

STATS IN BRIEF

U.S. DEPARTMENT OF EDUCATION

JULY 2018

NCES 2018-428

Working Before, During, and After Beginning at a Public 2-Year Institution: Labor Market Experiences of Community College Students

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Statistics in Brief publications present descriptive data in tabular formats to provide useful information to a broad audience, including members of the general public. They address simple and topical issues and questions. They do not investigate more complex hypotheses, account for inter-relationships among variables, or support causal inferences. We encourage readers who are interested in more complex questions and in-depth analysis to explore other NCES resources, including publications, online data tools, and public- and restricted-use datasets. See nces.ed.gov and references noted in the body of this document for more information.

Public 2-year educational institutions serve various purposes for a large and diverse population of students (Cohen, Brawer, and Kisker 2014). In 2011–12, about 40 percent of all postsecondary students were enrolled in a public 2-year institution (Skomsvold 2014), and about one-third of all students at 4-year institutions had attended a public 2-year institution at some time (Radford, Cominole, and Skomsvold 2015). Furthermore, compared with students in 4-year institutions, proportionally more public 2-year students are nontraditional.¹ In 2011–12, for example, 60 percent of public 2-year students were independent, 32 percent had dependents, and 34 percent first enrolled more than 12 months after graduating from high school. Among students in public 4-year colleges, the corresponding percentages were 36 percent, 15 percent, and 17 percent, respectively (Radford, Cominole, and Skomsvold 2015).

¹Nontraditional students are defined by Radford, Cominole, and Skomsvold (2015) as having any of the following characteristics: being independent for financial aid purposes, having one or more dependents, being a single caregiver, not having a traditional high school diploma, delaying postsecondary enrollment, attending school part time, and being employed full time.

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Many students with prior labor market experience enroll in public 2-year institutions to acquire new skills or certifications in order to advance in their careers or transition to new careers (Jacobson, Lalonde, and Sullivan 2005; Jenkins et al. 2010; Leigh and Gill 1997). These students often continue to work, in many cases full time, while enrolled. In 2011–12, about one-third (32 percent) of public 2-year students worked full time while enrolled, compared with 18 percent of public 4-year students (Radford, Cominole, and Skomsvold 2015). Additionally, when given the opportunity to identify themselves as an “employee enrolled in school” or a “student working to meet expenses,” 28 percent of public 2-year students in 2011–12 considered themselves an “employee enrolled in school,” compared with 12 percent of students at public 4-year institutions (Skomsvold 2014).²

In addition to differences in their employment experiences, public 2-year students’ academic lives also differ from those of their peers in public 4-year institutions. In particular, proportionally fewer public 2-year

students than public 4-year students enroll full time. In 2011–12, some 20 percent of all undergraduates at public 2-year institutions were enrolled full time, compared with 53 percent of all undergraduates at public 4-year institutions (Skomsvold 2014).

More students enrolled at public 2-year institutions work full time and more are enrolled part time. As this report focuses on the experiences of beginning public 2-year students, it is worth noting that both working full time while enrolled and not enrolling full time are negatively associated with postsecondary completion rates, although there is less evidence that working part time has negative effects on postsecondary completion (Darolia 2014; Skomsvold, Radford, and Berkner 2011).³ For example, about one-half (49 percent) of 2003–04 beginning postsecondary students who worked full time during their first year in college had not earned a credential and were not enrolled in 2009. In contrast, among their peers who did not work during their first year in college, 29 percent had not earned a credential and were not enrolled 6 years later (Skomsvold, Radford, and Berkner 2011).

To examine the relationships between beginning public 2-year students’ academic progress and labor market participation, this report uses data from the 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14). The report explores the demographics, enrollment intensity, and 3-year attainment and persistence of students who started in public 2-year institutions in 2011–12 in relation to their employment before, during, and after their postsecondary enrollment.⁴

For ease of presentation, throughout the remaining sections of this report, the term “beginning public 2-year students” refers to first-time students enrolled in certificate or associate’s degree programs at public, primarily associate’s degree-granting institutions—categorized as “public associate’s degree” institutions per the 2010 basic Carnegie Classification—in 2011–12.⁵ This definition includes some students enrolled in 4-year institutions that primarily granted certificates and associate’s degrees. All comparisons of estimates were tested for statistical significance using the Student’s *t* statistic, and all differences cited are statistically significant at the $p < .05$ level.⁶

² The analyses in both Skomsvold (2014) and Radford, Cominole, and Skomsvold (2015) use data from the 2011–12 National Postsecondary Student Aid Study (NPSAS:12), which surveyed a nationally representative sample of postsecondary students in 2011–12.

³ Some of these findings describe all postsecondary students, not beginning public 2-year students specifically.

⁴ Although students may eventually earn a certificate or degree more than 3 years after first beginning postsecondary education, 3-year degree attainment is the only outcome measure available in the BPS:12/14 data.

⁵ Throughout the report, all statistics are representative of the experiences of *first-time* public 2-year students, not all public 2-year students. For example, although many public 2-year students may have attended another institution previously, the nationally representative sample of students examined in this analysis includes only beginning postsecondary students whose first postsecondary enrollment was in 2011–12.

⁶ All estimates in this publication are weighted using the balanced repeated replication and jackknife II methods to adjust variance estimation for the complex sample design (Wolter 2007). The weight used for all estimates is WTA000. Two-tailed *t*-tests were used in all comparisons. Although all differences reported are statistically significant, not all statistically significant differences are discussed: readers should not infer that, because a difference between two numbers is not mentioned, the difference is not statistically significant. No adjustments for multiple comparisons were made.

STUDY QUESTIONS

1 Were there differences in demographic characteristics between beginning public 2-year students and other beginning college students in 2011–12? Were there differences in demographic characteristics, degree programs, and fields of study by the first-year employment status and intensity of 2011–12 beginning public 2-year students?

2 Among 2011–12 beginning public 2-year students who entered postsecondary education 12 or more months after high school graduation, was employment prior to enrollment in postsecondary education related to employment during their first year of college?

3 Among 2011–12 beginning public 2-year students, was employment status and intensity in 2011–12 related to enrollment intensity during their first year of college, employment status and intensity later in college, expectations for future enrollment, and degree attainment as of 2014?

4 Among 2011–12 beginning public 2-year students who had left postsecondary education with or without a credential and were not enrolled in 2014, was 2011–12 employment status and intensity related to employment status and intensity in 2014?

KEY FINDINGS

- Some 44 percent of beginning public 2-year students worked while enrolled their first year: 18 percent worked 35 hours or more per week, 14 percent worked between 21 and 34 hours per week, and 11 percent worked fewer than 21 hours per week (table 2).
- Among beginning public 2-year students, about half (48 percent) of White students worked while enrolled their first year, compared with 35 percent of Black students, 40 percent of Hispanic students, and 33 percent of Asian students (table 2).
- Among 2011–12 beginning public 2-year students who first enrolled at least a year after high school completion,² their employment status and intensity while enrolled in 2011–12 was related to their employment status before beginning college. Students who worked full time before college made up 81 percent of students who worked full time during their first year but made up a smaller percentage of those who worked part time while enrolled (50 and 51 percent) or did not work at all while enrolled (45 percent) (figure 1).
- A larger percentage of beginning public 2-year students who worked 20 hours or less while enrolled in 2011–12 (20 percent) had attained an associate's degree by 2014, compared with students who did not work while enrolled their first year (10 percent) and students who worked full time (9 percent) during their first year (figure 7).
- Among 2011–12 beginning public 2-year students who were not enrolled 3 years later, a higher percentage of students who did not work their first year (20 percent) were unemployed in 2014, compared with students who had worked their first year, either part time (4 and 9 percent) or full time (6 percent) (table 4).

² Analysis of employment prior to postsecondary enrollment was limited to those who had delayed postsecondary enrollment by at least 12 months after high school completion. This group constitutes 32 percent of beginning public 2-year students (Radford et al. 2016).

1

Were there differences in demographic characteristics between beginning public 2-year students and other beginning college students in 2011–12? Were there differences in demographic characteristics, degree programs, and fields of study by the first-year employment status and intensity of 2011–12 beginning public 2-year students?

Students who were enrolled in a public 2-year institution made up about 38 percent of all beginning postsecondary students in 2011–12 (Ifill et al. 2016). Table 1 presents estimates of the demographic characteristics of students beginning at a public 2-year college and those of all other beginning college students. Compared with all other

TABLE 1.

DEMOGRAPHICS OF BEGINNING POSTSECONDARY STUDENTS
Among 2011–12 beginning postsecondary students, percentage distribution of selected demographic characteristics, by whether began postsecondary education in a public 2-year institution: 2011–12

Demographic characteristics	Beginning public 2-year students	Beginning students at institutions other than public 2-year	All beginning postsecondary students
Total	100.0	100.0	100.0
Sex			
Male	47.4	42.3	44.2
Female	52.6	57.7	55.8
Race/ethnicity¹			
White	53.2	57.7	55.7
Black	13.9	14.0	14.0
Hispanic	23.7	17.0	19.7
Asian	4.5	6.1	5.5
Other	1.2	1.6	1.4
Two or more races	3.5	3.7	3.6
Age			
19 years or younger	67.7	79.2	74.6
20–23	13.4	8.5	10.5
24–29	8.8	5.4	6.7
30 years or older	10.0	6.9	8.1
Dependency status²			
Dependent	70.1	79.7	76.0
Independent	29.9	20.3	24.0
Without dependents	14.2	8.1	10.4
Unmarried	11.3	6.7	8.5
Married	2.9	1.3	2.0
With dependents	15.6	12.3	13.6
Unmarried	9.6	8.5	8.9
Married	6.0	3.8	4.7
Highest education attained by either parent			
High school diploma or less	39.6	28.1	32.5
Some postsecondary education	32.8	24.1	27.6
Bachelor’s degree or higher	27.7	47.7	39.9

¹ Black includes African American, Hispanic includes Latino, Other includes American Indian or Alaska Native and Pacific Islander or Native Hawaiian, and Two or more races includes beginning students having origins in more than one race. Race categories exclude Hispanic origin.

² Beginning students classified as independent include those aged 24 or over and those under 24 who are married, have dependents, are veterans or on active duty, are orphans or wards of the courts, are homeless or at risk of homelessness, or were determined to be independent by a financial aid officer using professional judgment. Other beginning students under age 24 are considered to be dependent. Within marital status, the unmarried category includes beginning students who are divorced, separated, or widowed. Beginning students are considered to have a dependent if they have a child or any others for whom they are the caretaker or have financial responsibility. A spouse is not considered to be a dependent.

NOTE: Public 2-year students include all students who began postsecondary education in certificate or associate’s degree programs at public, primarily associate’s degree-granting institutions as defined by the 2010 basic Carnegie Classification. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

beginning students, smaller percentages of students beginning at a public 2-year college were female (58 vs. 53 percent), White (58 vs. 53 percent), and 19 years or younger (79 vs. 68 percent), and

larger percentages were Hispanic (17 vs. 24 percent), independent (20 vs. 30 percent), and had parents who had a high school diploma or less (28 vs. 40 percent).

Some 44 percent of beginning public 2-year students worked while enrolled their first year: 18 percent worked full time, 14 percent worked between 21 and 34 hours per week, and 11 percent worked 20 hours or less per week (table 2).

TABLE 2.

EMPLOYMENT OF BEGINNING PUBLIC 2-YEAR STUDENTS BY DEMOGRAPHICS
Among beginning public 2-year students, percentage distribution of employment status and intensity, by selected demographic characteristics: 2011–12

Demographic characteristics	Did not work	Employed			
		Total employed	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Total	56.2	43.8	11.3	14.4	18.0
Sex					
Male	56.8	43.2	10.4	13.3	19.6
Female	55.8	44.2	12.1	15.5	16.6
Race/ethnicity¹					
White	51.9	48.1	12.1	15.5	20.5
Black	65.5	34.5	6.8	13.6	14.1
Hispanic	59.6	40.4	11.1	12.9	16.3
Asian	67.3	32.7	11.9	10.5	10.3
Other	46.4	53.6	19.7 !	‡	18.5 !
Two or more races	51.5	48.5	13.6	17.1	17.8
Age					
19 years or younger	57.5	42.5	13.1	16.0	13.4
20–23	55.1	44.9	8.4	14.1	22.3
24–29	54.5	45.5	4.7 !	11.1	29.7
30 years or older	50.9	49.1	8.4	7.7	33.0
Dependency status²					
Dependent	56.4	43.6	13.2	15.8	14.7
Independent	56.0	44.0	6.9	11.3	25.8
Without dependents	55.8	44.2	8.3	9.6	26.4
Unmarried	58.8	41.2	8.9	10.4	21.9
Married	44.2	55.8	‡	‡	43.3
With dependents	56.2	43.8	5.6	12.9	25.3
Unmarried	58.7	41.3	5.6	14.9	20.9
Married	52.2	47.8	5.7	9.7	32.4
Highest education attained by either parent					
High school diploma or less	59.1	40.9	9.8	12.7	18.4
Some postsecondary education	54.3	45.7	11.0	16.2	18.6
Bachelor's degree or higher	53.6	46.4	14.1	15.2	17.1

! Interpret data with caution. Estimate is unstable because the standard error is more than 30 percent but less than 51 percent of the estimate.

‡ Reporting standards not met. Either there were too few cases for a reliable estimate or the standard error is more than 50 percent of the estimate.

¹ Black includes African American, Hispanic includes Latino, Other includes American Indian or Alaska Native and Pacific Islander or Native Hawaiian, and Two or more races includes beginning students having origins in more than one race. Race categories exclude Hispanic origin.

² Beginning students classified as independent include those aged 24 or over and those under 24 who are married, have dependents, are veterans or on active duty, are orphans or wards of the courts, are homeless or at risk of homelessness, or were determined to be independent by a financial aid officer using professional judgment. Other beginning students under age 24 are considered to be dependent. Within marital status, the unmarried category includes beginning students who are divorced, separated, or widowed. Beginning students are considered to have a dependent if they have a child or any others for whom they are the caretaker or have financial responsibility. A spouse is not considered to be a dependent.

NOTE: Public 2-year students include all students who began postsecondary education in certificate or associate's degree programs at public, primarily associate's degree-granting institutions as defined by the 2010 basic Carnegie Classification. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Whether students worked while enrolled their first year varied by their racial and ethnic backgrounds and whether they had a parent who attained a bachelor's degree. Among beginning public 2-year students, 35 percent of Black students, 40 percent of Hispanic students, and 33 percent of Asian students worked while enrolled their first year, compared with 48 percent of White students. Additionally, 46 percent of beginning public 2-year students who had a parent who attained a bachelor's degree worked while enrolled, compared with 41 percent of students whose parents had a high school diploma or less education.

Compared with younger beginning public 2-year students, larger proportions of older students worked

full time while enrolled their first year. Some 33 percent of those who were 30 years of age or older worked full time while enrolled their first year, compared with 13 percent of those 19 years of age or younger and 22 percent of those 20 to 23 years of age. Consistent with these age differences, it was more common for independent students than for dependent students to work full time while enrolled their first year (26 percent vs. 15 percent). Additionally, 43 percent of married students without dependents worked full time while enrolled their first year, compared with 32 percent of married students with dependents, 22 percent of unmarried students with no dependents, and 21 percent of unmarried students with dependents.

The percentage of beginning public 2-year students who worked full time while enrolled in their first year also varied by major. For example, fewer students who majored in biology and physical science, science technology, math, and agriculture worked full time while enrolled their first year (15 percent) than did those who majored in engineering and engineering technology (27 percent) (table 3). In addition, fewer students who majored in personal and consumer services worked full time while enrolled their first year (11 percent), compared with those who majored in engineering and engineering technology (27 percent), general studies and other (20 percent), health care fields (20 percent), and business (20 percent).

TABLE 3.

EMPLOYMENT OF BEGINNING PUBLIC 2-YEAR STUDENTS BY DEGREE PROGRAM AND FIELD OF STUDY
Among beginning public 2-year students, percentage distribution of employment status and intensity,
by undergraduate degree program and field of study: 2011–12

Undergraduate degree program and field of study	Did not work	Employed			
		Total employed	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Undergraduate degree program					
Certificate	60.3	39.7	7.5	9.7	22.5
Associate's degree	55.9	44.1	11.6	14.8	17.7
Field of study					
STEM ¹	53.6	46.4	10.4	15.3	20.7
Computer and information sciences	62.8	37.2	7.0	11.9	18.3
Engineering and engineering technology	49.6	50.4	9.5	14.2	26.7
Biology and physical science, science technology, math, and agriculture	51.6	48.4	14.2	19.1	15.1
Non-STEM	55.6	44.4	12.1	14.5	17.8
General studies and other	54.2	45.8	12.8	12.8	20.3
Social sciences and humanities	59.6	40.4	15.0	13.4	12.0
Personal and consumer services	64.0	36.0	10.6 !	14.6	10.9 !
Manufacturing, construction, repair, and transportation	54.2	45.8	11.3 !	14.4	20.2
Military technology and protective services	56.9	43.1	10.2	14.4	18.5
Health care fields	56.4	43.6	10.8	12.7	20.1
Business	52.9	47.1	10.4	17.0	19.7
Other applied	52.3	47.7	14.3	17.0	16.4

! Interpret data with caution. Estimate is unstable because the standard error is more than 30 percent but less than 51 percent of the estimate.

¹ STEM refers to science, technology, engineering, and mathematics.

NOTE: Public 2-year student includes all students who began postsecondary education in certificate or associate's degree programs at public, primarily associate's degree-granting institutions as defined by the 2010 basic Carnegie Classification. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

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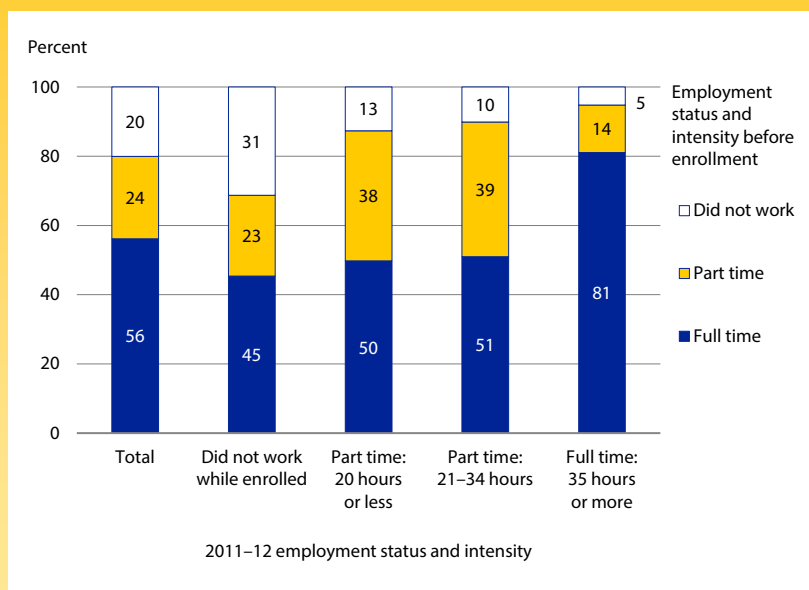
Among 2011–12 beginning public 2-year students who entered postsecondary education 12 or more months after high school graduation, was employment prior to enrollment in postsecondary education related to employment during their first year of college?

Among beginning public 2-year students, approximately one-third (32 percent) delayed postsecondary attendance by at least 12 months after graduating from high school (Radford et al. 2016) and thus had the opportunity to work between completing high school and enrolling in college.⁸ Of these students, more than half (56 percent) worked full time before beginning their postsecondary education, about one-quarter (24 percent) worked part time, and one-fifth did not work prior to enrolling (figure 1).

Students' employment status prior to enrollment was associated with their employment status and intensity while enrolled their first year. Among beginning public 2-year students who delayed attendance and subsequently worked full time while enrolled their first year, 81 percent had also worked full time prior to enrollment. In comparison, among students who did not work while enrolled their first year and those who worked part time, 51 percent or fewer had worked full time before enrolling. In addition, 31 percent of those who did not work while enrolled their first year were also not employed before they enrolled, compared with 5–13 percent of students who worked while enrolled their first year.

FIGURE 1.

EMPLOYMENT PRIOR TO ENROLLMENT
Among 2011–12 beginning public 2-year students who entered postsecondary education 12 or more months after high school graduation, percentage distribution of employment status and intensity before enrollment, by employment status: 2011–12



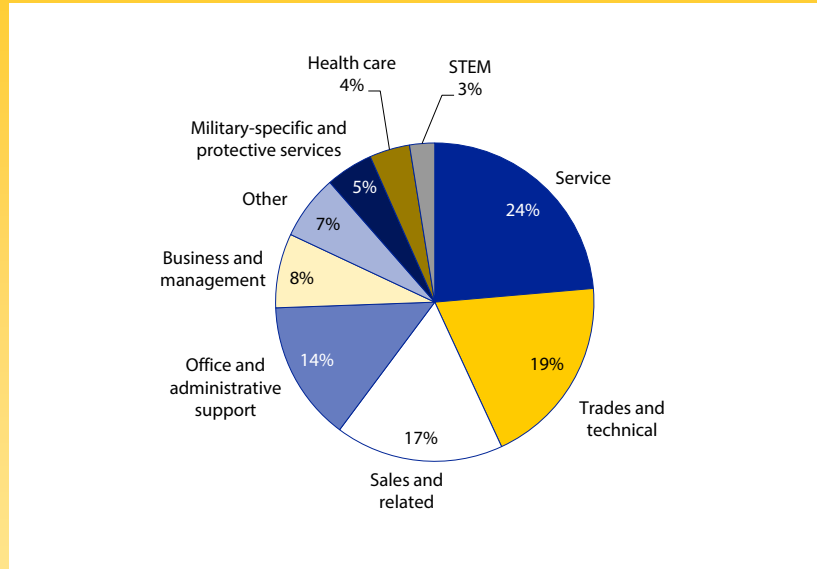
NOTE: Public 2-year students are defined as all students who began postsecondary education in certificate or associate's degree programs at public, primarily associate's degree-granting institutions as defined by the 2010 basic Carnegie Classification. Detail may not sum to totals because of rounding.
 SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

⁸ Only students who delayed enrollment by at least 12 months were asked questions about their employment prior to enrollment.

Among beginning public 2-year students who delayed postsecondary attendance and who worked prior to enrolling, 24 percent worked in service occupations; 19 percent worked in trades and technical occupations; 17 percent worked in sales and related occupations; 14 percent worked in office and administrative support occupations; 8 percent worked in business and management occupations; 5 percent worked in military-specific and protective-services occupations; 4 percent worked in health care occupations; and 3 percent worked in science, technology, engineering, and mathematics (STEM) occupations (figure 2).

FIGURE 2.

OCCUPATION BEFORE ENROLLMENT
Among 2011–12 beginning public 2-year students who entered postsecondary education 12 or more months after high school graduation and were employed before enrollment, percentage distribution of occupation before enrollment: 2011–12



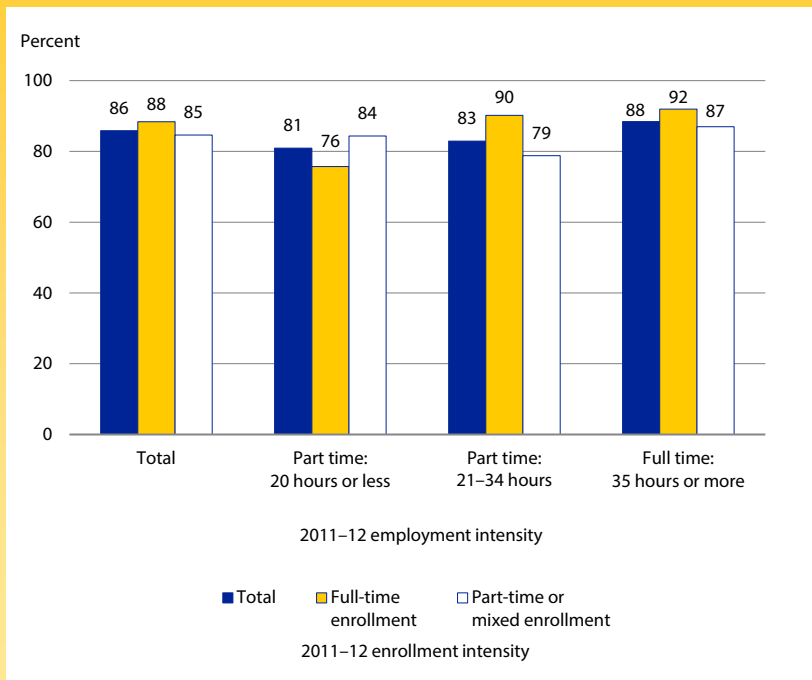
NOTE: Public 2-year students include all students who began postsecondary education in certificate or associate's degree programs at public, primarily associate's degree-granting institutions as defined by the 2010 basic Carnegie Classification. STEM refers to science, technology, engineering, and mathematics and includes computer and mathematical, architecture and engineering, and life/physical/social science technicians. Service includes food preparation and serving-related, personal care and service, and community and social services. Health care includes health care practitioners and technical and health care support. Trades and technical includes installation, maintenance, and repair; production; and transportation and material moving. Other includes legal; education, training, and library; art, design, entertainment, sports, and media; building/grounds cleaning and maintenance; farming, fishing, and forestry; and construction and extraction. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Most beginning public 2-year students (86 percent) who worked during the 12 or more months between graduating from high school and enrolling at the postsecondary level worked in the same or a similar job before and during enrollment (figure 3). There were no statistically significant differences by hours worked or enrollment intensity in the percentage of students who continued prior work after enrollment.

FIGURE 3.

CONTINUING PRIOR EMPLOYMENT
Among 2011–12 beginning public 2-year students who entered postsecondary education 12 or more months after high school graduation and were employed before enrollment and during 2011–12, percentage who were employed in the same or similar jobs before and during enrollment, by 2011–12 employment and enrollment intensity: 2011–12



NOTE: Public 2-year students include all students who began postsecondary education in certificate or associate's degree programs at public, primarily associate's degree-granting institutions as defined by the 2010 basic Carnegie Classification. "Mixed" refers to a combination of full- and part-time status.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

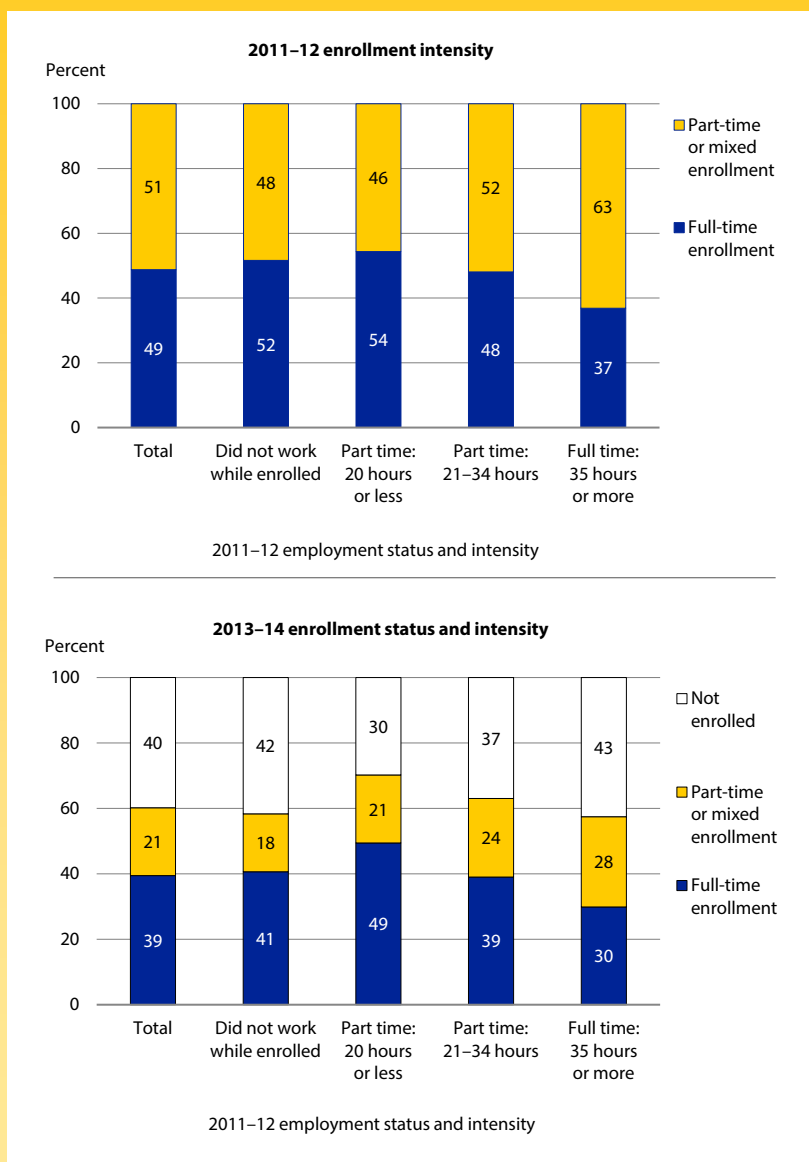
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Among 2011–12 beginning public 2-year students, was employment status and intensity in 2011–12 related to enrollment intensity during their first year of college, employment status and intensity later in college, expectations for future enrollment, and degree attainment as of 2014?

Employment status and intensity in 2011–12 was inversely related to enrollment intensity in that year. Some 37 percent of beginning public 2-year students who worked full time in 2011–12 were also enrolled full time, compared with 52 percent of students who did not work and 48–54 percent of students who worked part time (figure 4). Employment status and intensity in 2011–12 was also inversely related to enrollment intensity in 2013–14. About half (49 percent) of students who worked 20 hours or less per week in 2011–12 were enrolled full time in 2013–14, compared with 30–39 percent of those who worked more than 20 hours in 2011–12.

FIGURE 4.

ENROLLMENT BY EMPLOYMENT STATUS AND INTENSITY
Among 2011–12 beginning public 2-year students, percentage distribution of 2011–12 enrollment intensity and 2013–14 enrollment status and intensity, by 2011–12 employment status and intensity: 2011–12 and 2013–14



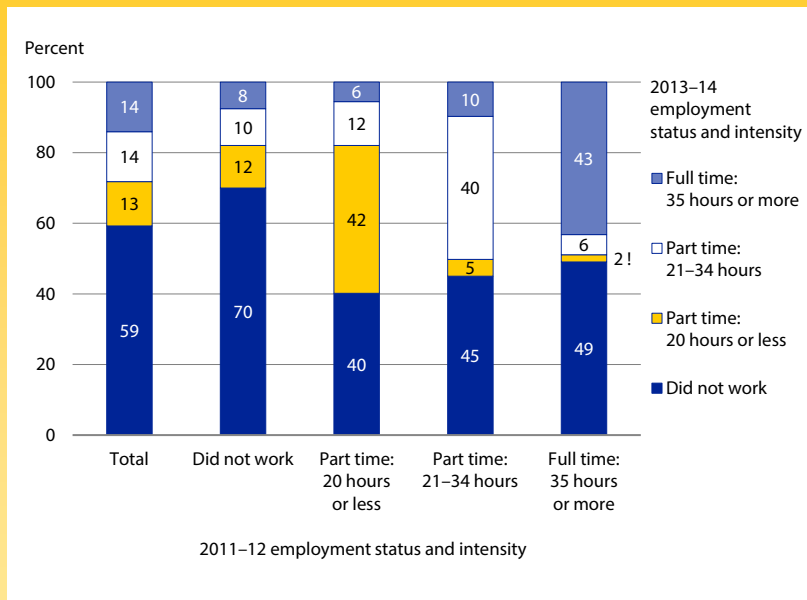
NOTE: Enrollment intensity in 2013–14 includes any enrollment during the 2013–14 academic year. Public 2-year students include all students who began postsecondary education in certificate or associate’s degree programs at public, primarily associate’s degree-granting institutions as defined by the 2010 basic Carnegie Classification. “Mixed” refers to a combination of full- and part-time status. Detail may not sum to totals because of rounding.
 SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Employment status and intensity varied over time, with less than half of students who worked while enrolled in 2011–12 working the same amount while enrolled in 2013–14. Among 2011–12 beginning public 2-year students who both worked while enrolled in 2011–12 and were enrolled 3 years later, 42 percent worked 20 hours per week or less in both academic years; 40 percent worked 21–34 hours per week in both years; and 43 percent worked full time in both 2011–12 and 2013–14 (figure 5).

Additionally, more students who worked full time when first enrolled had stopped working by their third year than students who worked half time or less in their first year. Some 49 percent of beginning public 2-year students who worked full time while enrolled in 2011–12 were not employed while enrolled in 2013–14, compared with 40 percent of those who worked 20 hours or less while enrolled in 2011–12.

FIGURE 5.

EMPLOYMENT WHILE ENROLLED IN 2013–14
Among 2011–12 beginning public 2-year students enrolled in 2013–14,
percentage distribution of 2013–14 employment status and intensity,
by 2011–12 employment status and intensity: 2013–14



! Interpret data with caution. Estimate is unstable because the standard error is more than 30 percent but less than 51 percent of the estimate.

NOTE: Public 2-year students include all students who began postsecondary education in certificate or associate's degree programs at public, primarily associate's degree-granting institutions as defined by the 2010 basic Carnegie Classification. Detail may not sum to totals because of rounding.

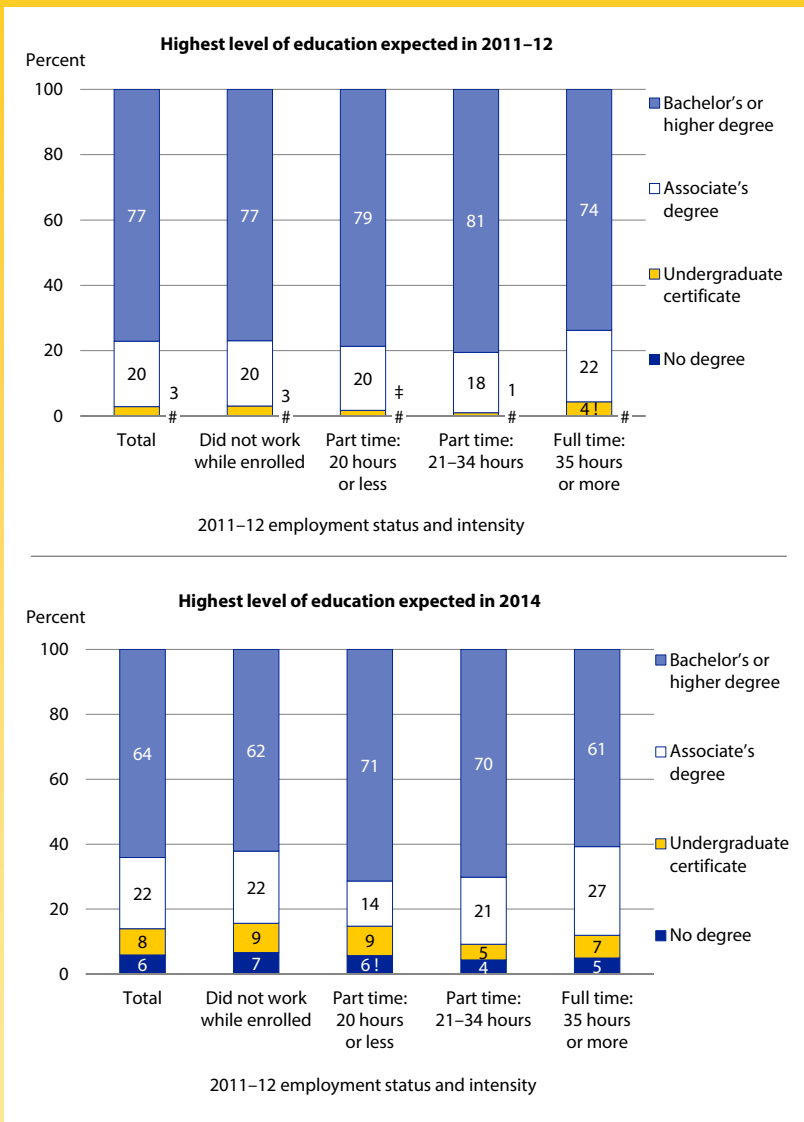
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

The highest level of education that students expected to achieve changed between 2011–12 and 2014. In 2011–12, some 77 percent of all beginning public 2-year students expected to complete a bachelor’s or higher degree, but by 2014, that percentage had dropped to 64 percent (figure 6). In contrast, in 2011–12, some 3 percent of all beginning public 2-year students expected to complete an undergraduate certificate, but by 2014, that percentage had risen to 8 percent.

In addition, there were differences in students’ 2014 degree-attainment expectations by their employment status and intensity while enrolled as first-year students. In 2014, some 61 percent of beginning public 2-year students who were employed full time while enrolled their first year and 62 percent of students who did not work in 2011–12 expected to earn at least a bachelor’s degree. In comparison, 71 percent of students who worked 20 hours or less per week and 70 percent of students who worked 21 to 34 hours per week expected to attain a bachelor’s or higher degree.

FIGURE 6.

HIGHEST LEVEL OF EDUCATION EXPECTED BY EMPLOYMENT STATUS AND INTENSITY
Among 2011–12 beginning public 2-year students, percentage distribution of highest level of education expected, by 2011–12 employment status and intensity: 2011–12 and 2014



Rounds to zero.

! Interpret data with caution. Estimate is unstable because the standard error is more than 30 percent but less than 51 percent of the estimate.

† Reporting standards not met. Either there are too few cases for a reliable estimate or the standard error is more than 50 percent of the estimate.

NOTE: Public 2-year students include all students who began postsecondary education in certificate or associate’s degree programs at public, primarily associate’s degree-granting institutions as defined by the 2010 basic Carnegie Classification. Detail may not sum to totals because of rounding.

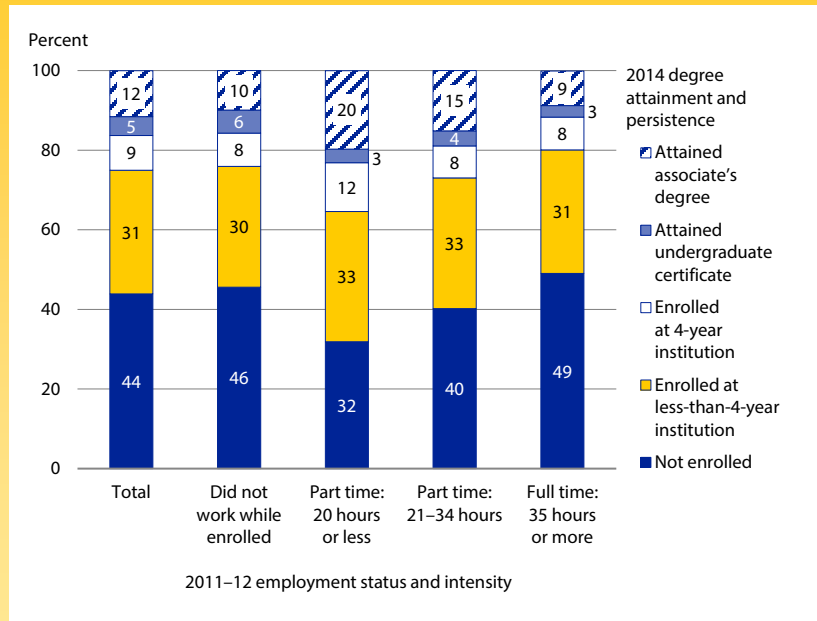
SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Students' employment while enrolled their first year was related not only to expectations of eventual degree attainment but also to actual attainment 3 years after beginning postsecondary education. Working no more than 20 hours per week while enrolled during their first year in college was associated with a higher rate of associate's degree attainment in 2014 than was not working or working full time as first-year students. One-fifth of beginning public 2-year students who worked 20 hours or less per week while enrolled in 2011–12 had attained an associate's degree by 2014, compared with about one-tenth of students who did not work or who worked full time during their first year (10 percent of students who did not work while enrolled and 9 percent of students who worked full time) (figure 7).

Additionally, by 2014, about half (49 percent) of beginning public 2-year students who worked full time during 2011–12 had left postsecondary education without a credential, as had 46 percent of those who had not worked in 2011–12. In contrast, proportionally fewer students who worked part time their first year had left without a credential within 3 years of first enrolling: 40 percent of students who worked 21 to 34 hours per week and 32 percent of those who worked 20 hours or less.

FIGURE 7.

DEGREE ATTAINMENT AND PERSISTENCE BY EMPLOYMENT STATUS AND INTENSITY
Among 2011–12 beginning public 2-year students, percentage distribution of 2014 degree attainment and persistence, by 2011–12 employment status and intensity: 2014



NOTE: Degree attainment and persistence indicates the highest degree or certificate attained as of June 2014 or the level of institution at which the student was last enrolled between January and June 2014. Public 2-year students include all students who began postsecondary education in certificate or associate's degree programs at public, primarily associate's degree-granting institutions as defined by the 2010 basic Carnegie Classification. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

4

Among 2011–12 beginning public 2-year students who had left postsecondary education with or without a credential and were not enrolled in 2014, was 2011–12 employment status and intensity related to employment status and intensity in 2014?

Employment during the first year of college may also be related to employment in the early years after leaving postsecondary education. Some 33 percent of 2011–12 beginning public 2-year students were not enrolled in 2014 and had no plans to reenroll in the remainder of 2014 (table 4). This group includes both students who attained an associate’s degree or undergraduate certificate and students who left without a degree.

Among 2011–12 beginning public 2-year students who were not enrolled in 2014 (including both those who had and those who had not completed a certificate or degree) and did not plan

to enroll again in 2014, proportionally more students who worked full time while enrolled as first-year students (79 percent) were employed in 2014, compared with students who did not work while enrolled in their first year (42 percent) and those who worked 21–34 hours in their first year (60 percent).

Full-time work as first-year students was also associated with full-time employment in 2014. Some 87 percent of beginning public 2-year students who had worked full time while enrolled in 2011–12, but were not enrolled in 2014, worked full time in 2014. In comparison, 68 percent of

students who had not worked their first year and 62–74 percent of students who had worked part time their first year were employed full time in 2014.

Proportionally more students who had not worked when first enrolled were unemployed in 2014, compared with students who had worked when first enrolled. Among 2011–12 beginning public 2-year students who were not enrolled 3 years later, 20 percent of students who did not work while enrolled in 2011–12 were unemployed in 2014, compared with 4–9 percent of students who worked part time and 6 percent of students who worked full time in 2011–12.

TABLE 4.

POST-ENROLLMENT EMPLOYMENT

Among 2011–12 beginning public 2-year students, percentage who were not enrolled in 2014 and had no plans to reenroll in 2014, and among those students, percentage distribution of 2014 employment status, by 2011–12 employment status and intensity: 2014

2011–12 employment status and intensity	Not enrolled in 2014 and had no plans to reenroll in 2014	2014 employment status					Out of the labor force
		Employed				Unemployed	
		Total employed	Part time	Full time			
Total	33.3	53.8	27.3	72.7	14.3	31.9	
Did not work	34.6	42.4	32.2	67.8	19.8	37.8	
Part time: 20 hours or less	28.4	67.6	38.1	61.9	3.8 !	28.6	
Part time: 21–34 hours	31.6	59.9	25.7	74.3	9.4	30.7	
Full time: 35 hours or more	33.6	78.9	12.8	87.2	5.6	15.5	

! Interpret data with caution. Estimate is unstable because the standard error is more than 30 percent but less than 51 percent of the estimate.

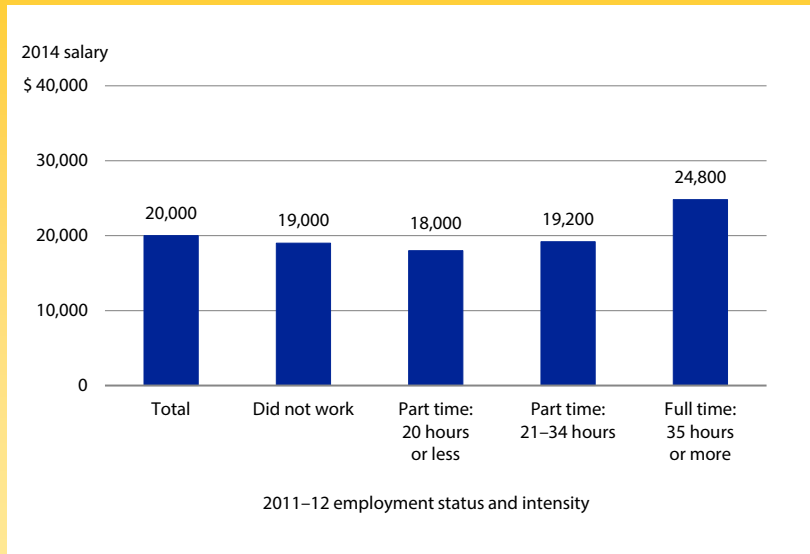
NOTE: Public 2-year students include all students who began postsecondary education in certificate or associate’s degree programs at public, primarily associate’s degree-granting institutions as defined by the 2010 basic Carnegie Classification. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Among 2011–12 beginning public 2-year students who were not enrolled in 2014, those who had worked full time when first enrolled earned a higher median salary in their post-enrollment job than did their counterparts who had worked less or not at all when first enrolled. The median 2014 earnings of students who worked full time in 2011–12 was \$24,800, compared with \$19,000 for those who did not work when first enrolled, \$18,000 for those who worked 20 hours or less per week, and \$19,200 for those who worked 21–34 hours per week (figure 8).

FIGURE 8.

POST-ENROLLMENT SALARY BY EMPLOYMENT WHILE ENROLLED
Among 2011–12 beginning public 2-year students who were employed and no longer enrolled in 2014 and had no plans to reenroll in 2014, median 2014 salary, by 2011–12 employment status and intensity: 2014



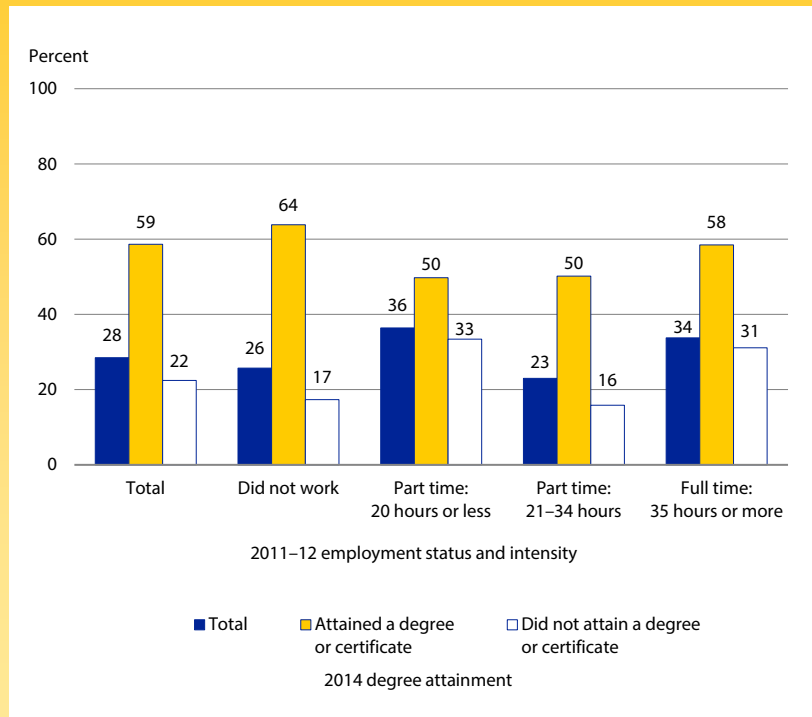
NOTE: Public 2-year students include all students who began postsecondary education in certificate or associate's degree programs at public, primarily associate's degree-granting institutions as defined by the 2010 basic Carnegie Classification. SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Among 2011–12 beginning public 2-year students who were working and not enrolled in 2014 and did not expect to enroll again in 2014, more than half of those who had earned a certificate or degree (59 percent) were working in a job related to their field of study (figure 9). In contrast, 22 percent of those who had not earned a certificate or degree reported that their job was related to their college studies. Among those who earned a certificate or degree, there were no statistically significant differences in the percentages who reported that their 2014 job was related to their field of study among respondents with different employment statuses and intensities in 2011–12.

FIGURE 9.

JOB RELATED TO COLLEGE STUDIES

Among 2011–12 beginning public 2-year students who were employed and no longer enrolled in 2014 and had no plans to reenroll in 2014, percentage who were employed in a job related to their college studies, by 2011–12 employment status and intensity and 2014 degree attainment: 2014



NOTE: Public 2-year students include all students who began postsecondary education in certificate or associate's degree programs at public, primarily associate's degree-granting institutions as defined by the 2010 basic Carnegie Classification. SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

FIND OUT MORE

For questions about content, to download this Statistics in Brief, or to view it online, go to:

<https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2018428>

More detailed information on 2011–12 beginning U.S. undergraduates can be found in Web Tables produced by the National Center for Education Statistics (NCES) using the BPS:12/14 data. These publications include estimates concerning retention, persistence, attainment, withdrawal, stopout, and transfer.

First-Time Postsecondary Students in 2011–12:

A Profile (NCES 2016-136).

<https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016136>

First-Time Postsecondary Students in 2011–12:

Three-Year Retention and Attainment at First Institution (NCES 2016-137).

<https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016137>

First-Time Postsecondary Students in 2011–12:

Three-Year Persistence and Attainment at Any Institution (NCES 2016-138).

<https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016138>

First-Time Postsecondary Students in 2011–12:

Three-Year Withdrawal, Stopout, and Transfer Rates (NCES 2016-139).

<https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016139>

Readers may also be interested in the following NCES product related to topics covered in this publication:

Persistence and Attainment of 2011–12 First-Time Postsecondary Students After 3 Years (NCES 2016-401).

<https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016401>

TECHNICAL NOTES

Survey Methodology

The estimates provided in this Statistics in Brief are based on data collected through BPS:12/14, a nationally representative study of the approximately 4 million students who were first enrolled in postsecondary education during the 2011–12 academic year. BPS is part of a suite of studies sponsored by NCES that explore postsecondary students' education financing, their education outcomes, and their early labor market experiences. The first BPS administration followed a cohort of 1989–90 first-time beginning students for 5 years, with follow-ups in 1992 and 1994. Two more cohorts were identified in 1995–96 and 2003–04, and each was followed up 3 and 6 years after they entered postsecondary education.

The 2011–12 National Postsecondary Student Aid Study (NPSAS:12) is the eighth administration of NPSAS, which has been conducted every 3 to 4 years since 1986–87. The NPSAS:12 target population includes students enrolled in Title IV postsecondary institutions in the United States (excluding Puerto Rico) at any time between July 1, 2011, and June 30, 2012.⁹ This population included about 23.1 million undergraduates and 3.7 million graduate students enrolled in over 7,000 institutions.

The BPS cohort was originally identified from respondents to NPSAS:12, which used a two-stage sampling design. Exhibit 1 presents the institution and student population and sample sizes and responses rates for the BPS:12/14 survey. First, 1,700 eligible institutions were sampled from the universe of Title IV participating schools in the 50 states and the District of Columbia.¹⁰ Sampled institutions supplied lists of all enrollees between July 1, 2011, and June 30, 2012, from which eligible students

were sampled. Using NPSAS:12 data, 37,200 NPSAS undergraduates were identified as potentially eligible for BPS and sampled for data collection in 2014. Responses to 2014 student interviews and additional administrative data collections provided the data needed to determine eligibility accurately based on the following definition of the target population: students who began postsecondary education for the first time during the 2011–12 academic year at any Title IV eligible

Exhibit 1. Selected statistics on BPS:12/14 data collections

Statistic	BPS:12/14
Target population	First-time beginning students (FTBs) in 2011–12
Target population size	4.3 million
Sampling frame (institutions)	2009–10 IPEDS IC, ¹ Fall Enrollment, 12-Month Enrollment, and Completion files
Number of sampled institutions (NPSAS:12) ²	1,700
Number of eligible institutions (NPSAS:12) ²	1,700
Number of participating institutions (NPSAS:12) ²	1,500
Percent of eligible institutions that provided student enrollment lists (unweighted)	87.8
Percent of eligible institutions that provided student enrollment lists (weighted)	87.0
Number of sampled students (BPS:12/14)	37,200
Number of eligible students (BPS:12/14)	35,500
BPS:12/14 interview response rate (unweighted)	69.7
BPS:12/14 interview response rate (weighted)	67.6

¹ The 2009–10 Integrated Postsecondary Education Data System (IPEDS) Institutional Characteristics (IC), Fall Enrollment, 12-Month Enrollment and Completion files were used to construct the institution sampling frame.

² The 2011–12 National Postsecondary Student Aid Study (NPSAS:12) was the base-year study for BPS:12/14.

NOTE: The analysis weight includes all study respondents who completed a BPS:12/14 interview.

SOURCE: Ifill, N., Radford, A.W., Wu, J., Cataldi, E.F., Wilson, D., and Hill, J. (2016). *Persistence and Attainment of 2011–12 First-Time Postsecondary Students After 3 Years*. (NCES 2016-401). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

⁹ The target population of students was limited to those enrolled in an academic program, those who took at least one course for credit that could be applied toward an academic degree, or those enrolled in an occupational or vocational program requiring at least 3 months or 300 clock hours of instruction to receive a degree, certificate, or other formal award. The target population excluded students who were also enrolled in high school or a high school completion (e.g., GED preparation) program. "Title IV institutions" refers to institutions eligible to participate in federal financial aid programs under Title IV of the Higher Education Act.

¹⁰ The target population of institutions was limited to those institutions that offered an educational program designed for persons who have completed secondary education; offered at least one academic, occupational, or vocational program of study lasting at least 3 months or 300 clock hours; offered courses that were open to more than the employees or members of the company or group (e.g., union) that administered the institution; were located in one of the 50 states or the District of Columbia; were not a U.S. service academy institution; and had signed the Title IV participation agreement with the U.S. Department of Education.

postsecondary institution in the United States. Approximately 35,500 students met this definition and were therefore eligible for BPS:12/14.

Students were interviewed using web-based or telephone instruments. The estimates in these tables reflect data from approximately 24,800 students who participated in the NPSAS:12 data collection and the first BPS follow-up (conducted in 2014, some 3 years after students began postsecondary education), yielding a response rate of 68 percent. This sample represents the approximately 4.3 million students who were first-time entrants to postsecondary education in the 2011–12 academic year. Like other NCES studies, BPS:12/14 collected data from a variety of sources, including web- or telephone-based student interviews conducted as part of NPSAS:12 and later in 2014, institutional records, federal financial aid applications and records of federal financial aid awards, and the National Student Clearinghouse.

Data processing included data swapping to protect respondent confidentiality and minimize disclosure risk. Detailed information about NCES data collections and an overview of survey methodology are available in the following reports: *2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14) Data File Documentation* (<https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016062>) and *2011–12 National Postsecondary Student Aid Study (NPSAS:12) Data File Documentation* (<https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2014182>).

VARIABLES USED

The variables used in this Statistics in Brief are listed below. Visit the NCES DataLab website at <https://nces.ed.gov/datalab> to view detailed information on question wording for variables coming directly from an interview, how variables were constructed, and their sources. The program files that generated the statistics presented in this Statistics in Brief can be found at <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2018428>. All estimates were generated using the first follow-up panel weight, WTA000.

Label	Name
2011–12 employment status and intensity	HRSWK12
2011–12 enrollment intensity	ENINPT1
2013–14 employment status and intensity	HRSWK14
2013–14 enrollment status and intensity	ENINPT3
2014 degree attainment	PROUT3
2014 degree attainment and persistence	PRLVL3Y
2014 employment status	JOBHRS14
2014 salary	SALARY14
Age	AGE
Beginning public 2-year students	CC2010B
Continuing prior enrollment	SAMEJOB
Dependency status	DEPEND5B
Employment status and intensity before enrollment	PRVHRSWK
Field of study	MAJ2Y14
Highest education attained by either parent	PAREduc
Highest level of education expected in 2011–12	HIGHLVEX
Highest level of education expected in 2014	DGEVR14
Job related to college studies	JOBRCLG14
Not enrolled in 2014 and had no plans to reenroll in 2014	JOBLFP14
Occupation before enrollment	PRVOCC
Race/ethnicity	RACE
Sex	GENDER
Undergraduate degree program	UGDEG

Two broad categories of error occur in estimates generated from surveys: sampling and nonsampling errors. Sampling errors occur when observations are based on samples rather than on entire populations. The standard error of a sample statistic is a measure of the variation due to sampling and indicates the precision of the statistic. The complex sampling design used in

BPS:12/14 must be taken into account when calculating variance estimates, including standard errors. NCES’s web-based software application, PowerStats, which was used to generate the estimates in this report, uses the balanced repeated replication and jackknife II methods to adjust variance estimation for the complex sample design (Wolter 2007).

Nonsampling errors can be attributed to several sources: incomplete information about all respondents (e.g., some students or institutions refused to participate, or students participated but answered only certain items); differences among respondents in question interpretation; inability or unwillingness to give correct information; mistakes in recording or coding data; and other errors of collecting, processing, and imputing missing data.

Response Rates

NCES Statistical Standard 4-4-1 states that “[a]ny survey stage of data collection with a unit or item response rate less than 85 percent must be evaluated for the potential magnitude of nonresponse bias before the data or any analysis using the data may be released” (Seastrom 2014). In the case of BPS:12/14, this means that nonresponse bias analysis could be required at any of three levels: institutions, study

respondents, or items. The weighted institution-level response rate for NPSAS:12 was 87 percent; therefore, nonresponse bias analysis was not required at that level.

As shown in exhibit 1, of 35,500 eligible sample members, the weighted interview response rate for BPS:12/14 was below 85 percent (68 percent). Exhibit 2 provides a summary of the results of nonresponse bias analyses conducted on the BPS:12/14 sample before and after the weights were adjusted to account for nonresponse. Each statistic is based on analyses of the following characteristics: institution control, level, doctorate-granting status, region, enrollment, and graduation rate; student age group as of NPSAS:12; whether the student had filed a Free Application for Federal Student Aid (FAFSA) (had a Central Processing System match) as of NPSAS:12; was a federal aid recipient; was a Pell Grant recipient; Pell Grant amount received;

was a Direct Loan recipient; Direct Loan amount received; was an institutional aid recipient; was a state aid recipient; major; and was a grant aid recipient. Within each category of institution control and level, nonresponse weight adjustments reduced estimated bias. For example, the mean estimated relative bias of estimates based on students who attended public 2-year institutions was 6 before nonresponse weight adjustments were made and 4 after those adjustments. In addition, whereas 29 percent of examined variable categories had estimates with significant bias before these adjustments, 3 percent did after. Poststratification adjustments also had effects. The difference between respondents’ means before and after poststratification ranged from 1 to 6, and the differences between the full sample estimates and those of respondents after poststratification did not exceed 5.

Exhibit 2. Summary of nonresponse bias analysis results and differences between pre- and post-stratification estimates using panel weight, by first institution control and level: 2012

Nonresponse bias statistics	Overall	Public less-than-2-year	Public 2-year	Public 4-year non-doctorate-granting	Public 4-year doctorate-granting	Private less-than-4-year	Private 4-year non-doctorate-granting	Private 4-year nonprofit doctorate-granting	Private for-profit less-than-2-year	Private for-profit 2-year	Private for-profit 4-year
Before nonresponse weight adjustments											
Mean estimated relative bias	10.7	7.8	6.4	8.9	4.2	12.9	7.1	4.7	13.0	9.6	7.2
Median estimated relative bias	6.3	5.1	3.8	4.6	2.7	8.8	4.0	3.8	7.5	5.4	5.5
Percent of variable categories significantly biased	62.1	36.4	29.0	43.2	33.3	7.4	32.6	29.3	25.0	8.3	11.7
After nonresponse weight adjustments											
Mean estimated relative bias	2.5	3.7	3.8	4.4	2.9	9.5	3.6	1.8	6.0	6.8	6.0
Median estimated relative bias	#	3.9	2.5	2.7	1.4	5.6	1.9	1.3	3.1	4.8	3.1
Percent of variable categories significantly biased	6.9	#	3.2	11.4	16.7	11.1	14.0	#	2.5	8.3	8.3
Difference between means for respondents before and after poststratification adjustment¹											
Mean absolute difference across characteristics	0.8	6.2	1.6	2.2	1.3	5.6	2.6	1.1	2.8	3.0	1.3
Median absolute difference across characteristics	0.5	4.9	0.3	1.4	1.0	5.7	2.1	0.9	1.2	1.1	1.1
Difference between means for full sample and respondents after poststratification adjustment²											
Mean absolute difference across characteristics	0.7	5.4	1.7	1.6	1.1	4.9	2.4	1.2	2.8	3.2	1.3
Median absolute difference across characteristics	0.5	1.8	0.6	1.3	0.8	4.4	2.2	0.8	1.7	1.7	0.8

Rounds to zero.

¹ Respondents before poststratification adjustment are weighted using the base weight, adjusted for nonresponse. Respondents after poststratification adjustment are weighted using the base weight, adjusted for nonresponse and poststratification.

² Full sample is weighted using the base weight. Respondents after poststratification adjustment are weighted using the base weight, adjusted for nonresponse and poststratification. NOTE: Relative bias and significance calculated on respondents versus full sample. Relative bias is defined as the ratio of estimated bias to the weighted mean of the full sample. Variable categories with fewer than 30 nonrespondents were suppressed for calculations in this table.

SOURCE: Ifill, N., Radford, A.W., Wu, J., Cataldi, E.F., Wilson, D., and Hill, J. (2016). *Persistence and Attainment of 2011–12 First-Time Postsecondary Students After 3 Years*. (NCES 2016-401). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

At the item level, six of the variables used in this report required nonresponse bias analysis because their response rates fell below 85 percent: employed in the same or similar jobs while enrolled and prior to enrollment (SAMEJOB) (67 percent), employed in a job related to college studies (JOBCLG14) (71 percent), employment status prior to enrollment (PRVHRSWK) (73 percent), occupation prior to enrollment (PRVOCC) (73 percent), dependency status (DEPEND5B) (73 percent), and employment status in 2014 (JOBFP14) (76 percent). For each of these variables, nonresponse bias analyses were conducted to determine whether respondents and nonrespondents differed on institution and student characteristics. Institution characteristics included the following: control and level; Office of Business Economics region; enrollment (categorized); percentage of full-time, first-time degree/certificate-

seeking undergraduate students who received any grant aid; and the rate at which full-time, first-time degree/certificate-seeking undergraduates graduated within 150 percent of normal time to completion. Student characteristics included the following: whether filed a FAFSA; whether received federal aid; whether received a Pell Grant; whether received a Direct Loan; amount received in Direct Loans (categorized); amount received in Pell Grants (categorized); age (categorized); whether received institutional aid; whether received state aid; and major (2-digit CIP [Classification of Instructional Programs], with several small majors collapsed). These analyses were conducted on data from students who began in public 2-year institutions because this report focuses on students in these institutions. Differences between respondents and nonrespondents on these variables were

tested for statistical significance at the 5 percent level (exhibit 3).

These nonresponse bias analyses indicated that respondents differed from nonrespondents on 2–54 percent of the characteristics analyzed, indicating that there may be bias in these estimates. Any bias due to nonresponse, however, is based upon responses prior to stochastic imputation in which missing data were replaced with valid data from the records of donor cases that matched the recipients on selected demographic, enrollment, institution, and financial aid-related variables (Krotki, Black, and Creel 2005).

The potential for bias can be tempered by imputation. Imputation procedures are designed specifically to identify donors with characteristics similar to those of the respondents whose data are missing; therefore, imputation is

Exhibit 3. Results of analyses to assess nonresponse bias among public 2-year student sample members

Variable name	Response rate	Pre-imputation			Percent difference in means or average percent difference across all categories pre- and post-imputation
		Median percent relative bias across characteristics	Percentage of characteristics with significant bias	Characteristic with greatest significant bias	
SAMEJOB	67.0	4.0	2.6	Age 15–23	7.8
JOBCLG14	71.3	2.8	9.1	State aid yes/no	2.7
PRVHRSWK	72.7	2.1	2.1	Age 15–23	0.5
PRVOCC	72.8	2.4	4.2	Major (2-digit CIP) security and protective services	5.8
DEPEND5B	73.1	6.6	54.2	Has CPS records yes/no	10.2 *
JOBFP14	76.4	0.9	2.1	Major (2-digit CIP) unknown	5.3 *

* Indicates statistically significant difference at $p < .05$.

NOTE: Relative bias is computed by dividing a variable's estimated bias for a given characteristic by the variable's mean for public 2-year students. Public 2-year students includes all students enrolled in certificate or associate's degree programs at public, primarily associate's degree-granting institutions based on the 2010 basic Carnegie Classification. Relative bias is defined as significant if its difference from zero is statistically significant at $p < .05$.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

assumed to reduce bias. Although the level of item-level bias before imputation is measurable, the same measurement cannot be made after imputation. The magnitude of any change in item-level bias cannot be determined; however, the item estimates before and after imputation were compared to determine whether the imputation changed the biased estimate as an indication of a possible reduction in bias.

For continuous variables, the difference between the mean before imputation and the mean after imputation was estimated. For each of the categories in the categorical variables, the estimated difference was computed as the percentage of students in that category before imputation minus the percentage of students in that category after imputation. These estimated differences were tested for statistical significance at the 5 percent level. A significant difference in the item means after imputation implies a reduction in bias due to imputation. A nonsignificant difference suggests that imputation may not have reduced bias, that the sample size was too small to detect a significant difference, or that there was little bias to be reduced. Statistical tests of the differences between the means before and after imputation for two of these six variables were significant,

indicating that the nonresponse bias was reduced through imputation.

For more detailed information on nonresponse bias analysis and an overview of the survey methodology, see *2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14) Data File Documentation* (<https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016062>).

Statistical Procedures

Comparisons of means and proportions were tested using Student's *t* statistic. Differences between estimates were tested against the probability of a Type I error¹¹ or significance level. The statistical significance of each comparison was determined by calculating the Student's *t* value for the difference between each pair of means or proportions and comparing the *t* value with published tables of significance levels for two-tailed hypothesis testing.¹² Student's *t* values were computed to test differences between independent estimates using the following formula:

$$t = \frac{E_1 - E_2}{\sqrt{se_1^2 + se_2^2}}$$

where E_1 and E_2 are the estimates to be compared and se_1 and se_2 are their corresponding standard errors.

There are hazards in reporting statistical tests for each comparison. First, comparisons based on large *t* statistics may appear to merit special attention. This can be misleading because the magnitude of the *t* statistic is related not only to the observed differences in means or percentages but also to the number of respondents in the specific categories used for comparison. Hence, a small difference compared across a large number of respondents would produce a large (and thus possibly statistically significant) *t* statistic.

A second hazard in reporting statistical tests is the possibility that one can report a "false positive" or Type I error. Statistical tests are designed to limit the risk of this type of error using a value denoted by alpha. The alpha level of .05 was selected for findings in this report and ensures that a difference of a certain magnitude or larger would be produced when there was no actual difference between the quantities in the underlying population no more than 1 time out of 20.¹³ When analysts test hypotheses that show alpha values at the .05 level or smaller, they reject the null hypothesis that there is no difference between the two quantities. Failing to reject a null hypothesis (i.e., detect a difference), however, does not imply that the values are the same or equivalent.

¹¹ A Type I error occurs when one concludes that a difference observed in a sample reflects a true difference in the population from which the sample was drawn, when no such difference is present.

¹² Analysts used a one-tailed hypothesis test to establish whether an estimate was statistically different from a parameter such as 50 percent.

¹³ No adjustments were made for multiple comparisons.

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APPENDIX A. DATA TABLES

Table A-1. Estimates for figure 1: EMPLOYMENT PRIOR TO ENROLLMENT
Among 2011–12 beginning public 2-year students who entered postsecondary education 12 or more months after high school graduation, percentage distribution of employment status and intensity before enrollment, by employment status: 2011–12

Employment status and intensity before enrollment	2011–12 employment status and intensity				
	Total	Did not work	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Total	100.0	100.0	100.0	100.0	100.0
Did not work	20.0	31.3	12.7	10.1	5.2
Part time	23.8	23.3	37.6	38.9	13.8
Full time	56.2	45.4	49.8	51.0	81.1

NOTE: Public 2-year students include all students who began postsecondary education in certificate or associate's degree programs at public, primarily associate's degree-granting institutions as defined by the 2010 basic Carnegie Classification. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Table A-2. Estimates for figure 2: OCCUPATION BEFORE ENROLLMENT
Among 2011–12 beginning public 2-year students who entered postsecondary education 12 or more months after high school graduation and were employed before enrollment, percentage distribution of occupation before enrollment: 2011–12

Occupation	Percent
Total	100.0
Service	23.6
Trades and technical	19.5
Sales and related	17.1
Office and administrative support	14.2
Business and management	7.6
Other	6.6
Military-specific and protective services	4.8
Health care	4.1
STEM	2.5

NOTE: Public 2-year students include all students who began postsecondary education in certificate or associate's degree programs at public, primarily associate's degree-granting institutions as defined by the 2010 basic Carnegie Classification. STEM refers to science, technology, engineering, and mathematics and includes computer and mathematical, architecture and engineering, and life/physical/social science technicians. Service includes food preparation and serving-related, personal care and service, and community and social services. Health care includes health care practitioners and technical and health care support. Trades and technical includes installation, maintenance, and repair; production; and transportation and material moving. Other includes legal; education, training, and library; art, design, entertainment, sports, and media; building/grounds cleaning and maintenance; farming, fishing, and forestry; and construction and extraction. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Table A-3. Estimates for figure 3: CONTINUING PRIOR EMPLOYMENT
Among 2011–12 beginning public 2-year students who entered postsecondary education 12 or more months after high school graduation and were employed before enrollment and during 2011–12, percentage who were employed in the same or similar jobs before and during enrollment, by 2011–12 employment and enrollment intensity: 2011–12

2011–12 enrollment intensity	2011–12 employment intensity			
	Total	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Total	85.8	80.9	82.9	88.4
Full-time enrollment	88.4	75.7	90.2	91.9
Part-time or mixed enrollment	84.6	84.4	78.8	87.0

NOTE: Public 2-year students include all students who began postsecondary education in certificate or associate's degree programs at public, primarily associate's degree-granting institutions as defined by the 2010 basic Carnegie Classification. "Mixed" refers to a combination of full- and part-time status.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Table A-4. Estimates for figure 4: ENROLLMENT BY EMPLOYMENT STATUS AND INTENSITY
Among 2011–12 beginning public 2-year students, percentage distribution of 2011–12 enrollment intensity and 2013–14 enrollment status and intensity, by 2011–12 employment status and intensity: 2011–12 and 2013–14

Enrollment intensity	2011–12 employment status and intensity				
	Total	Did not work	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Total	100.0	100.0	100.0	100.0	100.0
2011–12 Enrollment intensity					
Part-time or mixed enrollment	51.2	48.4	45.6	51.9	63.1
Full-time enrollment	48.8	51.6	54.4	48.1	36.9
2013–14 Enrollment status and intensity					
Not enrolled	39.8	41.7	29.8	37.0	42.5
Part-time or mixed enrollment	20.7	17.7	20.8	24.0	27.6
Full-time enrollment	39.5	40.6	49.4	39.0	29.9

NOTE: Enrollment intensity in 2013–14 include any enrollment during the 2013–14 academic year. Public 2-year students include all students who began postsecondary education in certificate or associate's degree programs at public, primarily associate's degree-granting institutions as defined by the 2010 basic Carnegie Classification. "Mixed" refers to a combination of full- and part-time status. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

**Table A-5. Estimates for figure 5: EMPLOYMENT WHILE ENROLLED IN 2013–14
Among 2011–12 beginning public 2-year students enrolled in 2013–14, percentage distribution of 2013–14
employment status and intensity, by 2011–12 employment status and intensity: 2013–14**

2013–14 employment status and intensity	2011–12 employment status and intensity				
	Total	Did not work	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Total	100.0	100.0	100.0	100.0	100.0
Full time: 35 hours or more	14.1	7.5	5.5	9.7	43.2
Part time: 21–34 hours	14.1	10.4	12.5	40.5	5.7
Part time: 20 hours or less	12.6	12.1	41.9	4.8	2.0 !
Did not work	59.2	70.0	40.2	45.0	49.1

! Interpret data with caution. Estimate is unstable because the standard error is more than 30 percent but less than 51 percent of the estimate.

NOTE: Public 2-year students include all students who began postsecondary education in certificate or associate's degree programs at public, primarily associate's degree-granting institutions as defined by the 2010 basic Carnegie Classification. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

**Table A-6. Estimates for figure 6: HIGHEST LEVEL OF EDUCATION EXPECTED BY EMPLOYMENT STATUS AND INTENSITY
Among 2011–12 beginning public 2-year students, percentage distribution of highest level of education expected,
by 2011–12 employment status and intensity: 2011–12 and 2014**

Highest level of education expected	2011–12 employment status and intensity				
	Total	Did not work	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Total	100.0	100.0	100.0	100.0	100.0
Highest level of education expected in 2011–12					
Bachelor's or higher degree	77.1	77.0	78.7	80.5	73.8
Associate's degree	20.1	20.0	19.6	18.5	21.9
Undergraduate certificate	2.9	3.1	‡	1.0	4.4 !
No degree	#	#	#	#	#
Highest level of education expected in 2014					
Bachelor's or higher degree	64.1	62.2	71.3	70.2	60.8
Associate's degree	22.0	22.2	13.9	20.7	27.3
Undergraduate certificate	8.1	9.0	9.1	4.8	7.0
No degree	5.9	6.6	5.7 !	4.3	4.9

Rounds to zero.

! Interpret data with caution. Estimate is unstable because the standard error is more than 30 percent but less than 51 percent of the estimate.

‡ Reporting standards not met. Either there are too few cases for a reliable estimate or the standard error is more than 50 percent of the estimate.

NOTE: Public 2-year students include all students who began postsecondary education in certificate or associate's degree programs at public, primarily associate's degree-granting institutions as defined by the 2010 basic Carnegie Classification. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Table A-7. Estimates for figure 7: DEGREE ATTAINMENT AND PERSISTENCE BY EMPLOYMENT STATUS AND INTENSITY Among 2011–12 beginning public 2-year students, percentage distribution of 2014 degree attainment and persistence, by 2011–12 employment status and intensity: 2014

2014 degree attainment and persistence	2011–12 employment status and intensity				
	Total	Did not work	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Total	100.0	100.0	100.0	100.0	100.0
Attained associate's degree	11.5	9.9	19.7	15.2	8.7
Attained undergraduate certificate	4.7	5.8	3.4	3.8	2.9
Enrolled at 4-year institution	8.7	8.3	12.2	8.0	8.2
Enrolled at less-than-4-year institution	31.1	30.3	32.7	32.8	31.0
Not enrolled	43.9	45.6	31.9	40.2	49.0

NOTE: Degree attainment and persistence indicates the highest degree or certificate attained as of June 2014 or the level of institution at which the student was last enrolled between January and June 2014. Public 2-year students include all students who began postsecondary education in certificate or associate's degree programs at public, primarily associate's degree-granting institutions as defined by the 2010 basic Carnegie Classification. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Table A-8. Estimates for figure 8: POST-ENROLLMENT SALARY BY EMPLOYMENT WHILE ENROLLED Among 2011–12 beginning public 2-year students who were employed and no longer enrolled in 2014 and had no plans to reenroll in 2014, median 2014 salary, by 2011–12 employment status and intensity: 2014

	2011–12 employment status and intensity				
	Total	Did not work	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Total	\$20,000	\$19,000	\$18,000	\$19,200	\$24,800

NOTE: Public 2-year students include all students who began postsecondary education in certificate or associate's degree programs at public, primarily associate's degree-granting institutions as defined by the 2010 basic Carnegie Classification.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Table A-9. Estimates for figure 9: JOB RELATED TO COLLEGE STUDIES Among 2011–12 beginning public 2-year students who were employed and no longer enrolled in 2014 and had no plans to reenroll in 2014, percentage who were employed in a job related to their college studies, by 2011–12 employment status and intensity and 2014 degree attainment: 2014

2014 degree attainment	2011–12 employment status and intensity				
	Total	Did not work	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Total	28.4	25.7	36.4	23.0	33.6
Attained a degree or certificate	58.5	63.8	49.8	50.2	58.5
Did not attain a degree or certificate	22.4	17.3	33.2	15.8	30.1

NOTE: Public 2-year students include all students who began postsecondary education in certificate or associate's degree programs at public, primarily associate's degree-granting institutions as defined by the 2010 basic Carnegie Classification.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

APPENDIX B. STANDARD ERROR TABLES

Table B-1. Standard errors for table A-1 and figure 1: EMPLOYMENT PRIOR TO ENROLLMENT
Among 2011–12 beginning public 2-year students who entered postsecondary education 12 or more months after high school graduation, percentage distribution of employment status and intensity before enrollment, by employment status: 2011–12

Employment status and intensity before enrollment	2011–12 employment status and intensity				
	Total	Did not work	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Total	†	†	†	†	†
Did not work	1.33	2.30	3.05	2.28	1.07
Part time	1.68	2.21	7.16	6.04	2.20
Full time	1.80	2.32	7.44	5.73	2.51

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Table B-2. Standard errors for table A-2 and figure 2: OCCUPATION BEFORE ENROLLMENT
Among 2011–12 beginning public 2-year students who entered postsecondary education 12 or more months after high school graduation and were employed before enrollment, percentage distribution of occupation before enrollment: 2011–12

Occupation	Percent
Total	†
Service	1.79
Trades and technical	1.98
Sales and related	1.66
Office and administrative support	1.51
Business and management	1.11
Other	0.83
Military-specific and protective services	1.08
Healthcare	0.72
STEM	0.73

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Table B-3. Standard errors for table A-3 and figure 3: CONTINUING PRIOR EMPLOYMENT
Among 2011–12 beginning public 2-year students who entered postsecondary education 12 or more months after high school graduation and were employed before enrollment and during 2011–12, percentage who were employed in the same or similar jobs before and during enrollment, by 2011–12 employment and enrollment intensity: 2011–12

2011–12 enrollment intensity	2011–12 employment intensity			
	Total	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Total	2.25	5.27	5.19	2.32
Full-time enrollment	2.30	9.46	2.56	2.53
Part-time or mixed enrollment	2.94	7.20	7.49	3.19

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Table B-4. Standard errors for table A-4 and figure 4: ENROLLMENT BY EMPLOYMENT STATUS AND INTENSITY Among 2011–12 beginning public 2-year students, percentage distribution of 2011–12 enrollment intensity and 2013–14 enrollment status and intensity, by 2011–12 employment status and intensity: 2011–12 and 2013–14

Enrollment intensity	2011–12 employment status and intensity				
	Total	Did not work	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Total	†	†	†	†	†
2011–12 Enrollment intensity					
Part-time or mixed enrollment	1.22	1.54	3.21	2.84	2.35
Full-time enrollment	1.22	1.54	3.21	2.84	2.35
2013–14 Enrollment status and intensity					
Not enrolled	1.45	1.79	3.22	2.49	2.55
Part-time or mixed enrollment	0.92	1.08	2.52	2.05	2.44
Full-time enrollment	1.31	1.48	3.61	2.48	2.24

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Table B-5. Standard errors for table A-5 and figure 5: EMPLOYMENT WHILE ENROLLED IN 2013–14 Among 2011–12 beginning public 2-year students enrolled in 2013–14, percentage distribution of 2013–14 employment status and intensity, by 2011–12 employment status and intensity: 2013–14

2013–14 employment status and intensity	2011–12 employment status and intensity				
	Total	Did not work	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Total	†	†	†	†	†
Full time: 35 hours or more	0.75	0.77	1.17	1.40	2.29
Part time: 21–34 hours	0.70	0.75	2.09	2.49	1.27
Part time: 20 hours or less	0.78	0.92	3.16	0.86	0.75
Did not work	1.22	1.36	3.28	2.50	2.41

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Table B-6. Standard errors for table A-6 and figure 6: HIGHEST LEVEL OF EDUCATION EXPECTED BY EMPLOYMENT STATUS AND INTENSITY
Among 2011–12 beginning public 2-year students, percentage distribution of highest level of education expected, by 2011–12 employment status and intensity: 2011–12 and 2014

Highest level of education expected	2011–12 employment status and intensity				
	Total	Did not work	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Total	†	†	†	†	†
Highest level of education expected in 2011–12					
Bachelor's or higher degree	1.11	1.24	2.82	2.59	2.38
Associate's degree	0.93	1.12	2.71	2.58	2.05
Undergraduate certificate	0.48	0.57	†	0.28	1.36
No degree	†	†	†	†	†
Highest level of education expected in 2014					
Bachelor's or higher degree	1.31	1.47	2.98	2.65	2.85
Associate's degree	0.86	1.12	1.82	2.27	2.21
Undergraduate certificate	0.76	1.01	1.97	1.36	1.22
No degree	0.46	0.51	1.88	1.12	1.01

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Table B-7. Standard errors for table A-7 and figure 7: DEGREE ATTAINMENT AND PERSISTENCE BY EMPLOYMENT STATUS AND INTENSITY
Among 2011–12 beginning public 2-year students, percentage distribution of 2014 degree attainment and persistence, by 2011–12 employment status and intensity: 2014

2014 degree attainment and persistence	2011–12 employment status and intensity				
	Total	Did not work	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Total	†	†	†	†	†
Attained associate's degree	0.81	0.84	2.54	1.69	1.08
Attained undergraduate certificate	0.49	0.81	0.97	0.77	0.53
Enrolled at 4-year institution	†	†	†	†	0.11
Enrolled at less-than-4-year institution	0.65	0.70	1.76	1.29	1.50
Not enrolled	1.32	1.55	3.21	2.52	2.57

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Table B-8. Standard errors for table A-8 and figure 8: POST-ENROLLMENT SALARY BY EMPLOYMENT WHILE ENROLLED
Among 2011–12 beginning public 2-year students who were employed and no longer enrolled in 2014 and had no plans to reenroll in 2014, median 2014 salary, by 2011–12 employment status and intensity: 2014

	2011–12 employment status and intensity				
	Total	Did not work	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Total	\$200	\$760	\$1,830	\$830	\$1,640

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Table B-9. Standard errors for table A-9 and figure 9: JOB RELATED TO COLLEGE STUDIES
Among 2011–12 beginning public 2-year students who were employed and no longer enrolled in 2014 and had no plans to reenroll in 2014, percentage who were employed in a job related to their college studies, by 2011–12 employment status and intensity and 2014 degree attainment: 2014

2014 degree attainment	2011–12 employment status and intensity				
	Total	Did not work	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Total	2.10	2.96	7.40	3.90	5.28
Attained a degree or certificate	5.27	7.34	13.73	10.43	9.39
Did not attain a degree or certificate	2.29	2.75	8.53	3.63	5.92

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Table B-10. Standard errors for table 1. DEMOGRAPHICS OF BEGINNING POSTSECONDARY STUDENTS
Among 2011–12 beginning postsecondary students, percentage distribution of selected demographic characteristics, by whether began postsecondary education in a public 2-year institution: 2011–12

Demographic characteristics	Beginning public 2-year students	Beginning students at institutions other than a public 2-year	All beginning postsecondary students
Total	†	†	†
Sex			
Male	0.93	0.76	0.60
Female	0.93	0.76	0.60
Race/ethnicity			
White	1.18	1.04	0.82
Black	0.83	0.74	0.59
Hispanic	0.93	0.80	0.58
Asian	0.40	0.42	0.28
Other	0.26	0.22	0.17
Two or more races	0.37	0.22	0.20
Age			
19 years or younger	1.79	0.60	0.78
20–23	0.84	0.45	0.43
24–29	0.85	0.29	0.41
30 years or older	0.72	0.43	0.34
Dependency status			
Dependent	1.69	0.92	0.63
Independent	1.69	0.92	0.63
Without dependents	1.21	0.53	0.46
Unmarried	0.95	0.56	0.36
Married	0.51	0.21	0.27
With dependents	0.95	0.59	0.46
Unmarried	0.69	0.55	0.38
Married	0.57	0.28	0.32
Highest education attained by either parent			
High school diploma or less	1.16	0.77	0.57
Some postsecondary education	0.96	0.63	0.50
Bachelor's degree or higher	0.98	0.77	0.63

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Table B-11. Standard errors for table 2: EMPLOYMENT OF BEGINNING PUBLIC 2-YEAR STUDENTS BY DEMOGRAPHICS
Among beginning public 2-year students, percentage distribution of employment status and intensity, by selected demographic characteristics: 2011–12

Demographic characteristics	Did not work	Employed			
		Total employed	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Total	1.01	1.01	0.64	0.62	0.73
Sex					
Male	1.38	1.38	0.90	0.88	1.21
Female	1.54	1.54	1.05	0.98	1.10
Race/ethnicity					
White	1.28	1.28	0.87	0.89	1.09
Black	2.46	2.46	1.12	1.48	1.71
Hispanic	2.24	2.24	1.32	1.32	1.51
Asian	4.24	4.24	2.68	3.13	2.61
Other	9.81	9.81	8.22	†	7.42
Two or more races	4.95	4.95	3.63	3.70	3.98
Age					
19 years or younger	1.24	1.24	0.77	0.73	0.79
20–23	2.97	2.97	1.47	1.74	2.24
24–29	3.67	3.67	1.68	2.45	3.75
30 or older	3.00	3.00	1.68	1.54	2.64
Dependency status					
Dependent	1.26	1.26	0.78	0.73	0.74
Independent	1.91	1.91	0.98	1.12	1.62
Without dependents	2.82	2.82	1.77	1.34	2.77
Unmarried	2.86	2.86	1.98	1.55	2.54
Married	7.64	7.64	†	†	7.64
With dependents	2.40	2.40	1.05	1.75	1.82
Unmarried	2.87	2.87	1.21	2.51	2.36
Married	4.03	4.03	1.63	2.42	3.49
Highest education attained by either parent					
High school diploma or less	1.55	1.55	0.85	1.01	1.18
Some postsecondary education	1.89	1.89	1.34	1.27	1.31
Bachelor's degree or higher	1.82	1.82	1.33	1.14	1.43

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Table B-12. Standard errors for table 3: EMPLOYMENT OF BEGINNING PUBLIC 2-YEAR STUDENTS BY DEGREE PROGRAM AND FIELD OF STUDY
Among beginning public 2-year students, percentage distribution of employment status and intensity, by undergraduate degree program and field of study: 2011–12

Undergraduate degree program and field of study	Did not work	Employed			
		Total employed	Part time: 20 hours or less	Part time: 21–34 hours	Full time: 35 hours or more
Undergraduate degree program					
Certificate	4.20	4.20	2.08	2.10	3.62
Associate's degree	1.04	1.04	0.67	0.65	0.74
Field of study					
STEM	2.61	2.61	1.53	1.77	2.34
Computer and information sciences	5.53	5.53	1.91	2.82	5.35
Engineering and engineering technology	4.43	4.43	2.85	3.24	3.97
Biology and physical science, science technology, math, and agriculture	4.49	4.49	3.06	3.08	3.39
Non-STEM	1.22	1.22	0.76	0.75	0.87
General studies and other	3.65	3.65	2.52	1.67	2.77
Social sciences and humanities	3.12	3.12	2.34	1.91	2.25
Personal and consumer services	5.41	5.41	3.69	3.32	3.41
Manufacturing, construction, repair, and transportation	4.49	4.49	3.50	3.57	3.80
Military technology and protective services	4.18	4.18	1.97	2.64	3.31
Health care fields	2.75	2.75	1.52	1.46	1.92
Business	2.90	2.90	1.59	2.21	2.08
Other applied	2.80	2.80	1.94	2.29	2.46

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

Table B-13. Standard errors for table 4: POST-ENROLLMENT EMPLOYMENT
Among 2011–12 beginning public 2-year students, percentage who were not enrolled in 2014 and had no plans to reenroll in 2014, and among those students, percentage distribution of 2014 employment status, by 2011–12 employment status and intensity: 2014

2011–12 employment status and intensity	Not enrolled in 2014 and had no plans to reenroll in 2014	2014 employment status				
		Total employed	Employed		Unemployed	Out of the labor force
			Part time	Full time		
Total	1.21	1.80	1.82	1.82	1.15	1.76
Did not work	1.50	2.13	2.72	2.72	1.84	2.28
Part time: 20 hours or less	2.86	6.63	6.72	6.72	1.48	6.50
Part time: 21–34 hours	2.40	4.77	4.39	4.39	1.69	4.78
Full time: 35 hours or more	2.47	3.27	2.60	2.60	1.65	3.01

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2012/14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14).

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