, first-generation students, and individuals with disabilities.

On behalf of the Department's Office of Postsecondary Education's Student Service, we are pleased to present this report, *Persistence and Completion in Postsecondary Education of Participants in the TRIO Student Support Services Program*. The body of this report provides information on the academic achievements of students who first participated in the SSS program as college freshmen in 2007–08. Findings are contextualized using outcome information taken from a national sample of students who began college in 2003–04. Appendix C includes tables and figures that present data on these SSS participants and students in the national sample.

While the data from the national sample add valuable context, they do not allow for direct comparisons, both because the SSS and national sample data collections occurred four years apart, and because of differences in student and institutional characteristics between SSS participants and the national sample. A more rigorous program evaluation is required to make direct comparisons.

Data limitations notwithstanding, this report provides valuable information on an important federal program and adds to the public's understanding of a large and understudied population. The information in this report should prove useful to a wide array of stakeholders, including Congress, TRIO project staff, education researchers, and interest group members.

In making this report available, we hope that the information it provides on the performance of the SSS program 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

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Introduction

Background and Purpose of the Report

The Student Support Services (SSS) program — one of the federal TRIO programs — was authorized in 1968 by the *Higher Education Act of 1965* (20 U.S.C. 1101a), as amended. The goal of SSS is to increase the postsecondary persistence and graduation rates of low-income students, first-generation students,¹ and students with disabilities.

Program services are offered by postsecondary degree-granting institutions that receive grants awarded through a competitive process. In the 2010–15 grant cycle, there are 1,028 funded grantees. Each grantee serves approximately 200 students, on average, although a few grantees serve as many as 1,000 participants. In order to participate in SSS, a student must qualify on the basis of one of the eligibility statuses (low-income and first-generation, low-income only, first-generation only, low-income students with disabilities, and students with disabilities) and must need academic support. At least two-thirds of participants served by each grantee must be either students with disabilities or first-generation, low-income students, and one-third of all participants with disabilities must also be low-income. The services provided include academic tutoring, guidance in selecting academic courses, and assistance with financial aid applications. Each grantee is required to submit to the SSS program office an annual performance report (APR) that details the academic progress of each student who received program services for as long as the student was enrolled at the grantee institution.

In order to make more information about the SSS program available, this report documents the characteristics and academic achievements (postsecondary persistence and completion) of SSS participants who were freshmen during the 2007–08 academic year. To help put these measures in context, information is provided about a national sample of students who met one or more of the SSS eligibility criteria. This national information is available only for students who began college during the 2003–04 academic year (four years earlier than the SSS students).² Because of this gap in college-going years and other factors (see Appendix B), the SSS and national samples are not directly comparable. As a result, the data cannot be used to draw definitive conclusions about the effectiveness of the SSS program.

¹ In this report, the term “first-generation” refers to students whose parents or legal guardians have not received a bachelor’s degree.

² The 2004/09 *Beginning Postsecondary Students Longitudinal Study* (BPS:04/09).

Methods of Analysis and Data Sources

Two student achievement measures were used to define successful program outcomes for this report: postsecondary persistence and completion. These two measures were defined differently for students enrolled in four-year institutions than for those enrolled in two-year institutions:

- For students who enrolled in four-year institutions as freshmen, persistence in postsecondary education refers to whether they were enrolled in any institution in the fall of the following year. For these students, completion is defined as receiving a bachelor's degree from any institution within six years of entering college as freshmen.
- For students who enrolled in two-year institutions as freshmen, persistence in postsecondary education refers to students who continued enrollment (at any two-year or four-year institution) or received an associate degree or certificate by the fall of the following year. This measure of persistence includes students who transferred to another two-year institution or to a four-year institution by the fall of the following year. For these students, completion is defined as transferring to a four-year institution (with or without receiving an associate degree), receiving an associate degree, or receiving a certificate within four years of entering college as freshmen.

In order to use the most recent data available — and to allow a sufficient amount of time to observe completion outcomes — this report focuses on participants who began college for the first time and were served by SSS during the 2007–08 academic year. For those participants who began their freshman year in four-year institutions, the six-year bachelor's degree completion rate is determined by their status at the end of the 2012–13 academic year. For participants who began their freshman year in two-year institutions, the completion/transfer rate is determined by their status at the end of the 2010–11 academic year. In this report, students entering two-year and four-year SSS grantee institutions as freshmen in 2007–08 are referred to as SSS participants.

To obtain a more complete picture of the academic achievements of SSS participants, APR data on postsecondary enrollment, transfer, and degree completion of SSS participants were supplemented with data from the National Student Clearinghouse (NSC). The NSC holds postsecondary enrollment and completion records for more than 3,600 institutions, accounting for more than 98 percent of all students enrolled in the United States.³ The NSC data were used to observe enrollment, transfer, and degree completion information for the following SSS participants: (1) participants who transferred from the grantee institution to another institution prior to completing their program of study, and (2) participants for whom recent APR data were not available because the grantee was not funded in the 2010–15 grant cycle or did not submit APR data in one or more of the academic years used for this analysis. In addition, for participants who enrolled as freshmen in four-year institutions in 2007–08, NSC data from fall 2013 were used to measure students' achievement during their sixth year of college (i.e., the

³ http://www.studentclearinghouse.org/about/clearinghouse_facts.php

2012–13 academic year) because APR data for the 2012–13 academic year were not available at the time of data analysis.⁴

The national survey chosen to provide context for the SSS outcomes is the *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*. All students in the *BPS:04/09* entered their freshman year in 2003–04, and only those students who would have qualified to receive SSS program services were selected for the national sample. That is, all students in the national sample were identified as low-income students, first-generation students, or students with disabilities, and all had demonstrated academic need. Tables illustrating the outcomes of SSS participants and students from the national sample are presented in Appendix C. Appendix B describes in greater detail the process of selecting a nationally representative data set, and from it, students whose academic achievements were used to provide context for SSS participant data.

It should be noted that although the students in the national sample closely reflected the eligibility characteristics of SSS participants, there were important differences in student and institutional characteristics between SSS participants and the national sample (see the tables in Appendix B, which present the characteristics of these two groups). For example, of all the four-year SSS grantees, 70 percent were public institutions; in contrast, 48 percent of four-year institutions in the national sample were public institutions. In addition, 52 percent of two-year SSS grantees and 37 percent of four-year SSS grantees were located in rural areas (i.e., towns and distant or remote areas), compared with 27 percent of two-year institutions and 21 percent of four-year institutions in the national sample. With regard to background characteristics, 65 percent of SSS participants at both two- and four-year institutions were both “low-income and first-generation,” while in the national sample, 32 percent of students attending two-year institutions and 26 percent of students attending four-year institutions were both low-income and first-generation. On the other hand, 50 percent of students attending two-year and four-year institutions in the national sample were “first-generation only,” compared with 18 percent of SSS participants in two-year and four-year institutions (Table B3 and Table B4.)

⁴ Appendix B describes this supplemental data source and how it is used in this report.

Student Achievements

This section presents the achievements of SSS participants related to persistence and degree completion. Achievement outcomes differ between students who enrolled as freshmen in two-year and four-year institutions, and this section therefore presents their achievements in separate tables and figures. In addition, results are presented first for all students and then by eligibility status. Student achievements presented by institutions' degree of urbanization (rural versus suburban versus urban) are also included in this section. Additional tables, such as those with data on student achievements by control of the institution (public versus private), are presented in Appendix D.

Persistence in Postsecondary Institutions

Among students who enrolled as freshmen in two-year institutions, the persistence rate equals the percentage of these students who, by the fall of the following year (1) were enrolled in any two-year or four-year institution, or (2) had received an associate degree or certificate. Table 1 shows that, overall, 86 percent of SSS participants who entered as freshmen in two-year institutions in 2007–08 persisted to the second year of college. In contrast, the persistence rate was 65 percent for a national sample of low-income, first-generation students, or students with disabilities who had academic need and entered two-year institutions (Table C1).

Table 1. Number of Student Support Services (SSS) participants who entered two-year institutions in 2007–08 and percentage who persisted to the fall of the second year, by eligibility status

Eligibility status	Number of SSS participants who entered two-year institutions in 2007–08	Percent of SSS participants who persisted
Total	21,669	86.0%
Low-income and first-generation	13,990	85.5
Low-income only	1,310	87.0
First-generation only	3,852	87.3
Disabled	1,283	88.5
Disabled and low-income	1,226	83.8

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012).

For students who enrolled as freshmen in four-year institutions, the persistence rate is the percentage of these students who were enrolled in any institution in the fall of the following year. Table 2 shows that 93 percent of SSS 2007–08 participants who entered as freshmen in four-year institutions persisted to the second year of college. Nationally, four years earlier, the persistence rate for students who enrolled as freshmen in four-year institutions and who would have met SSS eligibility criteria was 79 percent (Table C2).

Table 2. Number of Student Support Services (SSS) participants who entered four-year institutions in 2007–08 and percentage who persisted to the fall of the second year, by eligibility status

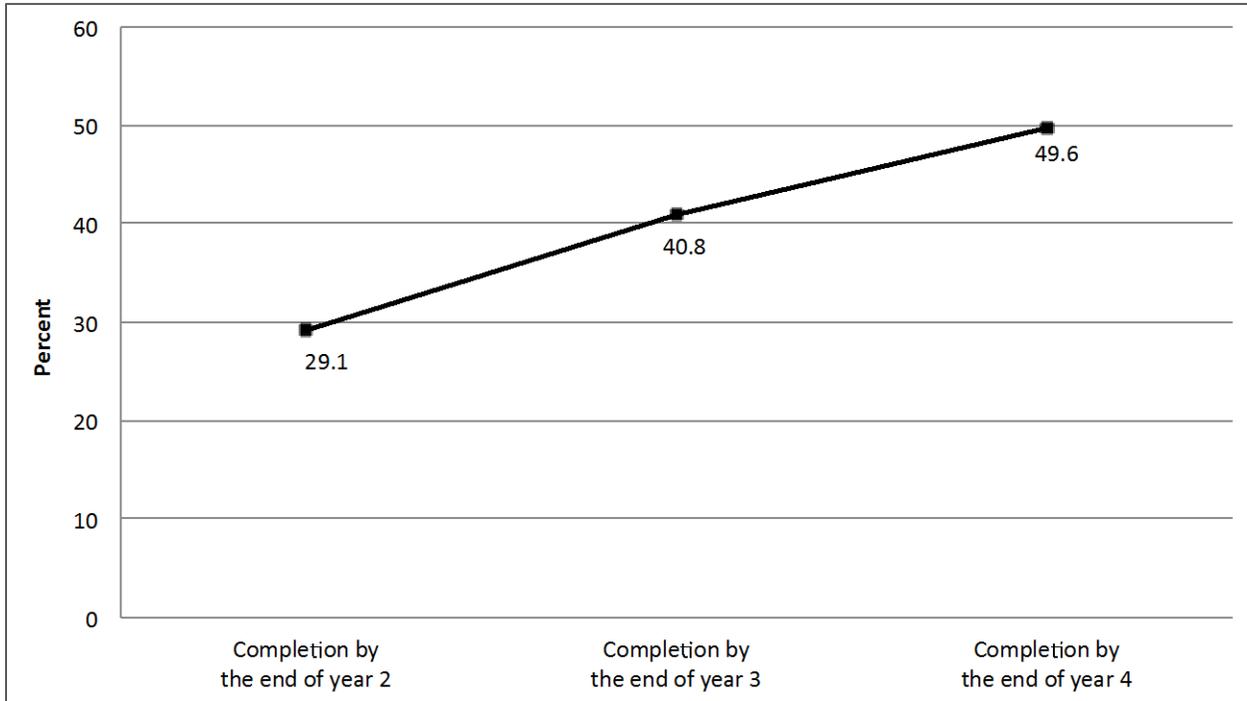
Eligibility status	Number of SSS participants who entered four-year institutions in 2007–08	Percent of SSS participants who persisted
Overall	23,897	92.7%
Low-income and first-generation	15,410	92.4
Low-income only	2,141	94.3
First-generation only	4,308	92.8
Disabled	1,277	92.9
Disabled and low-income	717	91.9

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012).

Completions for Students Who Started in Two-Year Institutions

For students who entered as freshmen in two-year institutions, completion was defined as transferring to a four-year institution (with or without receiving an associate degree or a certificate), or receiving an associate degree or certificate and not transferring, within two, three, and four years of entering college. The completion measure shown in Figure 1 includes all of these outcomes. The combined completion rate for SSS participants increased from 29 percent after two years to 50 percent after four years. To provide some context, the completion rate after four years was 28 percent for students in the earlier national sample (Figure C1).

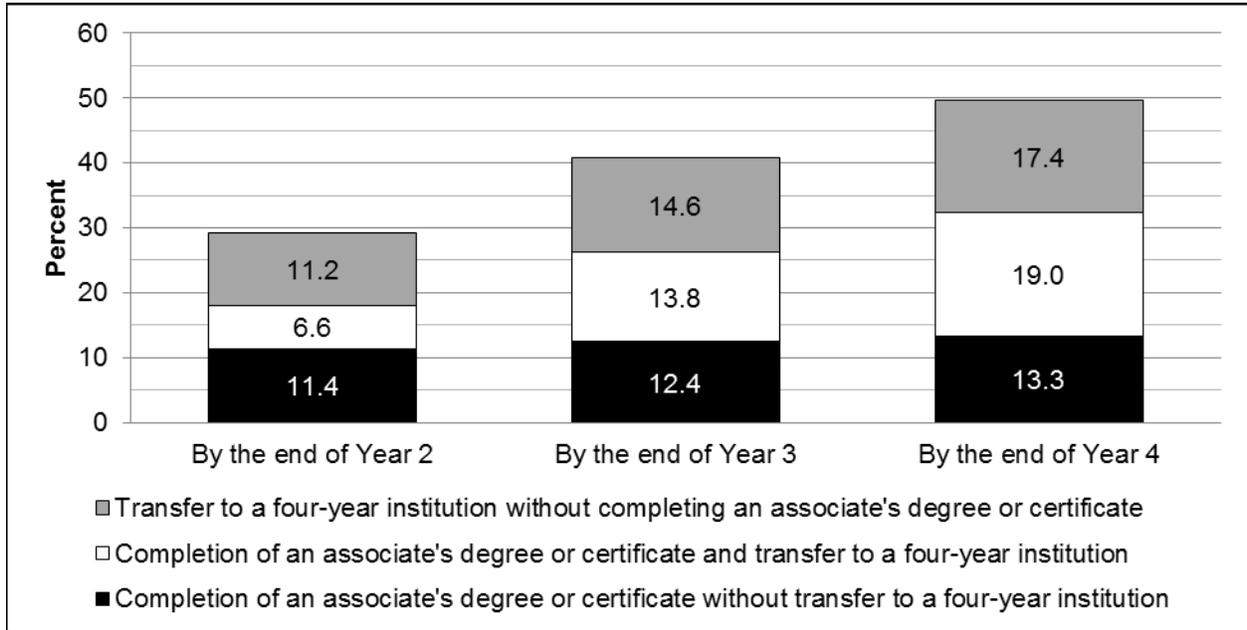
Figure 1. Percentage of Student Support Services (SSS) participants who entered two-year institutions in 2007–08 and completed an associate degree or certificate, or transferred to four-year institutions (with or without receiving an associate degree or certificate) within two, three, and four years



SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012).

Figure 2 separates the combined completion rate into three components, as defined by students’ transfer and degree or certificate completion status. Transferring to a four-year institution, either with or without obtaining an associate degree or certificate, is an important completion outcome because completing a bachelor’s degree is a goal for students who begin their postsecondary education at two-year colleges. Figure 2 shows that increasing percentages of SSS participants transferred to four-year institutions from the end of the second to the end of the fourth years of college. By the end of year four, 36 percent of SSS participants had transferred to four-year institutions (17 percent without completing an associate degree or certificate and 19 percent having completed one or the other). The transfer rate at the end of the fourth year of college was 14 percent for students in the national sample (Figure C2).

Figure 2. Percentage of Student Support Services (SSS) participants who entered two-year institutions in 2007–08 and who completed an associate degree or certificate without transfer to four-year institutions, completed an associate degree or certificate and transferred to four-year institutions, or transferred to four-year institutions without completing an associate degree or certificate within two, three, and four years



SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012).

Table 3 presents the combined completion rate for students who entered as freshmen in two-year institutions at the end of the fourth year of college, by eligibility status. Overall, 50 percent of SSS participants transferred to four-year institutions (with or without receiving an associate degree or a certificate) or received an associate degree or certificate without transferring, with some eligibility groups somewhat higher and others somewhat lower than the overall average. The overall completion rate for the earlier national sample was 28 percent (Table C3).

Table 3. Number of Student Support Services (SSS) participants who entered two-year institutions in 2007–08 and percentage who completed an associate degree or a certificate, or transferred to four-year institutions (with or without receiving an associate degree or certificate) within four years, by eligibility status

Eligibility status	Number of SSS participants who entered two-year institutions in 2007–08	Percent of SSS participants who completed within four years
Overall	21,669	49.6%
Low-income and first-generation	13,990	47.8
Low-income only	1,310	51.2
First-generation only	3,852	55.5
Disabled	1,283	56.1
Disabled and low-income	1,226	43.5

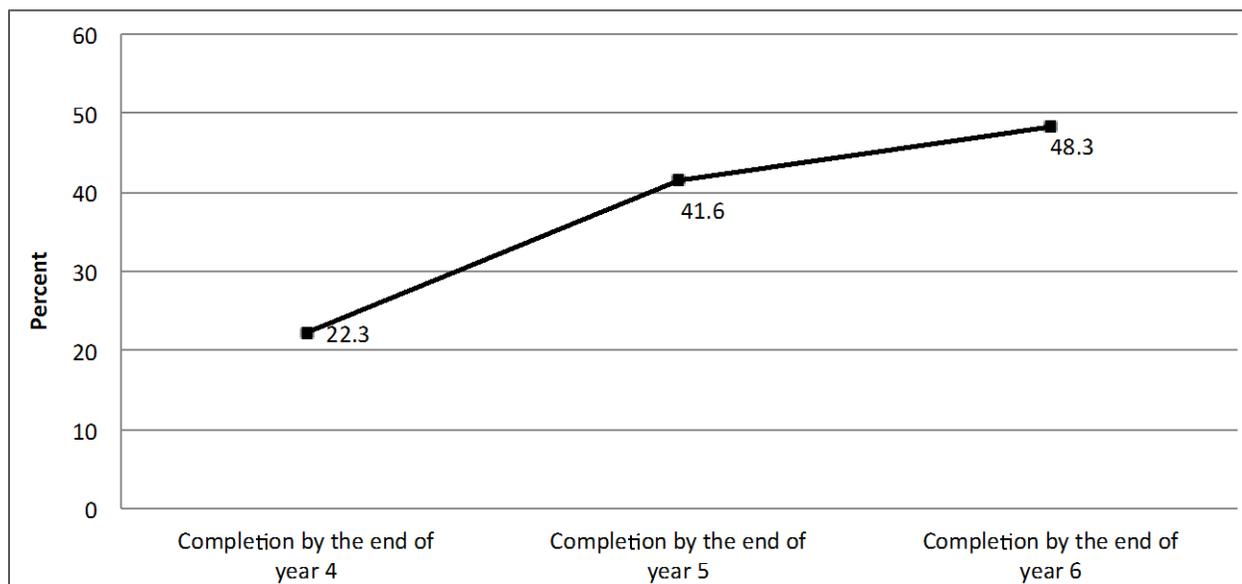
SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012).

Degree Completion for Students Who Started in Four-Year Institutions

For students who enrolled as freshmen in four-year institutions in academic year 2007–08, degree completion was measured as the percentage of incoming freshmen who received a bachelor’s degree within four, five, and six years of entering college. Twenty-two percent of SSS participants completed a bachelor’s degree by the end of their fourth year of college, and 48 percent obtained a bachelor’s degree by the end of their sixth year of college (Figure 3). In contrast, 40 percent of students in the earlier national sample completed a bachelor’s degree within six years of college entry (Figure C3).

It is important to note that completion data for SSS participants who received a bachelor’s degree in the sixth year of college were not available for 31 of the 449 four-year grantee institutions (7 percent) because these institutions did not submit data to the NSC in the 2012–13 academic year, and APR data for the 2012–13 academic year were not available at the time of data analysis. No adjustment was made to the calculations to address this missing information, and the percentage of SSS participants who completed a bachelor’s degree by the end of the sixth year of college may therefore be underreported.

Figure 3. Percentage of Student Support Services (SSS) participants who entered four-year institutions in 2007–08 and who completed a bachelor’s degree within four, five, and six years



NOTES: Completion data for SSS participants who received a bachelor’s degree in the sixth year of college were not available for 31 of the 449 four-year grantee institutions (7 percent) because these institutions did not submit data to the NSC in the 2012–13 academic year. In addition, APR data for the 2012–13 academic year were not available at the time of data analysis. No adjustment was made to the calculations to address this missing information.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012).

Forty-eight percent of SSS participants had received a bachelor’s degree by the end of their sixth year of college. The overall completion rate for the earlier national sample was 40 percent (Table C4).

Table 4. Number of Student Support Services (SSS) participants who entered four-year institutions in 2007–08 and percentage who completed a bachelor’s degree within six years, by eligibility status

Eligibility status	Number of SSS participants who entered four-year institutions in 2007–08	Percent of SSS participants who completed within six years
Overall	23,897	48.3%
Low-income and first-generation	15,410	46.9
Low-income only	2,141	49.5
First-generation only	4,308	51.5
Disabled	1,277	54.9
Disabled and low-income	717	42.0

NOTES: Completion data for SSS participants who received a bachelor’s degree in the sixth year of college were not available for 31 of the 449 four-year grantee institutions (7 percent) because these institutions did not submit data to the NSC in the 2012–13 academic year. In addition, APR data for the 2012–13 academic year were not available at the time of data analysis. No adjustment was made to the calculations to address this missing information.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012).

Student Achievements in Rural, Urban, and Suburban Institutions⁵

For freshmen at two-year institutions, where completion of an associate degree or certificate counted toward persistence, SSS participants had persistence rates exceeding 80 percent across institutions in all types of locations (rural, suburban, and urban) (Table 5). Among students in the national sample from four years earlier, persistence rates ranged from 62 percent in rural institutions to 70 percent in suburban institutions (Table C5).

Table 5. Number of Student Support Services (SSS) participants who entered two-year institutions in 2007–08 and percentage who persisted to the fall of the second year, by institution’s degree of urbanization

Two-year institution’s degree of urbanization	Number of SSS participants who entered two-year institutions in 2007–08	Percent of SSS participants who persisted
Overall	21,669	86.0%
Rural	11,774	83.3
Suburban	2,578	89.3
Urban	6,925	88.8

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012), and institution’s degree of urbanization data were drawn from the U.S. Department of Education’s National Center for Education Statistics’ *Integrated Postsecondary Education Data System (IPEDS)* for the 2007–08 academic year.

For freshmen at four-year institutions, persistence rates for SSS participants exceeded 90 percent across all institutions’ degree of urbanization, with students in suburban institutions achieving a persistence rate of 95 percent (Table 6). In the national sample from four years earlier, persistence rates ranged from 72 percent in rural institutions to 84 percent in suburban institutions (Table C6).

⁵ “Degree of urbanization” refers to the population density surrounding postsecondary institutions, based on data collected by the U.S. Census Bureau. More information about this measure is provided in the *Integrated Postsecondary Education Data System (IPEDS)* codebook (<http://nces.ed.gov/ipeds/glossary/index.asp?searchtype=term&keyword=locale>). In this report, institutions are classified into one of three categories of urbanization, based on *IPEDS* data: rural (institutions located in distant or remote areas, towns of all sizes, and “rural” areas as defined by the U.S. Census Bureau), urban (institutions located in cities of all sizes), and suburban (institutions located in the “urban fringe” or suburbs of all sizes, as defined by the U.S. Census Bureau).

Table 6. Number of Student Support Services (SSS) participants who entered four-year institutions in 2007–08 and percentage who persisted to the fall of the second year, by institution’s degree of urbanization

Four-year institution’s degree of urbanization	Number of SSS participants who entered four-year institutions in 2007–08	Percent of SSS participants who persisted
Overall	23,897	92.7%
Rural	8,829	90.7
Suburban	4,975	94.9
Urban	10,093	93.3

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012), and institution’s degree of urbanization data were drawn from the U.S. Department of Education’s National Center for Education Statistics’ *Integrated Postsecondary Education Data System (IPEDS)* for the 2007–08 academic year.

On average, the completion rate was 50 percent for SSS participants who enrolled as freshmen in two-year institutions. In rural two-year institutions, where the majority of SSS freshmen participants were enrolled, 53 percent of SSS participants completed a degree or certificate or transferred to a four-year institution (with or without completing a degree or certificate) within four years of college entry (Table 7). In the national sample from four years earlier, 39 percent of students in rural institutions completed their degree or certificate or transferred to a four-year institution within four years of college entry (Table C7).

Table 7. Number of Student Support Services (SSS) participants who entered two-year institutions in 2007–08 and percentage who completed an associate degree or a certificate, or transferred to four-year institutions (with or without receiving an associate degree or certificate) within four years, by institution’s degree of urbanization

Two-year institution’s degree of urbanization	Number of SSS participants who entered two-year institutions in 2007–08	Percent of SSS participants who completed within four years
Overall	21,669	49.6%
Rural	11,774	52.7
Suburban	2,578	49.7
Urban	6,925	45.8

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012), and institution’s degree of urbanization data were drawn from the U.S. Department of Education’s National Center for Education Statistics’ *Integrated Postsecondary Education Data System (IPEDS)* for the 2007–08 academic year.

Among students who enrolled as freshmen in four-year institutions, completion rates for SSS participants at the end of their sixth year of college ranged from 43 percent in suburban institutions to 51 percent in urban institutions (Table 8). In the national sample of students from four years earlier, completion rates ranged from 33 percent in rural institutions to 50 percent in suburban institutions, with 39 percent of students in urban institutions completing a bachelor’s degree within six years of college entry (Table C8).

Table 8. Number of Student Support Services (SSS) participants who entered four-year institutions in 2007–08 and percentage who completed a bachelor’s degree within six years, by institution’s degree of urbanization

Four-year institution’s degree of urbanization	Number of SSS participants who entered four-year institutions in 2007–08	Percent of SSS participants who completed within six years
Overall	23,897	48.3%
Rural	8,829	48.9
Suburban	4,975	42.5
Urban	10,093	50.7

NOTES: Completion data for SSS participants who received a bachelor’s degree in their sixth year of college were not available for 31 of the 449 four-year grantee institutions (7 percent) because these institutions did not submit data to the NSC in the 2012–13 academic year. In addition, APR data for the 2012–13 academic year were not available at the time of data analysis. No adjustment was made to the calculations to address this missing information.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012), and institution’s degree of urbanization data were drawn from the U.S. Department of Education’s National Center for Education Statistics’ *Integrated Postsecondary Education Data System (IPEDS)* for the 2007–08 academic year.

Conclusion

This report is a descriptive examination of the achievements of SSS participants, as well as the achievements of similar students from a national sample. This report did not use standard evaluation methodologies, such as experimental and quasi-experimental designs (which are typically used in evaluation studies), and thus the report cannot make conclusive statements about the impact of the SSS program. Further, because completion data for SSS participants who received a bachelor's degree in their sixth year of college were not available for 7 percent of the four-year grantee institutions, the percentage of SSS participants who completed a bachelor's degree by the end of the sixth year of college may be underreported. Nonetheless, the analyses demonstrate that, relative to similar students drawn from an earlier national sample, SSS participants appeared to have higher persistence and completion rates in postsecondary education at both two-year or four-year institutions.

APPENDIX A. GLOSSARY



Appendix A: Glossary

Academic need refers to poor academic performance prior to entering college or during college. Indicators of academic need may be, for example, low grades in high school or college, low scores on college admissions exams, and limited English proficiency.

Annual performance report (APR) is the report that each Student Support Services (SSS) program grantee submits to the U.S. Department of Education on an annual basis. The APR contains student-level data on project participants. These data include information about eligibility status, academic need, enrollment, persistence, and degree completion for students served during the reporting year as well as prior participants. The Department does not require grantees to track the academic progress and degree completion of participants who transfer to another postsecondary institution. Therefore, the APR contains information only about achievements that occur within grantee institutions.

Associate degree refers to a degree granted for the successful completion of a sub-baccalaureate program of study, which usually requires at least two years (or the equivalent) of full-time, college-level study. This includes degrees granted in a cooperative or work-study program.

Bachelor's degree refers to a degree granted for the successful completion of a baccalaureate program of study, which usually requires at least four years (or the equivalent) of full-time, college-level study. This includes degrees granted in a cooperative or work-study program.

Beginning Postsecondary Students Longitudinal Study (BPS:04/09) is the data source from which the national sample referred to in this report was drawn. Sponsored by the National Center for Education Statistics (NCES) of the U.S. Department of Education, the *BPS:04/09* surveyed a sample of first-time students who were beginning their undergraduate education in academic year 2003–04. Students were surveyed at three points in time: at the end of their first year, and then three and six years after first starting in postsecondary education. *BPS:04/09* collects data on a variety of topics, including student demographic characteristics, school and work experiences, persistence, transfer, and degree attainment. Student background characteristics and the postsecondary achievements of the national sample presented in this report are derived from the survey itself and from students' college transcript data, which were part of the collection effort for the *BPS:04/09*.

Cohort refers to a specific group of students established for tracking purposes. In this report, the cohort is defined as first-time freshmen.

Completion (for students who enrolled in four-year institutions) refers to obtaining a bachelor's degree within six years of entering college as a freshman.

Completion (for students who enrolled in two-year institutions) refers to any of the following three outcomes: (1) transferring to a four-year institution (with or without receiving an associate degree or certificate), (2) obtaining an associate degree, or (3) receiving a certificate. The timeframe for completion at two-year institutions is within four years of entering college as a freshman.

Control of institution refers to whether an institution is operated by publicly elected or appointed officials (public control) or by privately elected or appointed officials, with the majority of funds obtained from private sources (private control). In this report, all private institutions are not-for-profit institutions.⁶

Degree of urbanization refers to the population density surrounding postsecondary institutions, based on data collected by the U.S. Census Bureau. More information about this measure is provided in the *Integrated Postsecondary Education Data System (IPEDS)* glossary.⁷ In this report, institutions are classified into one of three categories of urbanization, based on *IPEDS* data:

- **Rural** refers to institutions located in distant, remote or fringe areas, or in towns.
- **Urban** refers to institutions located in small, midsize, and large cities.
- **Suburban** refers to institutions located in the “urban fringe” or suburbs of all sizes.

Degree-granting institution refers to a postsecondary institution that is eligible for *Title IV* federal financial aid programs, and that grants an associate or higher degree. For an institution to be eligible to participate in *Title IV* financial aid programs, it must offer a program of at least 300 clock hours in length, have accreditation recognized by the U.S. Department of Education, have been in business for at least two years, and have signed a participation agreement with the Department.

Disability status is one of the eligibility criteria for receiving SSS program services. Students with disabilities may have been diagnosed with either a physical or mental impairment that would limit their ability to participate in college activities.

Eligibility statuses are the criteria used by the SSS program to determine whether students qualify to receive program services. The five eligibility statuses are

1. low-income and first-generation;
2. low-income only;
3. first-generation only;
4. disabled; and
5. disabled and low-income.

⁶ One SSS grantee was reclassified as a for-profit institution during the period of observation.

⁷ <http://nces.ed.gov/ipeds/glossary/index.asp?searchtype=term&keyword=locale>

Enrollment intensity refers to students' full-time and part-time postsecondary enrollment patterns within the period of observation. Students are classified as enrolled consistently as full-time students (i.e., within each semester during the period of observation), enrolled consistently as part-time students, or enrolled as a mix of full-time and part-time.

First-generation refers to a student whose parents or legal guardians did not receive a bachelor's degree.

Four-year institution refers to an institution that primarily awards bachelor's degrees.

Freshmen students refer to students who are entering college for the first time and have never attended another institution in the past. Among SSS participants, freshmen students are new to the SSS program, receiving program services for the first time during their freshman year.

Hispanic-serving institutions (HSIs) are identified in the *IPEDS* data as institutions in which at least 25 percent of enrolled students are of Hispanic origin, and no less than 50 percent of these Hispanic students are low-income students. For SSS grantees, HSIs are defined in federal law as accredited and degree-granting public or private nonprofit institutions of higher education, with 25 percent or more total undergraduate Hispanic full-time equivalent (FTE) student enrollment.

Historically Black College and University (HBCU) refers to an accredited postsecondary institution that was founded before 1964 with the intention of serving the black community.

Institutional graduation rates in the *Integrated Postsecondary Education Data System (IPEDS)* data for four-year institutions (within six years of college entry) is a measure of graduation rates for four-year institutions in the *IPEDS* data at the time SSS participants and students in the national sample entered as freshmen. Because SSS participants who entered as freshmen in academic year 2007–08 were observed for this report, the *IPEDS* institutional graduation rate for academic year 2007–08 (based on students who entered as freshmen six years earlier) was used in Table B3. Similarly, because students in the national sample entered college as freshmen in academic year 2003–04, the academic year 2003–04 *IPEDS* institutional graduation rate (based on students who entered as freshmen six years earlier) was used in Table B3.

Institutional graduation rates in the *Integrated Postsecondary Education Data System (IPEDS)* data for two-year institutions (within three years of college entry) is a measure of graduation rates for two-year institutions in the *IPEDS* data at the time SSS participants and students in the national sample entered as freshmen. Because SSS participants who entered as freshmen in academic year 2007–08 were observed for this report, the *IPEDS* institutional graduation rate for academic year 2007–08 (based on students who entered as freshmen three years earlier) was used in Table B3. Similarly, because students in the national sample entered college as freshmen in academic year 2003–04, the academic year 2003–04 *IPEDS* institutional graduation rate (based on students who entered as freshmen three years earlier) was used in Table B3.

Integrated Postsecondary Education Data System (IPEDS) is a publically available data source that contains demographic, enrollment, and graduation information about postsecondary institutions. Data are collected on an annual basis by the National Center for Education Statistics from all public, private, and vocational postsecondary institutions that participate in federal financial aid programs.

Low-income refers to taxable family income that does not exceed 150 percent of the national poverty level in the calendar year prior to a student's entering college for the first time. This poverty level is established by the U.S. Census Bureau and varies based on family size.

Minority-serving institution refers to an institution identified as a Historically Black College or University (HBCU), a tribally controlled college or university (TCCU), or a Hispanic-serving institution (HSI).

National Student Clearinghouse (NSC) is a nonprofit organization that collects student-level enrollment and degree completion information from postsecondary institutions in the United States. More than 3,600 institutions submit data to the NSC, accounting for approximately 98 percent of all students in postsecondary education.⁸ NSC data are used in this report to supplement the SSS APR data, particularly for students who transferred to another institution.

p stands for “*p* value,” which is a statistical calculation of the probability that an observed finding could occur by chance in a population. The notation $p < .05$ (which is the standard researchers typically use) means that the finding must have a calculated *p* value of less than 5 percent to conclude that a finding is “statistically significant.” When many comparisons are performed, such as the comparisons presented in the appendices of this report, the *p* value is often adjusted to a smaller value to avoid false positives. In this report, $p < .001$ was used. For more information, see Appendix B, Testing for Significant Differences.

Persistence (for students who enrolled in four-year institutions) is defined as continued enrollment in postsecondary education into the fall term of a student's second year of college.

Persistence (for students who enrolled in two-year institutions) is defined as continued enrollment in postsecondary education into the fall term of a student's second year of college, or completion of an academic program during the first year of college. For students who entered college as freshmen in two-year institutions, persistence includes students who (1) enrolled in any two-year or four-year institution in the fall of their second year of college (including transfer students); (2) obtained an associate degree by the fall of their second year of college; or (3) obtained a certificate by the fall of their second year of college.

⁸ http://www.studentclearinghouse.org/about/clearinghouse_facts.php

Private not-for-profit institution refers to an educational institution in which the individual(s) or agency in control receives no compensation, other than wages, rent, or other expenses for the assumption of risk. These institutions include both independent not-for-profit schools and those affiliated with a religious organization.

Public institution refers to an educational institution in which the programs and activities are operated by publicly elected or appointed school officials, and which is supported largely by public funds.

Race/ethnicity are used to describe groups to which individuals belong, identify with, or belong in the eyes of the community. The groups are as follows:

- American Indian or Alaska Native — a person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliations or community recognition.
- Asian — a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent. This area includes, for example, China, India, Japan, Korea, and the Philippine Islands.
- Black or African American — a person having origins in any of the black racial groups of Africa.
- Hispanic or Latino — a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.
- White — a person having origins in any of the original peoples of Europe, North Africa, or the Middle East.
- Other — persons identifying as Native Hawaiian or Other Pacific Islander (having origins in any of the original peoples of Hawaii or other Pacific islands, such as Samoa and Guam) and persons with more than one reported race (i.e., of a multiracial background).

Statistical significance is a mathematical tool that is used to determine whether the outcome of a statistical test is the result of a relationship between specific factors or merely the result of chance. Tests of statistical significance are used to indicate that the observed differences are not likely to be associated with sampling and measurement error, but are statistically dependable population differences. For more information, see Appendix B, Testing for Significant Differences.

Tribally controlled college or university (TCCU) refers to a postsecondary institution that is controlled and operated by American Indian tribes.

Two-year institution refers to an institution that awards primarily associate degrees.

APPENDIX B. DATA SOURCES AND METHODOLOGY

Appendix B: Data Sources and Methodology

This appendix provides additional information about (1) the data sources used in this report; (2) the methodology used to create a national sample of students from the *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*; (3) testing for statistically significant differences in student achievements between Student Support Services (SSS) program participants and students in the national sample; (4) the institutional and student characteristics of SSS grantees and the postsecondary institutions and students in the national sample; and (5) the limitations of the data and analyses.

Data Sources

Annual Performance Reports

SSS grantees are required to report annually student-level background and academic information about the participants served. These data include information about individual students' race/ethnicity, eligibility status, academic need, and postsecondary academic achievements such as academic standing, continued enrollment, and graduation. Annual performance reports (APRs) provide academic information about participants for as long as they are enrolled at the grantee institutions⁹ but do not track the achievements of participants who transfer to another postsecondary institution. Further, grantees that are unsuccessful in securing new SSS grants are not required to report on the academic progress of participants served after their grant has terminated. Each year, student information in the APRs is compiled into a longitudinal data file so that students' progress can be tracked over time.

Supplementary Postsecondary Outcome Data for SSS Participants from the National Student Clearinghouse

To obtain a more complete picture of the academic achievements of SSS participants, this report uses data from the National Student Clearinghouse (NSC). The NSC is a nonprofit organization that collects student-level enrollment and degree-completion information from postsecondary institutions in the United States. More than 3,600 institutions submit data to the NSC, accounting for approximately 98 percent of all students in postsecondary education.¹⁰ Supplemental enrollment and degree-completion data for SSS participants were requested from the NSC so that outcomes could be measured for participants who may have transferred to another postsecondary institution, and for participants enrolled at institutions that did not obtain SSS grants during the most recent grant cycle (2010–15).

⁹ Four-year SSS grantee institutions are required to follow participants for six years, and two-year SSS grantee institutions are required to follow participants for four years.

¹⁰ http://www.studentclearinghouse.org/about/clearinghouse_facts.php

In fall 2013, the research team requested data from the NSC for SSS participants who entered college as freshmen in academic year 2007–08. NSC data were used in the report to supplement data on academic achievements for the following groups of participants:

- Students who transferred from the grantee institution to another institution.
- Students attending institutions that did not receive funding through the fiscal year (FY) 2010 SSS grant competition. For those students who entered as freshmen in two-year institutions that did not get funding in the FY 2010 grant competition, APR data were not available to measure completions during the fourth year of college. For those students who enrolled as freshmen in four-year institutions that did not get funding, APR data were not available to measure completions during the fourth, fifth, or sixth year of college.
- A small number of students whose grantee institutions did not submit APR data in one or more academic years.

With the supplementary data, the report presents participants' achievements that occurred in any institution, not just the grantee institutions. In addition, for participants who enrolled as freshmen in four-year institutions in 2007–08, NSC data from fall 2013 allowed for the measurement of student achievements during their sixth year of college (i.e., the 2012–13 academic year).

Missing Data from the NSC and APR

It should be noted that not all of the SSS grantee institutions participate in the NSC data collection, and not all grantees were successful in the FY 2010 grant competition. In addition, at the time of the analysis, the most recent APR data available were for the 2011–12 academic year. As a result, there are several reasons why outcome measures at different points in time may not include all participants, i.e., there may be missing data for participants attending specific institutions. For example, if a four-year institution was not successful in the FY 2010 grant competition and did not participate in the NSC data collection, bachelor's degree completions during years four, five, and six (i.e., the years aligned with APR years 2010–11, 2011–12, and 2012–13) could not be observed for students attending this institution. Neither APR nor NSC data would have been available for these students. Overall, 5 percent of grantee institutions did not report student achievements through APR data or NSC data in at least one academic year during the period of observation. Tables B1 and B2 provide counts of two-year and four-year institutions in which students have missing achievement data for at least one academic year, along with the associated explanations.

Table B1. Number of Student Support Services (SSS) grantees, number and percentage of two-year SSS grantee institutions missing graduation data, and explanations for the missing data

Explanation for two-year institutions' missing data	Total number of two-year SSS grantee institutions	Number of two-year SSS grantee institutions missing graduation data	Percent of two-year SSS grantee institutions missing graduation data
No outcome data for year 4: Not funded in FY 2010 SSS grant competition and not in the NSC in academic year 2010–11	475	15	3.2%

Table B2. Number of Student Support Services (SSS) grantees, number and percentage of four-year SSS grantee institutions missing graduation data, and explanations for the missing data

Explanation for four-year institutions' missing data	Total number of four-year SSS grantee institutions	Number of four-year SSS grantee institutions missing graduation data	Percent of four-year SSS grantee institutions missing graduation data
Total number of four-year SSS grantee institutions	449	31	6.9%
No outcome data for year 4, year 5, or year 6: Not funded in FY 2010 SSS grant competition and not in the NSC as of academic year 2010–11	449	4	0.9
No outcome data for year 6: Funded in FY 2010 SSS grant competition but not in the NSC in academic year 2012–13	449	27	6.0

Measurement of Institutional Characteristics

Institutional data were drawn from two primary sources. Some institutional data, such as control of institution (private versus public) and minority-serving status, came from SSS program data. Additional institutional characteristics, such as the average number of degree-seeking freshmen students and estimated persistence and graduation rates, were obtained from the U.S. Department of Education's National Center for Education Statistics' (NCES') *Integrated Postsecondary Education Data System (IPEDS)*. *IPEDS* collects data annually from all public, private, and vocational postsecondary institutions that participate in federal student aid programs.¹¹ When information from the SSS program's data differed from the *IPEDS* data, priority was given to the

¹¹ <http://nces.ed.gov/ipeds/about/>

information drawn from the SSS program. The report also uses *IPEDS* data to measure institutional characteristics in the national sample.

In *IPEDS*, institutions that primarily award associate degrees but also offer bachelor's degrees in select programs are classified as four-year institutions. This differs from how SSS grantee institutions are classified by the program office.¹² To keep the definition of institution type consistent across the SSS participant data and the national sample data, the research team used Carnegie Classification information in the *IPEDS* data to identify two-year institutions in the national sample data as those that primarily award associate degrees. For SSS grantees, institution type was measured as reported by the SSS program office.

National Sample Data

Selection of an Appropriate National Data Set

The report presents academic achievements for SSS participants who entered SSS grantee institutions as freshmen and received program services for the first time during the 2007–08 academic year. In the APR data, grantees specify participants' eligibility status and academic need (which qualify students to receive program services), and their academic achievements are followed for up to six years.

To create a sample of students whose achievements could provide some context for the observed achievements of SSS participants, the research team required the selected national survey to have the following data and characteristics:

- The national survey must collect data for students enrolled in their first year of postsecondary education.
- The data must contain student background information used to identify students' eligibility status (i.e., students from low-income families, students whose parents did not obtain a college degree, and students with disabilities).
- The data must also contain information about academic achievements in high school and college to determine which students exhibited academic need — a key requirement for SSS program participants.
- The national survey must follow students for a period of at least six years, regardless of whether students transfer to another institution.

Data sets that contain information on postsecondary students at the end of their academic careers (such as NCES' *Baccalaureate and Beyond Longitudinal Study*) do not provide an appropriate national sample because students must have persisted in college to participate in the survey. National surveys of high school students (such as NCES' *Education Longitudinal Study*) also would not provide an appropriate national sample because many at-risk high school students do not enter college immediately after high school, and the limited timeframe for follow-up would

¹² *IPEDS* classifies the institution based on the sector of the highest degree offered while SSS classifies the institution by the type of degree it primarily awards.

not allow the measurement of achievement outcomes for all students entering postsecondary education at different stages in their lives.

After reviewing various data sets available through the NCES and other nongovernment agencies, the research team determined that the *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)* would provide the most appropriate national sample for context. *BPS:04/09* is the most recent nationally representative data set of students entering postsecondary education for the first time, with students beginning their freshman year in 2003–04.¹³ The *BPS:04/09* contains sufficient student background information to identify students' eligibility status and academic need, allowing the team to identify a subsample of students who met the eligibility and academic need requirements for participating in the SSS program.

The *BPS:04/09* data used in this analysis come entirely from transcripts collected through NCES' *2009 Postsecondary Education Transcript Study (PETS:09)*. Student survey data were not used to measure achievement outcomes in the national sample. For SSS students, outcome data were drawn primarily from the annual performance reports (APRs) submitted by grantees. The APR data compiled and reported by grantees are based on transcripts from the host institutions. National Student Clearinghouse (NSC) data were used to supplement SSS student outcome data (e.g., degree completion) wherever APR information was unavailable. Postsecondary institutions submit enrollment and graduation data to the NSC from their administrative records. These data are the same enrollment and graduation data that are submitted to the National Student Loan Data System within the Department of Education. The internal validity of the analysis for this report is bolstered by the fact that reporting for both groups stems from the same sources: transcripts and institutional administrative records.

Similar to the postsecondary data collected for SSS participants through the NSC, some students in the national sample had incomplete outcome data due to missing transcript data. While 92 percent of the base-year *BPS:04/09* sample had transcript data from at least one postsecondary institution, 89 percent had transcript data from the institutions they entered as college freshmen. Overall, the *BPS:04/09* had complete transcript data for 87 percent of the base-year sample,¹⁴ and 87 percent of the national sample used in the report had transcript data from every institution students attended.

Selection of the National Sample

The original *BPS:04/09* sample contained 18,640 students¹⁵ who entered postsecondary education for the first time in the 2003–04 academic year. The sample represented students attending both two-year and four-year institutions across a range of ages, with different academic

¹³ Data are currently being collected for a more recent cohort of *BPS* respondents. These students entered their freshman year in 2011, which means that completion rates for students at four-year institutions cannot be calculated prior to the spring of 2017 (the sixth year after initial entry into a four-year institution, which is the amount of time required to measure completion of a bachelor's degree).

¹⁴ <http://nces.ed.gov/pubs2012/2012246.pdf>

¹⁵ The Institute of Education Sciences requires that reports using restricted data round unweighted sample sizes to the nearest 10. Therefore, all unweighted *BPS:04/09* sample sizes reported in this report have been rounded to the nearest 10.

aptitudes, and from different socioeconomic backgrounds. As a result, it would be inappropriate to compare the outcomes of SSS participants to the outcomes of *all* respondents in the *BPS:04/09* sample.

To create an appropriate subsample, the research team applied the following data filters in sequence¹⁶ to the *BPS:04/09* data:

- The respondents must have been classified into at least one of the following conditions: first-generation college students, students from low-income families, or students with disabilities. (This removed 5,810 respondents.)
- The respondents must have demonstrated at least one academic need. This included the following:
 - Students with low high school grades (a grade point average below 2.0, according to students' self-reports)
 - Students who had been out of the academic pipeline for five or more years (i.e., at least five years had passed between leaving high school and entering college)
 - GED recipients or students who did not receive a diploma
 - Students with low college grades (transcript data show a grade point average of less than 2.0 at the end of a student's first year of college)
 - College students taking English as a second language (ESL) courses
 - Students taking remedial courses in college
 - Students with SAT and/or ACT scores that fell below the 25th percentile within the institution (as reported in the *IPEDS* data)

(Taken together, applying these data filters removed an additional 3,230 respondents.)

- The respondents must have 2009 transcript data so that student outcomes could be observed and accurate survey weights could be applied. (This removed an additional 750 respondents.)

After applying these data filters, 8,860 *BPS:04/09* respondents remained in the national sample. In addition to meeting the SSS eligibility criteria, the research team also wanted to ensure that similar types of institutions were represented in the two data sources. To achieve this, the research team applied the following filters:

¹⁶ An alternative strategy would be to first filter the data on the basis of institutional characteristics, then to filter it on the basis of student characteristics. The research team decided to filter on the basis of student characteristics first in order to maximize the number of eligible students (i.e., students meeting eligibility requirements and demonstrating academic need) within the national data set. While this may lead to some dissimilarity in terms of institutional characteristics between data sources, this report explicitly accounts for these differences by presenting student outcomes within these different institutional settings (i.e., public and private institutions, rural and urban institutions, etc.).

- The respondents must have attended institutions that can be linked to the 2003 *IPEDS* data (i.e., institutions must have a valid unique identifier) in order to measure institutional characteristics. (This filter removed an additional 20 student respondents.)
- The respondents must have attended institutions that were classified in the 2003 *IPEDS* as a “four-year institution” or a “two-year institution” (the only two institutional types funded by the SSS program). (This filter removed 180 “less than two-year” institutions and an additional 1,090 respondents.)
- The respondents must have attended an institution that offers at least an associate degree because there are no grantee institutions in which the highest available degree is lower than an associate degree. (This filter removed 30 institutions in the *BPS:04/09* data set that offered a certificate as the highest credential, as well as an additional 160 respondents.)
- The respondents must have attended public institutions or private not-for-profit institutions because none of the grantee institutions are for-profit institutions.¹⁷ (This filter removed 80 institutions in the *BPS:04/09* data set that are private for-profit institutions, as well as an additional 640 respondents.)

After applying these data filters, the *BPS:04/09* national sample contained 6,950 respondents from 880 institutions (37 percent of the base-year sample). This national sample consisted of students who met the eligibility requirements of the SSS program, exhibited academic need(s), had persistence and completion achievement measures within the transcript data, and did not attend institution types that do not exist among the SSS grantee institutions.

The transcript weight (WTC000) was applied to the 6,950 students on all descriptive statistics and analyses of student achievements because student outcomes in the *BPS:04/09* are measured in the transcript data. After this transcript weight was applied, the weighted *BPS:04/09* national sample represented 1,674,346 students within 880 institutions. A total of 556,116 of these students attended 550 four-year institutions, and 1,118,230 of these students attended 330 two-year institutions. The national sample data presented in the report are all derived from the filtered, weighted sample of respondents drawn from the *BPS:04/09* data set.

Testing for Significant Differences

Survey data include outcomes for only a sample of all students in the population, and as a result, the achievement rates for the national sample are only estimates of the true achievement rates that would be observed had all students in the population been measured. To estimate persistence and completion rates within the national sample of students, as well as the sampling error associated with these outcome measures, replicate weights were applied to the data. To determine whether the estimates of persistence and completion rates within the national sample were statistically different enough from the rates among SSS participants to be considered true population differences (and not just differences due to sampling error), *t* tests were conducted.

¹⁷ One grantee institution changed classification from a private not-for-profit institution to a private for-profit institution during the period of observation. In the report, this grantee is classified as a private not-for-profit institution.

A conservative p value was used to determine whether differences in achievements between SSS participants and students in the national sample were statistically significant because multiple comparisons were tested throughout the body and appendices of this report — on persistence and completion rates, overall, and by eligibility status and other subgroups of students — which increases the risk having false positives. In this report, differences with a p value of .001 are identified as statistically significant, although differences that are statistically significant with a p value of .05 (i.e., the conventional p value used in research) but are not statistically significant with a p value of .001 are also noted.¹⁸ Due to the impact of small samples on the results of significance tests, t tests were not performed for any student or institutional characteristic that included fewer than 5 percent of SSS participants or students in the national sample.

Institutional and Student Characteristics of SSS Grantees, SSS Participants, and Postsecondary Institutions and Students in the National Sample

Table B3, which focuses on the characteristics of SSS grantee institutions and postsecondary institutions in the earlier national sample, shows that a larger percentage of SSS grantees (both two-year and four-year) were public institutions; 70 percent of the four-year SSS grantees and 97 percent of the two-year SSS grantees were public institutions. In contrast, 48 percent of four-year institutions and 87 percent of two-year institutions in the national sample were public institutions. In addition, a larger percentage of SSS grantees were located in rural areas (i.e., towns and distant or remote areas) when compared with the institutions in the national sample.

Table B4, which focuses on the background characteristics of SSS participants and students in the national sample, shows that a larger percentage of SSS participants were both “low-income and first-generation.” The national sample had a higher percentage of students who were “first-generation only.” In addition, a larger percentage of SSS participants were female and enrolled as full-time students throughout their academic careers when compared with the national sample. Additional differences in race/ethnicity, student age, and the degree of urbanization of the institution students attended were observed between SSS participants and students in the national sample.

In light of these differences in student and institutional characteristics, student achievements are reported (1) by students’ eligibility status and institutions’ degree of urbanization, and (2) by control of institution in appendices C and D. In particular, completion rates are examined separately for low-income and first-generation participants, and those with disabilities; for rural, suburban and urban settings; for students who attended multiple two- and four-year colleges; for full-time and part-time participants; and for public and private institutions.

¹⁸ Another common technique is to perform a Bonferroni correction. Using this method, researchers divide the desired confidence level (i.e., .05) by the number of comparisons being made. For the report, differences in rates of completion of bachelor’s degree by the end of the sixth year of college were tested 16 times; therefore, using the Bonferroni correction, the adjusted confidence level would be $(.05/16) = .003$. This means that using the .001 confidence level is more conservative than using a Bonferroni correction.

Table B3. Two- and four-year Student Support Services (SSS) grantee institutions and institutions in the national sample,^a by institutional characteristics

	Percent of SSS, two-year institutions	Percent of the national sample, two-year institutions	Percent of SSS, four-year institutions	Percent of the national sample, four-year institutions
Minority-serving institution status				
Historically Black Colleges and Universities (HBCU)	1.3	—	11.8	4.2
Tribally Controlled Colleges and Universities (TCCU)	2.5	—	0.7	—
Hispanic-Serving Institutions (HSI)	10.5	13.2	10.2	6.0
Control of institution				
Public	97.3	87.4	70.2	47.9
Private, not-for-profit	2.7	12.6	29.8	52.1
Highest degree offered				
Associate degree	94.5	96.0	N/A	N/A
Bachelor's degree	4.8	4.0	14.9	14.3
Master's degree/first professional degree	0.4	0.0	40.3	37.7
Ph.D.	0.2	0.0	44.8	48.1
Degree of urbanization				
Rural	52.0	26.5	37.2	20.8
Urban	34.1	43.1	47.9	54.7
Suburban	12.8	27.1	14.9	22.5
Missing	1.1	3.4	0.0	2.0
Enrollment				
Percent of all incoming students who are full-time, degree-seeking students	40.4	41.7	66.3	66.2
Missing enrollment information	0.8	—	0.2	1.6
Institutional graduation rates				
Percent of students completing an associate degree in three years	21.4	26.0	N/A	N/A
Percent of students completing a bachelor's degree in six years	N/A	N/A	46.6	51.2
Missing completion information	4.4	5.2	1.3	3.5
Total number of institutions	475	330	449	550
Average number of full-time, degree-seeking students in incoming cohort year	704	765	1,550	1,344

^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need.

NOTES: The "—" indicates that information has been suppressed because of small sample sizes. This category has been collapsed with the largest category to mask small sample sizes. Significance testing was not performed on institutional characteristics. N/A = Not applicable. Please refer to the glossary in Appendix A for definitions of some of the characteristics listed in this table.

SOURCE: Data for SSS grantees concerning minority-serving institutions and control of institution were drawn from the SSS program office. Other institutional information for SSS grantees were drawn from the U.S. Department of Education's National Center for Education Statistics' *Integrated Postsecondary Education Data System (IPEDS)* for the 2007–08 academic year. The national sample was drawn from the U.S. Department of Education's National Center for Education Statistics' *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*. Characteristics of the institutions in the national sample were drawn from *IPEDS* data from 2003–04.

Table B4. Student Support Services (SSS) participants and students in the national sample^a attending two- and four-year institutions, by eligibility, enrollment, demographic, and institutional characteristics

	Percent of SSS participants, two-year institutions	Percent of the national sample, two-year institutions	Percent of SSS participants, four-year institutions	Percent of the national sample, four-year institutions
Eligibility status^b				
Low-income and first-generation	64.6	32.0	64.5	25.8
Low-income only ^{c,d}	6.0	7.1	9.0	11.5
First-generation only	17.8	49.9	18.0	50.2
Disabled	5.9	9.5	5.3	11.5
Disabled and low-income ^{e,f}	5.7	1.6	3.0	1.1
Enrollment				
All full-time	27.0	9.3	36.0	16.7
All part-time ^g	17.7	35.3	6.1	7.8
Mixed full-time and part-time ^c	53.3	55.4	56.8	74.7
Missing ^{e,f}	0.1	5.5	0.1	0.9
Gender				
Male ^d	35.2	39.6	36.5	41.0
Female ^d	64.8	60.4	63.5	59.0
Race/ethnicity				
White	46.5	55.8	32.7	56.1
Black	27.7	15.9	30.3	16.3
Hispanic ^h	13.6	17.1	25.9	16.1
Asian ^{e,f}	2.6	3.8	5.2	4.8
American Indian/Alaska Native ^{e,f}	4.6	0.8	2.3	0.3
Other ^{e,f}	4.4	4.5	2.5	3.7
Missing ^{e,f}	0.7	2.0	1.1	2.7
Age at college entry				
18 or younger ^c	31.3	30.1	61.0	53.3
19 to 24 ^{g,h}	39.8	36.9	34.0	34.6
25 to 34 ^{c,f}	14.5	15.3	2.8	6.6
35 to 44 ^{f,h}	8.6	10.8	1.3	3.5
45 and over ^{c,f}	5.6	6.8	0.7	2.0
Missing ^{e,f}	0.2	—	0.2	0.2
Control of institution				
Public ^{g,h}	95.7	97.2	67.7	68.0
Private, not-for-profit ^{e,g}	4.3	2.8	32.3	32.0
Degree of urbanization of institution				
Rural	54.3	18.1	36.9	24.6
Urban	32.0	49.0	42.2	51.2
Suburban ^g	11.9	29.7	20.8	20.5
Missing ^{e,f}	1.8	3.3	0.0	3.7
Number of students	21,669	1,118,230	23,897	556,116
Total number of institutions	475	330	449	550

^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The numbers and percentages in the national sample columns are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

^b A very small number of students were missing eligibility data from the SSS APR.

^c The observed difference is not significant at the $p < .05$ level at two-year institutions.

^d The observed difference is significant at the $p < .05$ level, but not significant at the $p < .001$ level, at four-year institutions.

^e There were too few students in the national sample to allow for statistical tests that determine whether observed differences were statistically significant at two-year institutions.

^f There were too few students in the national sample to allow for statistical tests that determine whether observed differences were statistically significant at four-year institutions.

^g The observed difference is not significant at the $p < .05$ level at four-year institutions.

^h The observed difference is significant at the $p < .05$ level, but not significant at the $p < .001$ level, at two-year institutions.

NOTES: The “—” indicates that information has been suppressed because of small sample sizes. This category has been collapsed with the largest category to mask small sample sizes. N/A = Not applicable. Unless otherwise noted, differences were statistically significant at the $p < .001$ level.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012), and the institutional characteristics of grantees were drawn from the SSS program office, as well as the U.S. Department of Education’s National Center for Education Statistics’ *Integrated Postsecondary Education Data System (IPEDS)* for the 2007–08 academic year. The national sample was drawn from the U.S. Department of Education’s National Center for Education Statistics’ *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*. Characteristics of the institutions in the national sample were drawn from *IPEDS* data from 2003–04.

Limitations of Data and Analyses

An important limitation to the data used in the report is that, even after filtering, the SSS participants and the students in the national sample are not entirely comparable. Table B3 and Table B4 presented previously highlight several ways in which the SSS participants and the students within the national sample, and the institutions that they attended, were not similar across the data sources. SSS is a competitive program, meaning that institutions self-select when applying to the program. Further, SSS grantee institutions are required to serve a specific group of students, two-thirds of whom must be first-generation and low-income. Neither the composition of institutional characteristics (private or public, two-year or four-year, urban or rural) nor the distribution of characteristics of students who participate in SSS programs are representative of institutions of higher learning or the students who attend them. Given the differences between SSS participants and students in the national sample, academic achievements were measured within several subgroups of students to ensure that findings were consistent across student and institution types. Differences in achievements by eligibility status, as well as within rural, urban, and suburban institutions, are reported in the body of the report; outcomes by other institution-level and student-level characteristics are provided in Appendix D.

The *BPS:04/09* data do not contain consistent information about services, such as tutoring or academic counseling, which students in the national sample may have received throughout their academic careers, and it is therefore possible that students in the national sample received services similar to SSS program services. As a result, the differences in achievements should not be interpreted as the differences between SSS participants and students who did not receive any services of any kind during their academic careers.

The results of this report should not be interpreted as impacts of the SSS program because the research team did not employ rigorous procedures that statistically account for student-level and institution-level differences when measuring differences in student achievements. To measure program impact, more advanced methods would need to be employed, such as randomly assigning at-risk students to receive SSS program services and following participants and nonparticipants over time. Other statistical procedures (such as propensity score modeling) would also allow us to compare the achievements of program participants and nonparticipants

after rigorously accounting for differences in student-level and institution-level characteristics. However, such a study would require a single data source to contain detailed student-level background information for both participants and nonparticipants, such as their academic achievements prior to entering college.

Misalignment in Data Reporting Years

SSS data from 2007–08 were juxtaposed in the analysis with *BPS:04/09* data because this was the first year for which reliable APR data were available. Just prior to that APR year, the SSS data reporting process underwent several significant enhancements to improve the quality of the data collected. First, the Department developed a Web-based data collection system that requires all SSS grantees to submit their data using a uniform electronic system. Second, the Department implemented a one-time student verification process that requires grantees to affirmatively establish student cohorts. Additionally, since SSS data for this report were supplemented with data from the National Student Clearinghouse (NSC), the marked increase in NSC participation among institutions between 2003 and 2007 (an approximately three-fold increase) is also likely to have improved data quality.

The misalignment in data reporting years between SSS participants (freshmen in 2007–08) and *BPS:04/09* students (freshmen in 2003–04) limits the conclusions readers are able to draw from the analysis. However, given that national graduation and persistence rates varied little over the time period in question, broader societal or “secular” trends in higher education student outcomes are unlikely to account for the majority of the differences observed between SSS participants and the *BPS:04/09* sample.

Data from the *Integrated Postsecondary Education Data System (IPEDS)* measuring national graduation rates show that the national graduation rate at four-year institutions for students beginning their postsecondary education in 2003 was 57 percent. The graduation rate for the 2006 cohort (the most recent cohort available) was 58 percent. Among two-year institutions, the graduation rate for first-time postsecondary students in 2003 was 24 percent. The rate for the 2007 cohort was 23 percent.

Persistence rates at two-year and four-year institutions also remained largely unchanged over time. The national persistence rate at four-year institutions in 2004 was 73 percent.¹⁹ The persistence rate was 72 percent at four-year institutions in 2008. At two-year institutions, the persistence rate was 68 percent in 2004, while the rate in 2008 was 67 percent.²⁰

¹⁹ For persistence rates, the 2004 and 2008 data years align with the *BPS:04/09* cohort and the 2007–08 SSS cohort, respectively.

²⁰ U.S. Department of Education’s National Center for Education Statistics’ *Integrated Postsecondary Education Data System (IPEDS)*, Graduation Rates component (provisional data).

**APPENDIX C. EDUCATIONAL OUTCOMES OF
STUDENT SUPPORT SERVICES (SSS)
PARTICIPANTS AND OF A NATIONAL SAMPLE OF
SIMILAR STUDENTS**

Appendix C: Educational Outcomes of Student Support Services (SSS) Participants and of a National Sample of Similar Students

This appendix provides data on the persistence and completion outcomes of SSS participants alongside data on the persistence and completion outcomes of students in the national sample. Unless otherwise noted, differences in student achievements were statistically significant at the $p < .001$ level.

Exhibits

Table C1. Number of Student Support Services (SSS) participants who entered two-year institutions in 2007–08 and of students in the national sample^a who entered two-year institutions in 2003–04, and percentage of each who persisted to the fall of the second year, by eligibility status

Eligibility status	Number of SSS participants who entered two-year institutions in 2007–08	Percent of SSS participants who persisted	Number of students in the national sample who entered two-year institutions in 2003–04	Percent of students in the national sample who persisted
Total	21,669	86.0%	1,118,230	64.8%
Low-income and first-generation	13,990	85.5	357,713	61.5
Low-income only	1,310	87.0	79,500	68.8
First-generation only	3,852	87.3	557,721	66.7
Disabled	1,283	88.5	105,800	66.6
Disabled and low-income ^b	1,226	83.8	17,496	41.7

^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The numbers and percentages in the national sample columns are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

^b For this group of students, there were too few cases in the national sample to allow for statistical tests to determine whether observed differences were statistically significant. Please see Appendix B for more details about the analysis strategy.

NOTE: Unless otherwise noted, differences were statistically significant at the $p < .001$ level.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012). The national sample was drawn from the U.S. Department of Education's National Center for Education Statistics' *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*.

Table C2. Number of Student Support Services (SSS) participants who entered four-year institutions in 2007–08 and of students in the national sample^a who entered four-year institutions in 2003–04, and percentage of each who persisted to the fall of the second year, by eligibility status

Eligibility status	Number of SSS participants who entered four-year institutions in 2007–08	Percent of SSS participants who persisted	Number of students in the national sample who entered four-year institutions in 2003–04	Percent of students in the national sample who persisted
Overall	23,897	92.7%	556,116	78.7%
Low-income and first-generation	15,410	92.4	143,320	71.7
Low-income only	2,141	94.3	63,749	74.3
First-generation only	4,308	92.8	278,913	82.0
Disabled ^b	1,277	92.9	63,751	84.0
Disabled and low-income ^c	717	91.9	6,383	87.3

^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The numbers and percentages in the national sample columns are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

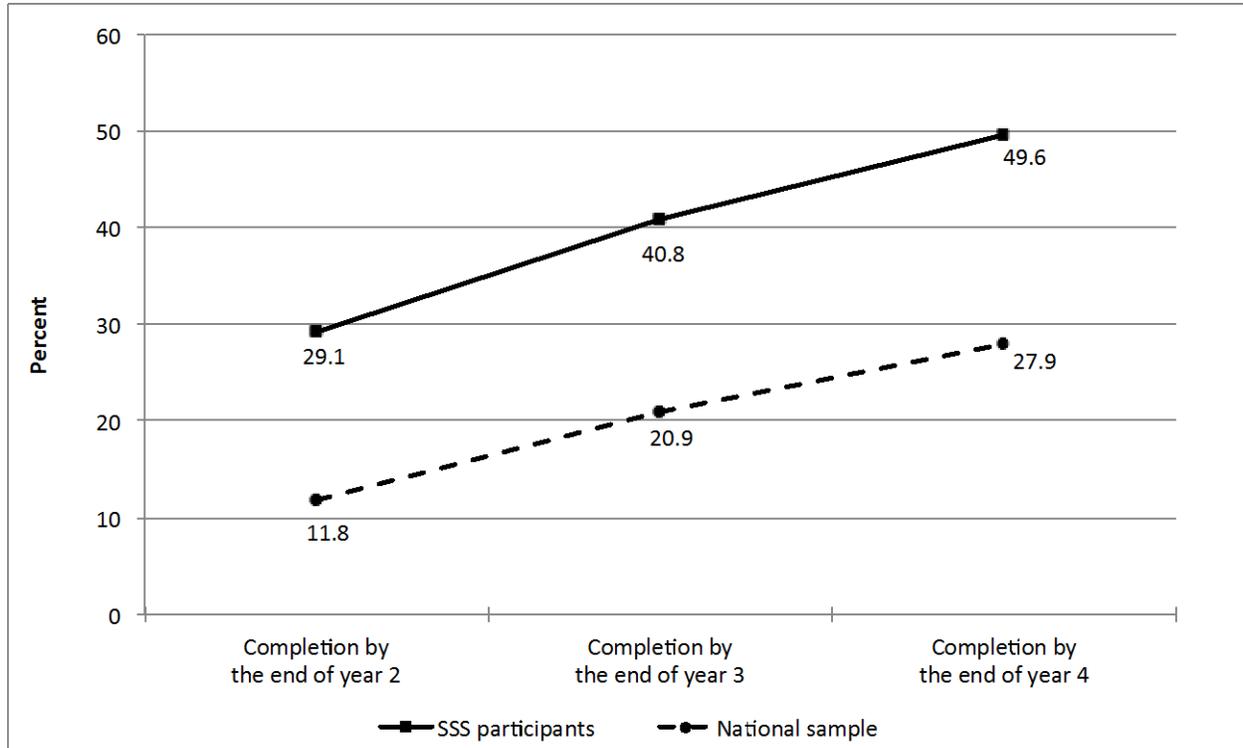
^b For the eligibility status “Disabled,” the difference was statistically significant at the $p < .05$ level but was not statistically significant at the $p < .001$ level ($p = .016$). Please see Appendix B for more details about the analysis strategy.

^c For this group of students, there were too few cases in the national sample to allow for statistical tests that determine whether observed differences were statistically significant. Please see Appendix B for more details about the analysis strategy.

NOTE: Unless otherwise noted, differences were statistically significant at the $p < .001$ level.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012). The national sample was drawn from the U.S. Department of Education’s National Center for Education Statistics’ *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*.

Figure C1. Percentage of Student Support Services (SSS) participants who entered two-year institutions in 2007–08, and of students in the national sample^a who entered two-year institutions in 2003–04, who completed an associate degree or certificate, or transferred to four-year institutions (with or without receiving an associate degree or certificate) within two, three, and four years

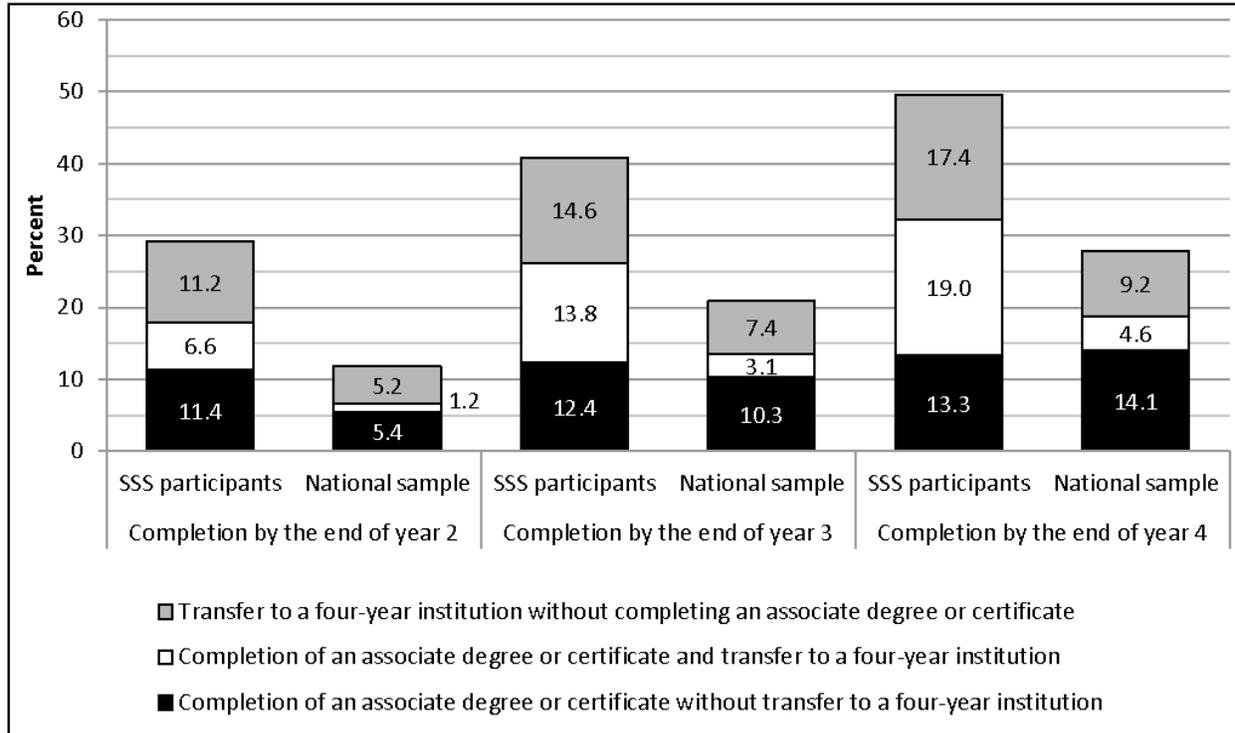


^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The percentages pertaining to the national sample are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

NOTE: Unless otherwise noted, differences were statistically significant at the $p < .001$ level.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012). The national sample was drawn from the U.S. Department of Education’s National Center for Education Statistics’ 2004/09 *Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*.

Figure C2. Percentage of Student Support Services (SSS) participants who entered two-year institutions in 2007–08, and of students in the national sample^a who entered two-year institutions in 2003–04, who completed an associate degree or certificate without transferring to four-year institutions, completed an associate degree or certificate and transferred to four-year institutions, or transferred to four-year institutions without completing an associate degree or certificate within two, three, and four years, by completion type



^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The percentages pertaining to the national sample are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

NOTE: Significance tests were not performed to determine if differences in rates of completion of an associate degree or certificate without transfer to a four-year institution, completion of an associate degree or certificate and transfer to a four-year institution, and transfer to a four-year institution without completing an associate degree or certificate were significant between SSS participants and students in the national sample.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012). The national sample was drawn from the U.S. Department of Education’s National Center for Education Statistics’ *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*.

Table C3. Number of Student Support Services (SSS) participants who entered two-year institutions in 2007–08 and of students in the national sample^a who entered two-year institutions in 2003–04, and percentage of each who completed an associate degree or certificate, or transferred to four-year institutions (with or without receiving an associate degree or certificate) within four years, by eligibility status

Eligibility status	Number of SSS participants who entered two-year institutions in 2007–08	Percent of SSS participants who completed within four years	Number of students in the national sample who entered two-year institutions in 2003–04	Percent of students in the national sample who completed within four years
Overall	21,669	49.6%	1,118,230	27.9%
Low-income and first-generation	13,990	47.8	357,713	22.8
Low-income only	1,310	51.2	79,500	31.9
First-generation only	3,852	55.5	557,721	30.6
Disabled	1,283	56.1	105,800	29.7
Disabled and low-income ^b	1,226	43.5	17,496	17.1

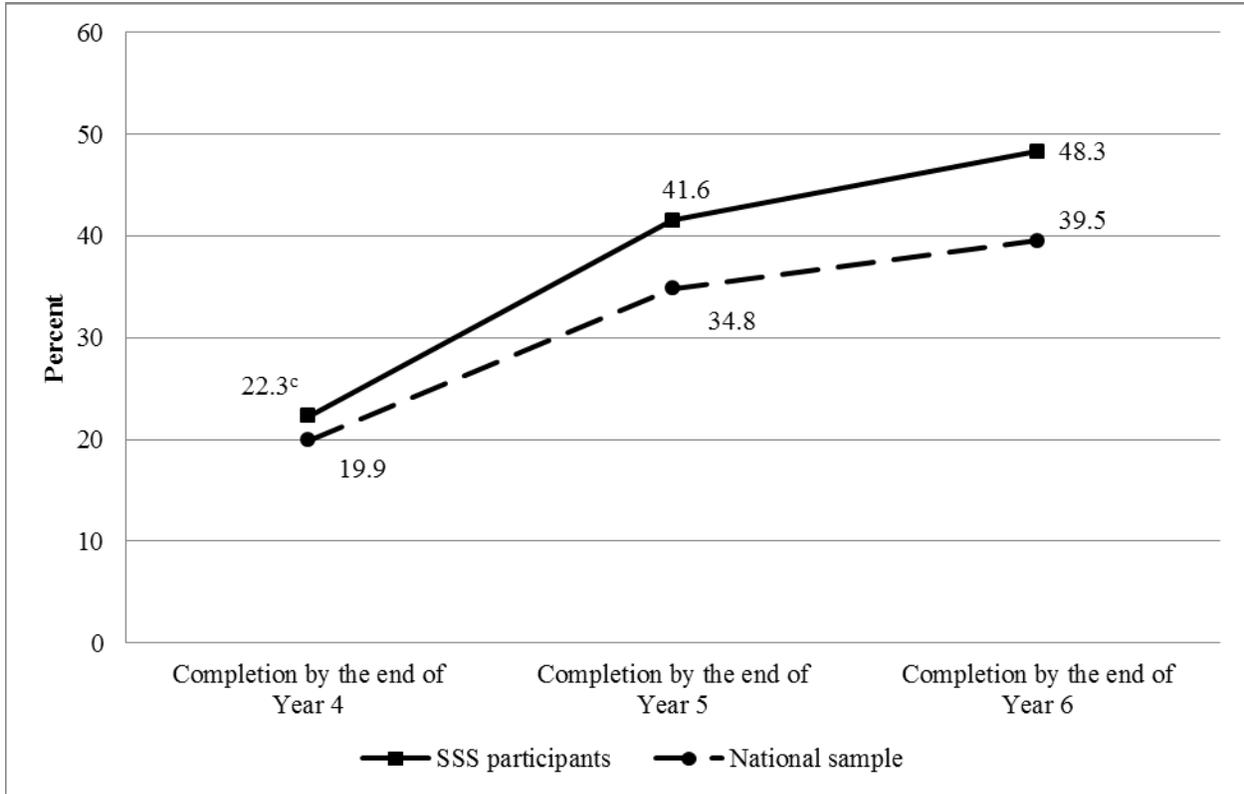
^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The numbers and percentages in the national sample columns are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

^b For this group of students, there were too few cases in the national sample to allow for statistical tests that determine whether observed differences were statistically significant. Please see Appendix B for more details about the analysis strategy.

NOTE: Unless otherwise noted, differences were statistically significant at the $p < .001$ level.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012). The national sample was drawn from the U.S. Department of Education’s National Center for Education Statistics’ *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*.

Figure C3. Percentage of Student Support Services (SSS) participants who entered four-year institutions in 2007–08, and of students in the national sample^a who entered four-year institutions in 2003–04, who completed a bachelor’s degree within four, five, and six^b years



^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The percentages pertaining to the national sample are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

^b Completion data for SSS participants who received a bachelor’s degree in the sixth year of college were not available for 31 of the 449 (7 percent) four-year grantee institutions because these institutions did not submit data to the NSC in the 2012–13 academic year. In addition, APR data for the 2012–13 academic year were not available at the time of data analysis. No adjustment was made to the calculations to address this missing information.

^c The difference in bachelor’s degree completion rates between SSS participants and students in the national sample at the end of the fourth year of college was not statistically significant ($p = .058$). Please see Appendix B for more details about the analysis strategy.

NOTE: Unless otherwise noted, differences were statistically significant at the $p < .001$ level.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012). The national sample was drawn from the U.S. Department of Education’s National Center for Education Statistics’ *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*.

Table C4. Number of Student Support Services (SSS) participants who entered four-year institutions in 2007–08 and of students in the national sample^a who entered four-year institutions in 2003–04, and percentage of each who completed a bachelor’s degree within six years,^b by eligibility status

Eligibility status	Number of SSS participants who entered four-year institutions in 2007–08	Percent of SSS participants who completed within six years	Number of students in the national sample who entered four-year institutions in 2003–04	Percent of students in the national sample who completed within six years
Overall	23,897	48.3%	556,116	39.5%
Low-income and first-generation	15,410	46.9	143,320	32.0
Low-income only ^c	2,141	49.5	63,749	40.7
First-generation only	4,308	51.5	278,913	42.7
Disabled ^c	1,277	54.9	63,751	42.5
Disabled and low-income ^d	717	42.0	6,383	27.3

^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The numbers and percentages in the national sample columns are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

^b Completion data for SSS participants who received a bachelor’s degree in the sixth year of college were not available for 31 of the 449 (7 percent) four-year grantee institutions because these institutions did not submit data to the NSC in the 2012–13 academic year. In addition, APR data for the 2012–13 academic year were not available at the time of data analysis. No adjustment was made to the calculations to address this missing information.

^c Although there appear to be differences in bachelor’s degree completion rates between SSS participants and students in the national sample who were “low-income only” or “disabled,” these differences were statistically significant at the $p < .05$ level but were not statistically significant at the $p < .001$ level ($p = .025$ for low-income only; $p = .002$ for disabled). Please see Appendix B for more details about the analysis strategy.

^d For this group of students, there were too few cases in the national sample to allow for statistical tests that determine whether observed differences were statistically significant. Please see Appendix B for more details about the analysis strategy.

NOTE: Unless otherwise noted, differences were statistically significant at the $p < .001$ level.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012). The national sample was drawn from the U.S. Department of Education’s National Center for Education Statistics’ *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*.

Table C5. Number of Student Support Services (SSS) participants who entered two-year institutions in 2007–08 and of students in the national sample^a who entered two-year institutions in 2003–04, and percentage of each who persisted to the fall of the second year, by institution’s degree of urbanization

Two-year institution’s degree of urbanization	Number of SSS participants who entered two-year institutions in 2007–08	Percent of SSS participants who persisted	Number of students in the national sample who entered two-year institutions in 2003–04	Percent of students in the national sample who persisted
Overall	21,669	86.0%	1,118,230	64.8%
Rural	11,774	83.3	202,626	61.6
Suburban	2,578	89.3	331,712	70.2
Urban	6,925	88.8	547,417	63.6

^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The numbers and percentages in the national sample columns are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

NOTE: Unless otherwise noted, differences were statistically significant at the $p < .001$ level.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012), and institution’s degree of urbanization data were drawn from the U.S. Department of Education’s National Center for Education Statistics’ *Integrated Postsecondary Education Data System (IPEDS)* for the 2007–08 academic year. The national sample was drawn from the U.S. Department of Education’s National Center for Education Statistics’ *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*. Characteristics of the institutions in the national sample were drawn from *IPEDS* data from 2003–04.

Table C6. Number of Student Support Services (SSS) participants who entered four-year institutions in 2007–08 and of students in the national sample^a who entered four-year institutions in 2003–04, and percentage of each who persisted to the fall of the second year, by institution’s degree of urbanization

Four-year institution’s degree of urbanization	Number of SSS participants who entered four-year institutions in 2007–08	Percent of SSS participants who persisted	Number of students in the national sample who entered four-year institutions in 2003–04	Percent of students in the national sample who persisted
Overall	23,897	92.7%	556,116	78.7%
Rural	8,829	90.7	136,709	71.8
Suburban	4,975	94.9	113,992	84.3
Urban	10,093	93.3	284,766	79.1

^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The numbers and percentages in the national sample columns are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

NOTE: Unless otherwise noted, differences were statistically significant at the $p < .001$ level.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012), and institution’s degree of urbanization data were drawn from the U.S. Department of Education’s National Center for Education Statistics’ *Integrated Postsecondary Education Data System (IPEDS)* for the 2007–08 academic year. The national sample was drawn from the U.S. Department of Education’s National Center for Education Statistics’ *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*. Characteristics of the institutions in the national sample were drawn from *IPEDS* data from 2003–04.

Table C7. Number of Student Support Services (SSS) participants who entered two-year institutions in 2007–08 and of students in the national sample^a who entered two-year institutions in 2003–04, and percentage of each who completed an associate degree or a certificate, or transferred to four-year institutions (with or without receiving an associate degree or certificate) within four years, by institution’s degree of urbanization

Two-year institution’s degree of urbanization	Number of SSS participants who entered two-year institutions in 2007–08	Percent of SSS participants who completed within four years	Number of students in the national sample who entered two-year institutions in 2003–04	Percent of students in the national sample who completed within four years
Overall	21,669	49.6%	1,118,230	27.9%
Rural	11,774	52.7	202,626	38.5
Suburban	2,578	49.7	331,712	29.2
Urban	6,925	45.8	547,417	23.2

^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The numbers and percentages in the national sample columns are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

NOTE: Unless otherwise noted, differences were statistically significant at the $p < .001$ level.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012), and institution’s degree of urbanization data were drawn from the U.S. Department of Education’s National Center for Education Statistics’ *Integrated Postsecondary Education Data System (IPEDS)* for the 2007–08 academic year. The national sample was drawn from the U.S. Department of Education’s National Center for Education Statistics’ *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*. Characteristics of the institutions in the national sample were drawn from *IPEDS* data from 2003–04.

Table C8. Number of Student Support Services (SSS) participants who entered four-year institutions in 2007–08 and of students in the national sample^a who entered four-year institutions in 2003–04, and percentage of each who completed a bachelor’s degree within six years,^b by institution’s degree of urbanization

Four-year institution’s degree of urbanization	Number of SSS participants who entered four-year institutions in 2007–08	Percent of SSS participants who completed within six years	Number of students in the national sample who entered four-year institutions in 2003–04	Percent of students in the national sample who completed within six years
Overall	23,897	48.3%	556,116	39.5%
Rural	8,829	48.9	136,709	32.8
Suburban ^c	4,975	42.5	113,992	50.4
Urban	10,093	50.7	284,766	39.3

^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The numbers and percentages in the national sample columns are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

^b Completion data for SSS participants who received a bachelor’s degree in the sixth year of college were not available for 31 of the 449 (7 percent) four-year grantee institutions because these institutions did not submit data to the NSC in the 2012–13 academic year. In addition, APR data for the 2012–13 academic year were not available at the time of data analysis. No adjustment was made to the calculations to address this missing information.

^c Although there appears to be a difference in bachelor’s degree completion rates between SSS participants and students in the national sample in suburban institutions, this difference was statistically significant at the $p < .05$ level but was not statistically significant at the $p < .001$ level ($p = .018$). Please see Appendix B for more details about the analysis strategy.

NOTE: Unless otherwise noted, differences were statistically significant at the $p < .001$ level.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012), and institution’s degree of urbanization data were drawn from the U.S. Department of Education’s National Center for Education Statistics’ *Integrated Postsecondary Education Data System (IPEDS)* for the 2007–08 academic year. The national sample was drawn from the U.S. Department of Education’s National Center for Education Statistics’ *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*. Characteristics of the institutions in the national sample were drawn from *IPEDS* data from 2003–04.

APPENDIX D. ADDITIONAL RESULTS



Appendix D: Additional Results

To ensure that differences in achievements between SSS participants and students in the national sample were not entirely due to differences in sample characteristics, differences in persistence and completion rates are examined based on the control of the institutions that students attended.²¹ In particular, persistence and completion rates are presented separately for public and private institutions.

In addition to institutional characteristics, differences in completion rates are calculated on the basis of students' enrollment patterns. First, because full-time enrollment status affects the pace at which students progress through classes, this report examines completion rates separately for students who, throughout their academic careers, (1) were consistently enrolled as full-time students, (2) were consistently enrolled as part-time students, and (3) were enrolled as a mix of full-time and part-time students. In addition, acknowledging that enrollment in multiple institutions throughout one's academic career might impact rates of completion, rates of completion are examined separately for students who attended only one postsecondary institution in their academic careers, students who attended multiple two-year institutions but never transferred to a four-year institution, students who attended multiple four-year institutions but never transferred to a two-year institution, and students who attended a mix of two-year and four-year institutions. Results of these supplementary analyses are presented separately for students who entered as freshmen in two-year and four-year institutions. Unless otherwise noted, differences in student achievements were statistically significant at the $p < .001$ level.

²¹ In the report, differences in persistence and completion rates are examined by eligibility status and institution's degree of urbanization.

Exhibits

Table D1. Number of Student Support Services (SSS) participants who entered two-year institutions in 2007–08 and of students in the national sample^a who entered two-year institutions in 2003–04, and percentage of each who persisted to the fall of the second year, by control of institution

Control of institution	Number of SSS participants who entered two-year institutions in 2007–08	Percent of SSS participants who persisted	Number of students in the national sample who entered two-year institutions in 2003–04	Percent of students in the national sample who persisted
Overall	21,669	86.0%	1,118,230	64.8%
Public	20,745	86.2	1,086,992	64.5
Private ^b	924	81.7	31,238	74.0

^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The numbers and percentages in the national sample columns are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

^b For this group of students, there were too few cases in the national sample to allow for statistical tests that determine whether observed differences were statistically significant. Please see Appendix B for more details about the analysis strategy.

NOTE: Unless otherwise noted, differences were statistically significant at the $p < .001$ level.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012). The national sample was drawn from the U.S. Department of Education's National Center for Education Statistics' *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*.

Table D2. Number of Student Support Services (SSS) participants who entered two-year institutions in 2007–08 and of students in the national sample^a who entered two-year institutions in 2003–04, and percentage of each who completed an associate degree or certificate, or transferred to four-year institutions (with or without receiving an associate degree or certificate) within four years, by control of institution

Control of institution	Number of SSS participants who entered two-year institutions in 2007–08	Percent of SSS participants who completed within four years	Number of students in the national sample who entered two-year institutions in 2003–04	Percent of students in the national sample who completed within four years
Overall	21,669	49.6%	1,118,230	27.9%
Public	20,745	49.5	1,086,992	27.4
Private ^b	924	52.5	31,238	43.8

^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The numbers and percentages in the national sample columns are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

^b For this group of students, there were too few cases in the national sample to allow for statistical tests that determine whether observed differences were statistically significant. Please see Appendix B for more details about the analysis strategy.

NOTE: Unless otherwise noted, differences were statistically significant at the $p < .001$ level.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012). The national sample was drawn from the U.S. Department of Education's National Center for Education Statistics' 2004/09 *Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*.

Table D3. Number of Student Support Services (SSS) participants who entered two-year institutions in 2007–08 and of students in the national sample^a who entered two-year institutions in 2003–04, and percentage of each who completed an associate degree or certificate within four years, by the number and types of postsecondary institutions attended

Number and types of postsecondary institutions attended	Number of SSS participants who entered two-year institutions in 2007–08	Percent of SSS participants who completed within four years	Number of students in the national sample who entered two-year institutions in 2003–04	Percent of students in the national sample who completed within four years
Overall	21,669	32.3%	1,118,230	18.7%
Attended only one postsecondary institution	11,160	21.8	790,381	15.2
Attended more than one postsecondary institution — all two-year institutions ^b	2,888	18.0	167,850	20.7
Attended more than one postsecondary institution — a mix of two-year and four-year institutions	7,621	52.9	159,999	34.0

^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The numbers and percentages in the national sample columns are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

^b The difference in completion rates at the end of the fourth year of college between SSS participants and students in the national sample who attended multiple two-year institutions was not statistically significant ($p = .295$). Please see Appendix B for more details about the analysis strategy.

NOTE: Unless otherwise noted, differences were statistically significant at the $p < .001$ level.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012). The national sample was drawn from the U.S. Department of Education's National Center for Education Statistics' *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*.

Table D4. Number of Student Support Services (SSS) participants who entered two-year institutions in 2007–08 and of students in the national sample^a who entered two-year institutions in 2003–04, and percentage of each who completed an associate degree or certificate, or transferred to four-year institutions (with or without receiving an associate degree or certificate) within four years, by enrollment intensity

Enrollment intensity	Number of SSS participants who entered two-year institutions in 2007–08	Percent of SSS participants who completed within four years	Number of students in the national sample who entered two-year institutions in 2003–04	Percent of students in the national sample who completed within four years
Overall	21,669	49.6%	1,118,230	27.9%
All full-time	5,841	53.2	98,135	21.8
All part-time	3,830	21.2	373,508	12.9
Mixed full-time and part-time	11,543	57.6	585,181	40.3

^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The numbers and percentages in the national sample columns are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

NOTE: Unless otherwise noted, differences were statistically significant at the $p < .001$ level.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012). The national sample was drawn from the U.S. Department of Education's National Center for Education Statistics' *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*.

Table D5. Number of Student Support Services (SSS) participants who entered four-year institutions in 2007–08 and of students in the national sample^a who entered four-year institutions in 2003–04, and percentage of each who persisted to the fall of the second year, by control of institution

Control of institution	Number of SSS participants who entered four-year institutions in 2007–08	Percent of SSS participants who persisted	Number of students in the national sample who entered four-year institutions in 2003–04	Percent of students in the national sample who persisted
Overall	23,897	92.7%	556,116	78.7%
Public	16,179	93.5	378,268	78.4
Private	7,718	91.0	177,848	79.4

^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The numbers and percentages in the national sample columns are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

NOTE: Unless otherwise noted, differences were statistically significant at the $p < .001$ level.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012). The national sample was drawn from the U.S. Department of Education's National Center for Education Statistics' *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*.

Table D6. Number of Student Support Services (SSS) participants who entered four-year institutions in 2007–08 and of students in the national sample^a who entered four-year institutions in 2003–04, and percentage of each who completed a bachelor’s degree within six years,^b by control of institution

Control of institution	Number of SSS participants who entered four-year institutions in 2007–08	Percent of SSS participants who completed within six years	Number of students in the national sample who entered four-year institutions in 2003–04	Percent of students in the national sample who completed within six years
Overall	23,897	48.3%	556,116	39.5%
Public	16,179	49.9	378,268	38.6
Private ^c	7,718	45.0	177,848	41.4

^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The numbers and percentages in the national sample columns are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

^b Completion data for SSS participants who received a bachelor’s degree in the sixth year of college were not available for 31 of the 449 (7 percent) four-year grantee institutions because these institutions did not submit data to the NSC in the 2012–13 academic year. In addition, APR data for the 2012–13 academic year were not available at the time of data analysis. No adjustment was made to the calculations to address this missing information.

^c The difference in bachelor’s degree completion rates between SSS participants and students in the national sample who entered their freshman year in private four-year institutions was not statistically significant ($p = .208$). Please see Appendix B for more details about the analysis strategy.

NOTE: Unless otherwise noted, differences were statistically significant at the $p < .001$ level.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012). The national sample was drawn from the U.S. Department of Education’s National Center for Education Statistics’ *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*.

Table D7. Number of Student Support Services (SSS) participants who entered four-year institutions in 2007–08 and of students in the national sample^a who entered four-year institutions in 2003–04, and percentage of each who completed a bachelor’s degree within six years,^b by the number and types of postsecondary institutions attended

Number and types of postsecondary institutions attended	Number of SSS participants who entered four-year institutions in 2007–08	Percent of SSS participants who completed within six years	Number of students in the national sample who entered four-year institutions in 2003–04	Percent of students in the national sample who completed within six years
Overall	23,897	48.3%	556,116	39.5%
Attended only one postsecondary institution	12,303	51.6	312,099	36.9
Attended more than one postsecondary institution — all four-year institutions ^c	5,026	57.2	73,359	49.2
Attended more than one postsecondary institution — a mix of two-year and four-year institutions ^d	6,568	35.4	170,658	40.1

^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The numbers and percentages in the national sample columns are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

^b Completion data for SSS participants who received a bachelor’s degree in the sixth year of college were not available for 31 of the 449 (7 percent) four-year grantee institutions because these institutions did not submit data to the NSC in the 2012–13 academic year. In addition, APR data for the 2012–13 academic year were not available at the time of data analysis. No adjustment was made to the calculations to address this missing information.

^c While there appears to be a difference in bachelor’s degree completion rates at the end of the sixth year of college between SSS participants and students in the national sample who attended multiple four-year institutions, this difference was statistically significant at the $p < .05$ level but was not statistically significant at the $p < .001$ level ($p = .034$). Please see Appendix B for more details about the analysis strategy.

^d The difference in bachelor’s degree completion rates at the end of the sixth year of college between SSS participants and students in the national sample who attended a mix of two-year and four-year institutions was not statistically significant ($p = .052$). Please see Appendix B for more details about the analysis strategy.

NOTE: Unless otherwise noted, differences were statistically significant at the $p < .001$ level.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012). The national sample was drawn from the U.S. Department of Education’s National Center for Education Statistics’ *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*.

Table D8. Number of Student Support Services (SSS) participants who entered four-year institutions in 2007–08 and of students in the national sample^a who entered four-year institutions in 2003–04, and percentage of each who completed a bachelor’s degree within six years,^b by enrollment intensity

Enrollment intensity	Number of SSS participants who entered four-year institutions in 2007–08	Percent of SSS participants who completed within six years	Number of students in the national sample who entered four-year institutions in 2003–04	Percent of students in the national sample who completed within six years
Overall	23,897	48.3%	556,116	39.5%
All full-time	8,610	49.0	92,703	28.1
All part-time ^c	1,462	22.6	43,328	13.9
Mixed full-time and part-time ^c	13,563	50.6	415,309	45.2

^a To create the national sample, the *BPS:04/09* was subsampled to include students who met the SSS eligibility requirements of low-income status, first-generation status, or disability status, as well as demonstrated academic need. The numbers and percentages in the national sample columns are estimates based on the weighted *BPS:04/09* national sample. Please see Appendix B, Selection of the National Sample for more details.

^b Completion data for SSS participants who received a bachelor’s degree in the sixth year of college were not available for 31 of the 449 (7 percent) four-year grantee institutions because these institutions did not submit data to the NSC in the 2012–13 academic year. In addition, APR data for the 2012–13 academic year were not available at the time of data analysis. No adjustment was made to the calculations to address this missing information.

^c While there appear to be differences in bachelor’s degree completion rates at the end of the sixth year of college between SSS participants and students in the national sample who consistently enrolled as part-time students or enrolled as a mix of full-time and part-time students, these differences were statistically significant at the $p < .05$ level but were not statistically significant at the $p < .001$ level ($p = .025$ among students enrolled consistently as part-time students; $p = .006$ among students enrolled as a mix of full-time and part-time). Please see Appendix B for more details about the analysis strategy.

NOTE: Unless otherwise noted, differences were statistically significant at the $p < .001$ level.

SOURCE: Data for SSS participants were taken from the SSS annual performance report (APR) longitudinal data file (1998–2012). The national sample was drawn from the U.S. Department of Education’s National Center for Education Statistics’ *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09)*.



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