

Completing College

National and State Reports

With New Longitudinal Data Dashboard



About This Report

As the tenth in the Completing College series, this report updates the six-year college completion rates nationally and by state, by tracking the enrollment and completion outcomes for the fall 2015 cohort of beginning college students through June 2021.

The national completion rate measures the performance of the entire higher education system. It counts all students who enter postsecondary education for the first time each fall, enrolling full-time or part-time at two-year or four-year institutions, and completing at any U.S. degree-granting institution. It includes those who complete after transfer, not just completions at the starting institution. Thus, the results more fully capture today's students' diverse pathways to success, which increasingly involve mobility across institutions and across state lines, re-entry after stop-out, and changes in enrollment intensities.

Newly added this year, the longitudinal data dashboard offers detailed six-year completion outcomes by cohort year across starting institution sectors and student backgrounds, enabling national and state-level comparisons through interactive visualizations and analysis tools. Underlying data are available online for downloading. The national eight-year completion rates are not included in the current report and will be published at a later time.

Key Findings

- The national six-year completion rate for the fall 2015 cohort reached 62.2 percent, a 1.2 percentage point increase over the fall 2014 cohort. Students from all starting institution sectors saw increases in completion rates, with the largest increase among community colleges starters (+1.5 percentage points).
- Six-year completion rates increased in two-thirds of states (32 out of the 46 states with sufficient data). This is markedly different from the prior year when completion rates only increased in 12 out of 46 states.
- Completion rates increased for White, Black, and Latinx students this year, with the largest jump for Black students (+1.9 pp), while Asian student completion rates remained virtually unchanged.
- Adult learners showed the largest completion rate increases particularly at the public four-year and community college sectors. However, traditional college-age students continue to see higher completion rates than older students in both genders.

ERRATA

Since our last publication was released in December 2020, there has been a data reporting change that improved student-level data matching in the Clearinghouse database. To accurately report the six-year completion rate trend, we have re-calculated the previously published data for the fall entering cohorts of 2013 and 2014. The revised completion rates for the 2013 and 2014 cohorts are higher than what was originally reported, and the current report has been updated to reflect these changes in the historical trend. Earlier cohorts have not been re-calculated, however, making the year-over-year changes between 2012 and 2013 appear larger. These trend discontinuities should be interpreted with caution, particularly at the state level, where some states may be more affected than others. The revised one-year changes between 2013 and 2014 are aligned with previously published reports, with little impact on the main findings previously reported.

1. The national six-year completion rate for the fall 2015 cohort reached 62.2 percent, a 1.2 percentage point increase over the fall 2014 cohort. Students from all starting institution sectors saw increases in completion rates, with the largest increase among community colleges starters (+1.5 percentage points).

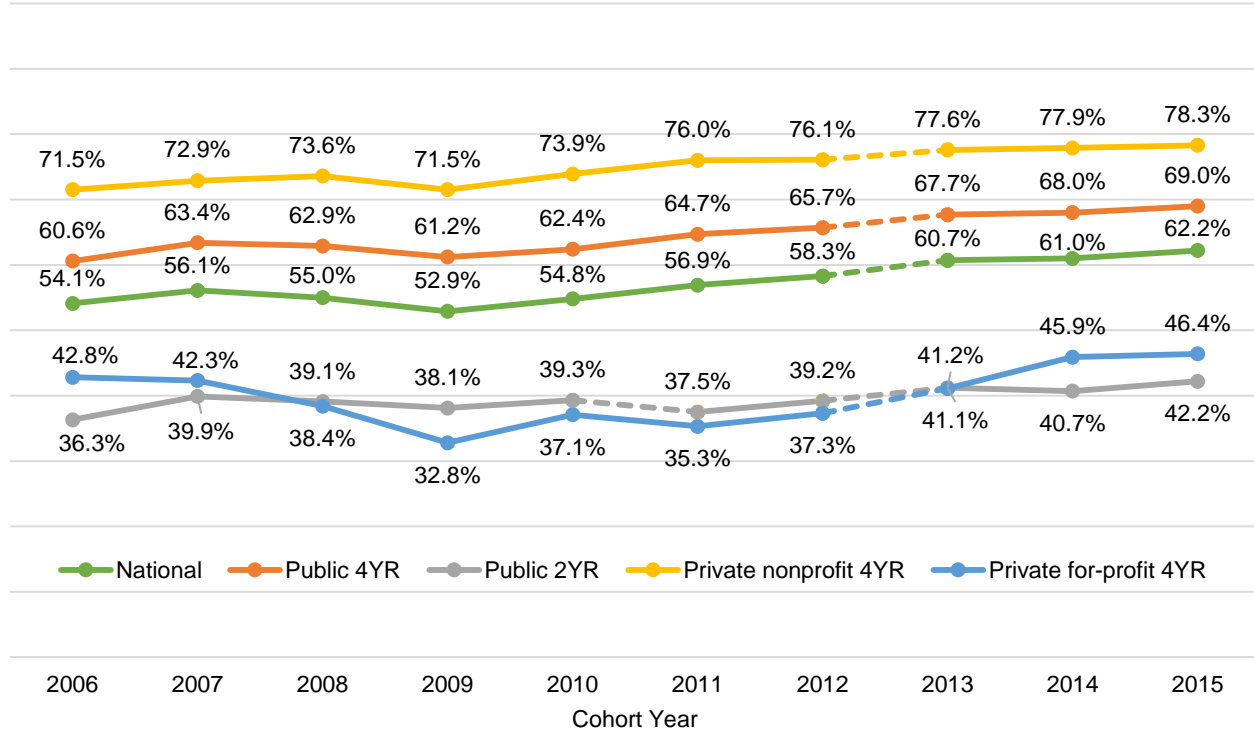
The national six-year completion rate reached 62.2 percent for the fall 2015 entering cohort, reflecting a 1.2 percentage point (pp) gain from the 2014 cohort and a 1.5 pp growth from the 2013 cohort (see Figure 1). The latest gains were more pronounced for the students entering a public institution (+1.5 pp for community college starters and +1 pp for public four-year starters) than those starting at a private institution (+0.4 to +0.5 pp).

Historically, the community college completion rate fluctuated more compared to other large institution sectors (+/- 1 to 2 pp year-over-year). The 1.5 pp growth in community college completion rate, the largest gain of any sector this year, comes after a 0.5 pp drop last year. It should be noted that community colleges were the only sector with a rate decline seen last year.

Nationally, the prevalence of same-institution completers remained stable this year, consistent with the recent trend; the share of completers who earned a credential from their starting institution increased by 0.1 pp to 81.9 percent from the 2014 cohort, similar to a 0.3 pp increase in the preceding year (not shown in figures).

Diverging from the recent trend, the 2015 cohort was 0.8 percent smaller (or 20,200 fewer students) than the previous cohort (see Figure 2). A larger share of them were public four-year starters (+0.8 pp) while community college and private for-profit four-year starters were a declining share of the cohort (each sector decreased by 0.4 pp).

Figure 1. Six-Year Completion Rates by Starting Institution Type: 2006-2015 Entering Cohorts



Note: Beginning in 2011, two changes improved the definition of first-time beginning college students: (1) current dual enrolled students (those taking college courses while in high school) were excluded (impacting mainly two-year colleges); and (2) data enhancements enabled reliable exclusion of students with prior enrollments over a longer historical timeframe (impacting mainly older students). After these changes, year-over-year comparisons can still be reliably made. Trends should be interpreted with caution, however, because removing current dual enrolled students caused the completion rate to decline at two-year colleges (see Methodological Notes). As noted in the Errata, there were unusually large rate changes from 2012 to 2013 due to a data reporting change, but the trendlines for 2006-2012 and 2013-2015 can be considered as reliable to use.

Figure 2. Entering Cohort by Starting Institution Type: 2014 and 2015

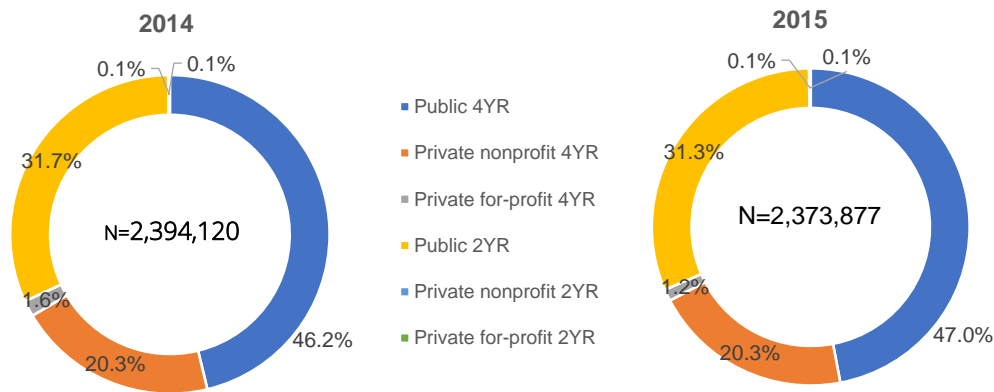
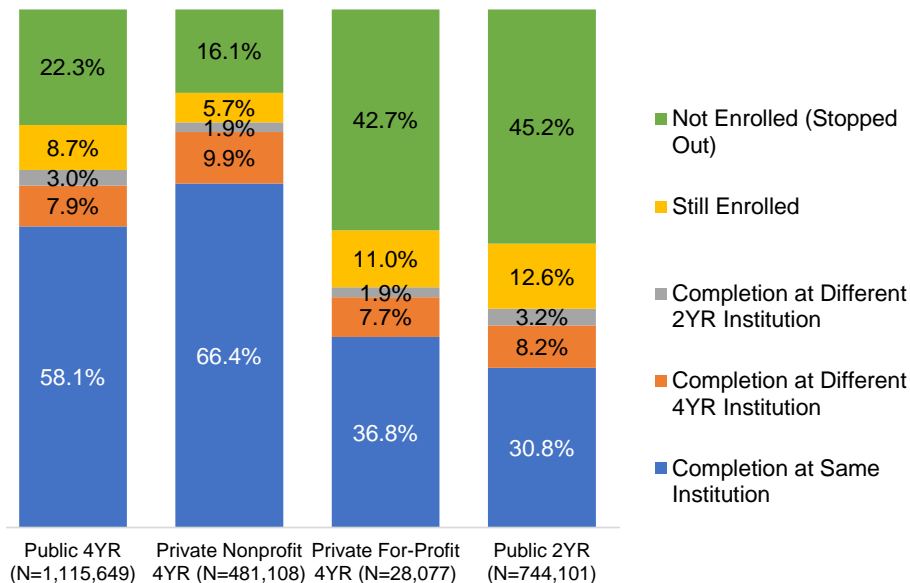


Figure 3. Six-Year Outcomes by Starting Institution Type: 2015 Cohort



Note: Private nonprofit and for-profit 2YR sectors, not shown above, are included in the national numbers.

2. The six-year completion rates increased in two-thirds of states (32 out of the 46 states with sufficient data coverage for reporting). This is markedly different from the prior year, when completion rates only increased in 12 out of 46 states.

This year's improvements are shared by a majority of states. For 32 of the 46 states with sufficient data, the completion rate increased at least 1 pp (see Figure 4). Last year, only 12 states had reached this level of improvement. Meanwhile, the rates decreased at least 1 pp in only three states this year in comparison with eight states last year.

Some states experienced marked changes. Nevada and Utah had growth larger than the national average (+4.6 and +3.4 pp, respectively). Despite its large growth from last year, Nevada remained with the second lowest statewide completion rate in the nation.

For students who started at public four-year institutions, completion rates increased by at least 1 pp in 25 out of 46 states with sufficient data (seen Figure 3 in the Dashboard). For students who started at community colleges, completion rates increased by at least 1 pp in 26 out of 42 states. Some states such as Arkansas, Montana, and Virginia saw higher than the average rate of increases for community college starters, recovering from dips in the previous year. Four states, Idaho, Kentucky, North Carolina, and Ohio had above-average increases this year, which also followed improvements from last year.

Figure 4. Change from Previous Year in Six-Year Completion Rate by State

State	Fall 2015 percent	2014-2015 pp	State	Fall 2015 percent	2014-2015 pp
Alabama	60.1%	▲ 3.3	Montana	55.7%	▬ 0.3
Alaska	35.2%	▲ 1.5	Nebraska	63.2%	▲ 1.0
Arizona	53.5%	▬ -0.2	Nevada	44.5%	▲ 4.6
Arkansas	58.9%	▲ 2.9	New Hampshire	64.3%	▬ 0.6
California	55.3%	▬ 0.9	New Jersey	63.1%	▲ 1.1
Colorado	62.1%	▲ 1.4	New Mexico	49.6%	▲ 1.0
Connecticut	67.9%	▲ 1.7	New York	68.4%	▬ 0.8
Delaware		*	North Carolina	65.1%	▲ 1.6
Florida	60.4%	▲ 1.8	North Dakota	68.6%	▲ 1.3
Georgia	62.6%	▬ 0.4	Ohio	66.1%	▲ 1.9
Hawaii	52.3%	▲ 3.0	Oklahoma	52.8%	▲ 1.1
Idaho	53.3%	▼ -1.2	Oregon	57.1%	▼ -1.2
Illinois	64.6%	▬ 0.9	Pennsylvania	72.5%	▲ 2.2
Indiana	65.5%	▲ 2.0	Rhode Island	74.4%	▬ 0.7
Iowa	70.0%	▬ 0.9	South Carolina	61.8%	▲ 1.6
Kansas	60.0%	*	South Dakota	69.2%	*
Kentucky	60.3%	▲ 2.6	Tennessee	59.4%	▼ -1.2
Louisiana	56.1%	*	Texas	58.2%	▲ 1.2
Maine	62.9%	▲ 1.2	Utah	55.3%	▲ 3.4
Maryland	60.0%	▬ 0.7	Vermont	74.4%	▲ 2.2
Massachusetts	73.5%	▬ -0.3	Virginia	66.9%	▲ 1.8
Michigan	61.4%	▲ 1.5	Washington	59.5%	▲ 1.2
Minnesota	69.9%	▲ 1.1	West Virginia	59.1%	▲ 1.3
Mississippi	59.6%	▲ 1.0	Wisconsin	70.3%	▲ 1.8
Missouri	62.9%	▲ 3.2	Wyoming	57.6%	▲ 1.1

National Average = 62.2% (+1.2 pp)

Note: Data for D. C., Delaware, Kansas, Louisiana, and South Dakota are not shown due to insufficient data coverage (see the Methodological Notes). For this report, changes of less than +/-1 pp are considered marginal (represented by the yellow line), and we only note states with an increase (or drop) of at least 1 pp.

3. Completion rates increased for White, Black, and Latinx students this year, with the largest jump for Black students (+1.9 pp), while Asian student completion rates remained virtually unchanged this year.

The national six-year completion rates for the 2015 entering cohort increased among White, Black, and Latinx students over the 2014 cohort (see Figure 5 in the Dashboard). When compared with White and Latinx students (+1.1 and +1.2 pp, respectively), Black students improved more notably, increasing 1.9 pp from 42.4 percent in 2014 to 44.3 percent in 2015. Between 2013 and 2015, Black student completion rates have increased the most (+2.0 pp), followed by Asian (+1.7 pp), White (+1.0 pp), and Latinx students (+0.6 pp).

For Black students, this year's improvement was led by those starting at a public institution. There was little change for Black student completion rates at the private nonprofit four-year sector. Specifically, the completion rate for Black starters at public four-years increased 1.3 pp to 51.3 percent, in keeping with the recent upward trend. Black students entering community colleges had the largest rate increase of the four racial and ethnic groups (+1.6 pp to 30.2%), reversing the small decline experienced the previous year (-0.3 pp)

Asian student completion rate increased only marginally (+0.3 pp nationally), including a 0.4 pp decline at private nonprofit four-year institutions, which contributed to this year's leveling-off in the national completion rate.

4. Adult learners showed the largest completion rate increases particularly at the public four-year and community college sectors. However, traditional college-age students continue to see higher completion rates than older students in both genders.

In the 2015 cohort, students who were older than 24 at the time of entry (adult learners) saw the largest one-year increases in the six-year completion rate. This small group of students, comprising 8.6 percent of the 2015 entering cohort (see Figure 5) saw a 2.5 pp increase in completion rates to 50.5 percent. Adult learners starting at a public institution contributed to this one-year increase: Rates for public four-year starters increased 2.9 pp to 57.7 percent; and 2.3 pp to 37.9 percent for community college starters, as shown in Figure 8 in the Dashboard. In contrast, national traditional college-age students (20 and younger) made a 0.9 pp gain to 64.1 percent (see Figure 6). This is a reversal from last year's slight drop (-0.2 pp).

The six-year completion rate for male and female adult learners grew at equal rates this year, with female rate increasing 2.7 pp to 48.2 percent and male rate increasing 2.5 pp to 50.7 percent (see Figure 11 in the Dashboard). Overall completion rates for all male students remain far lower than for female students (58.6% and 65.4%, respectively). However, consistent with past results, traditional college-age students continue to complete at higher rates than older students, regardless of gender. Traditional college-age male and female completion rates were 59.9 percent and 68.2 percent, respectively, in 2015 (8.3 pp gap) compared to gaps of half that size among older students (less than 4 pp).

The make-up of students by age is also shifting. Of the 2015 cohort, 84.4 percent were traditional age students, an increase of 1.9 pp over the 2014 cohort (see Figure 5). This continued the recent trend that fall entering cohorts are increasingly comprised of traditional age students.

Figure 5. Entering Cohort by Student Age at First Entry: 2014 and 2015

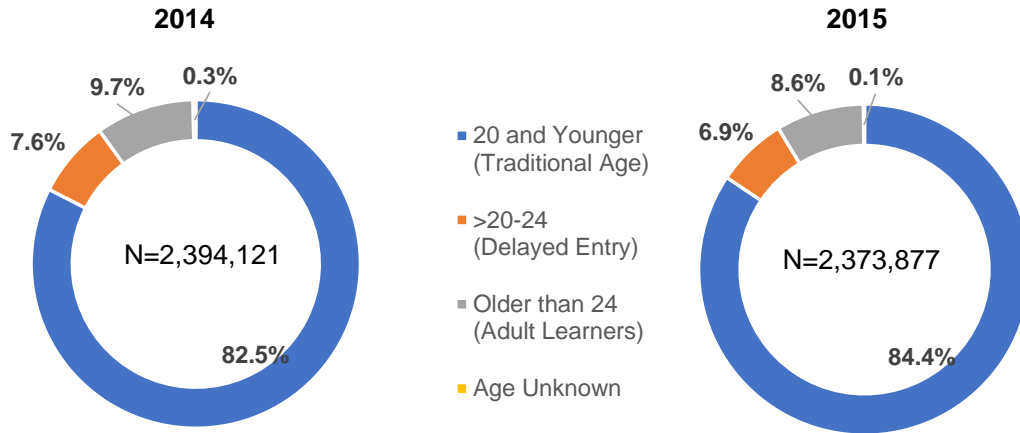
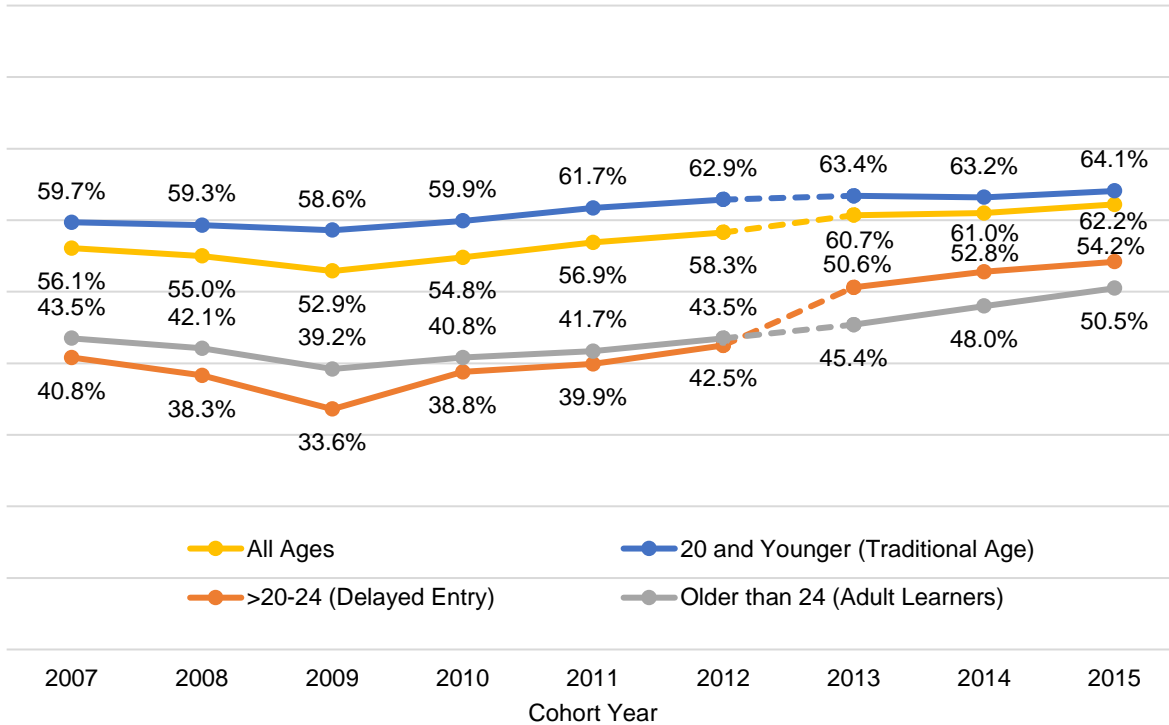


Figure 6. Six-Year Completion Rates by Student Age at First Entry: 2007-2015 Entering Cohorts



Note: Beginning in 2011, two changes improved the definition of first-time beginning college students: (1) current dual enrolled students (those taking college courses while in high school) were excluded (impacting mainly two-year colleges); and (2) data enhancements enabled reliable exclusion of students with prior enrollments over a longer historical timeframe (impacting mainly older students). After these changes, year-over-year comparisons can still be reliably made. Trends should be interpreted with caution, however, because removing current dual enrolled students caused the completion rate to decline at two-year colleges (see Methodological Notes). As noted in the Errata, there were unusually large rate changes from 2012 to 2013 due to a data reporting change, but the trendlines for 2006-2012 and 2013-2015 can be considered as reliable to use.

Summary

This report provides the latest update on the six-year college completion rates nationally and for states, by tracking the fall 2015 entering cohort's outcomes through June 2021. Since most of the 2015 starters would have completed before the pandemic began, it is unlikely that the increases in completion rates may have been caused by the pandemic.

For the fall 2015 beginning students, the national six-year completion rate reached 62.2 percent, up 1.2 pp over last year. Among community college starters, the completion rate increased 1.5 pp to 42.2 percent, reversing last year's slight decline (-0.5 pp). This is a notable change given that community colleges were the only institution sector to experience a drop in completion rates last year. Completion rates increased for all major racial and ethnic groups except Asian students, with the largest increase among Black students (+1.9 pp). The completion rate for adult learners (older than 24) also increased (+2.5 pp).

Completion rates improved by at least 1 pp in 32 out of the 46 states with sufficient data coverage for reporting, which is markedly different from the prior year when only 12 states made similar gains. Of those 32 states, five states reversed last year's decline while 10 states continued steady growth from the preceding year. The rate of growth also varied across the 32 states, with the highest rate increase in Nevada (+4.6 pp). However, even with such variation, the majority of these states improved between 1 to 2 pp over last year.

Finally, it is important to note that shifting student enrollment patterns and demographics in the fall 2015 cohort may have contributed to the improvement in completion rates this year. For example, a larger share of the fall 2015 entering cohort started at public four-year institutions (+0.8 pp over 2014) while a smaller share started at community colleges and private for-profit four-year institutions (-0.4 pp each)—the sectors with the lowest completion rates. This is also part of a longer-term trend: The share of community college starters in 2015 was 6.0 pp smaller than five years earlier (not shown in figures). The 2015 cohort also had a larger share of traditional age students (+1.9 pp over 2014 and +10.3 pp over 2010), who typically finish college at higher rates than older students. This is not to suggest that improvements in completion rates have not been made through institutional and student effort, but rather to underscore that many other factors may have contributed as well.

Methodological Notes

This report examines six-year college student success outcomes, focusing primarily on degree and certificate completion of a cohort of first time-in-college, degree-seeking students who started their postsecondary education at U.S. colleges and universities in the fall of 2015 through June 30, 2021. Outcomes examined include completion (i.e., receipt of any postsecondary credential by the end of the study period), major at completion, persistence (i.e., having enrollment records at any postsecondary institution during the last year of the study period), and stop-out without completion (i.e., having no enrollment records at any postsecondary institution during the last year of the study period). The report mainly focuses on students' first ever completions, with further distinctions drawn between completions awarded at the institution where a student first enrolled (his or her starting institution) and those awarded at an institution other than their starting institutions. For students who started at a two-year public institution, this report also presents an overview of their completions at a four-year institution, either as a first completion (i.e., those who completed at a four-year institution without having first earned a credential at a two-year institution¹) or as a subsequent degree after a first completion awarded in the two-year sector. In addition to results on degree and certificate completion rates by enrollment intensity, age group, gender, race and ethnicity, and starting institution type, the report includes results on completion across state lines and for students who started at multistate institutions.

¹ Throughout this report, "two-year institution" is used broadly to designate institutions offering both associate degrees and less-than two-year degrees and certificates.

Data Coverage

The National Student Clearinghouse currently collects data from more than 3,600 postsecondary institutions, which represent 97 percent of the nation's postsecondary enrollments in degree-granting institutions, as of 2020. The enrollment data used in this report provide an unduplicated headcount for the fall 2015 first-time college entering student cohort. Clearinghouse data track enrollments nationally and are not limited by institutional and state boundaries. Moreover, because this database is comprised of student-level data, researchers can use it to link concurrent as well as consecutive enrollments of individual students at multiple institutions.

Cohort Identification, Data Cut, and Definitions

This report examines completion, over a span of six years, for the cohort of first time-in-college degree-seeking students who started their postsecondary studies at U.S. colleges and universities in the fall of 2015 for six-year outcomes (through June 30th, 2021). To limit the cohort to first-time

undergraduate students only, the study uses data from the Clearinghouse's enrollment reporting and DegreeVerify services to confirm that students included in the study fulfilled the following conditions:

1. Enrolled in a Title IV degree-granting institution in fall 2015, excluding territories outside the U.S. (e.g., Guam, Puerto Rico, or the U.S. Virgin Islands).
2. Did not have a previous enrollment record, as shown in the Clearinghouse data, prior to the first day of enrollment in the fall of 2015, unless the previous enrollment record was before the student turned 18 years old (qualified as former dual enrollment students);
3. Did not receive any degree or certificate from a postsecondary institution prior to the first day of enrollment in fall 2015, according to Clearinghouse data unless the award date was before the student turned 18 years old (dual enrollment);
4. Had at least one legitimate enrollment status throughout the study period; that is, enrolled for at least one term with full-time, part-time (i.e., halftime or less than half-time), or withdrawal status²;
5. Showed intent to seek a degree or certificate. That is:
 - For students who started at four-year institutions, enrolled at least one term with an intensity of halftime or higher.
 - For students who started at two-year institutions, either:
 - Enrolled full time for at least one term before August 10, 2015, or
 - Enrolled three-quarter time for at least one term or half time for any two terms before December 31, 2016³

² The Clearinghouse receives enrollment status data as full-time, half-time, less-than-half-time, withdrawal, or other statuses from its participating institutions.

³ We excluded 225,603 students who began at two-year institutions as non-degree-seeking students as a result.

Race and Ethnicity

The race and ethnicity categories include Asian, Black (of non-Latinx origin), Latinx, White, Other or two or more races. The Other category includes Native American and Native Hawaiian or other Pacific Islander. Eleven percent of the data are unknown or missing race/ethnicity in the 2015 cohort.

Former Dual Enrollment Students

Beginning in the fall 2011 entering cohort, our definition of first-time student cohort excludes current dual enrollment students, impacting largely two-year institutions. Interpret the trends with caution for two-year starters because removing current dual enrollment students caused the completion rate to decline. The cohort used in this study only includes former

dual enrollment students: first-time college students who had previously taken dual enrollment courses. These are the students who enrolled in college courses prior to fall 2015 while still in high school. Students were identified as former dual enrollment students if their enrollment or degree record prior to fall 2015 was before the student turned 18 years old. Former dual enrollment students represent 21.2 percent of the fall 2015 cohort. As a proportion of the sample for each sector, former dual enrollment students represent 24.5 percent of the students who started in four-year public institutions, 18.4 percent of the students who started in two-year public institutions and 18.9 percent of those who started in four-year private nonprofit institutions. Only 8.5 percent of the students who started in four-year private for-profit institutions had prior dual enrollments.

Enrollment Intensity

In this report, enrollment intensity is classified as exclusively full-time, exclusively part-time, or mixed enrollment (including both full-time and part-time enrollments) throughout the study period. Each of the enrollment type is based on students' enrollments across all terms in which the student was enrolled. Hence, the report does not exclude stop-outs through the first completion or, for non-completers, through the entire study period. In establishing students' enrollment intensity in this way, enrollments during summer terms (defined as terms with both the start date and the end date falling between May 1 and August 31 in any given year) and short terms (defined as terms lasting less than 21 days) were excluded from consideration.

For terms in which a student showed concurrent enrollment records (i.e., records that overlapped by 30 days or more), the two highest-intensity enrollments were considered. For example, a student concurrently enrolled half-time at two institutions was categorized as enrolled full-time for that term. In doing this, we create one single enrollment record from a set of concurrent enrollment records. The enrollment status for the single enrollment record is defined as full-time if (1) for terms with concurrent enrollments, the two highest-status enrollment records included at least one full-time enrollment, or one three quarter-time enrollment and one at least less than half-time enrollment; or (2) for terms with concurrent enrollments, the two highest-status enrollment records both reflected half-time enrollment. The enrollment status for the single enrollment record is defined as half-time, if for terms with concurrent enrollments, the two highest status enrollment records included some combination of half-time and less than half-time enrollments, but no full-time enrollment, and no more than one half-time enrollment. Overall, for each term under consideration (i.e., all terms except summer terms and short terms – less than 21 days – up through the first completion, or, if no completion, throughout the entire study period), the “exclusively fulltime enrollment” designation was assigned to students whose enrollment showed exclusively full-time enrollment for all

terms. The “part-time enrollment” designation was assigned to students whose enrollment for each term under consideration showed exclusively three-quarter time, half-time or less than half-time enrollment. The category of mixed enrollment was applied to students who showed a combination of full-time and part-time enrollments across the terms under consideration. Finally, students who showed records indicating withdrawal (i.e., students who were enrolled, but withdrew before the term ended) but no full-time or part-time enrollments were randomly assigned to an enrollment intensity category.

Concurrent Completion

For this report, we examined completion by first-time students at either two-year or four-year institutions. We defined completion as having obtained a degree or certificate at any institution within the six-year study period (i.e., by June 30, 2021). Clearinghouse data provide a unique headcount of U.S. college enrollments during each term, which allows for the tracking of individuals including those with concurrent completion. In preparing data for this report, a small number of individuals showed more than one completion awarded at multiple institutions on the same day. In these instances, a primary completion record was selected using decision rules specific to the sector of the student's starting institution.

The first set of decision rules was applied to students with concurrent completions who started at a two-year institution:

1. Concurrent Completions at Two Different Two-Year Institutions
 - Same institution over different institution: Completions at the starting institution were selected over completions at other institutions.
 - Random selection: If the first decision rule did not result in a single completion record being selected, then a completion record was selected at random.
2. Concurrent Completions at a Two-Year Institution and a Four-Year Institution
 - Two-year then four-year: The two-year degree completion was considered the first completion and the four-year degree completion was considered a subsequent completion.
3. Concurrent Completions at Two or More Four-Year Institutions
 - Random selection: If a student started at a two-year institution but later completed at two or more four-year institutions concurrently, then a completion record was selected at random.

The second set of decision rules was applied to students who started at four-year institutions and later showed concurrent completion records:

1. Same institution over different institution: Completions at the starting institution were selected over completions at other institutions.

2. Four-year over two-year: If the first decision rule did not result in the selection of a single completion record, then completions at four-year institutions were selected over those at two-year institutions.
3. Random selection: If neither of the first two decision rules resulted in the selection of a single completion record, then a completion record was selected at random.

Imputation of Values for Gender

The Clearinghouse's coverage of student gender has increased dramatically for enrollments occurring in recent years. However, imputation of gender for the majority of enrollment records is still necessary in order to use the data for research studies using older cohorts. To meet this need, the Research Center developed an imputation process based on first names. Previously submitted name gender pairs throughout the Clearinghouse database are used to determine the probability of any first name being associated with either gender. To increase the accuracy of the imputation process, the Research Center also draws on name-gender data from the Social Security Administration (SSA) and the U.S. Census Bureau. Because the Clearinghouse collects transactional data, its data contain many more unique first names than other sources. The imputation used only those pairs in which the name occurred in at least two instances and was associated with a single gender in at least 95 percent of the instances. The SSA and Census data sets were used to ensure that name-gender pairs were consistent across every data set in which they occurred and to enhance the imputation process by contributing name-gender pairs that did not occur in the Clearinghouse data. The imputation process that yielded additional gender codes produced a total gender coverage rate of 94 percent.

Imputation of Missing DegreeVerify Graduation Data

The Clearinghouse collects graduation information from its participating institutions via two data reporting services: Enrollment Reporting and DegreeVerify. Enrollment Reporting has higher data coverage rates, but includes only basic completion information such as graduation indicator and the date of graduation. For the fall 2015 cohort, Enrollment Reporting covered 97 percent of all the students in Title IV degree-granting institutions listed in IPEDS (including 99 percent of the students in public institutions, 96 percent in private nonprofit institutions, and 72 percent in private for-profit institutions). DegreeVerify includes enhanced information on completions, including degree title, major, level, and CIP code, but covered only 94 percent of enrollments in 2015. Institutions may participate either in Enrollment Reporting alone or in both services. Completions data for this report included information drawn from either service. An analysis conducted by the Clearinghouse on the 2015 cohort found that graduation data for the institutions that participated in DegreeVerify were relatively more

complete for some of the years covered in this study than those for institutions that participated only in Enrollment Reporting, biasing completion rates slightly downwards for institutional sectors with lower participation rates in DegreeVerify © 2021 National Student Clearinghouse. All rights reserved. To correct for this bias, the Research Center conducted a randomized imputation procedure for missing graduation data among students at non-DegreeVerify institutions who were no longer enrolled but for whom outcome data were missing (that is, for whom the institution had reported neither a graduation nor a withdrawal status in their Enrollment Reporting). This involved comparing the Enrollment Reporting and DegreeVerify records for institutions that participated in both services and estimating, for each institution type, the average percentage of students with missing outcomes in the enrollment data who had a reported graduation in the DegreeVerify data. We further specified these underreporting rates by taking into account student age and the academic year. We then used random assignment of graduation outcomes to students with missing data at the institutions that did not participate in DegreeVerify to match each institution's underreporting rate for each student age group and for every year of the study to the average rate for similar students at institutions of the same type that did participate in DegreeVerify. This imputation was performed only for students with missing outcomes data at institutions that did not participate in DegreeVerify. It is based on the typical underreporting of graduation outcomes from similar institutions that participate in both Enrollment Reporting and DegreeVerify. The table below shows, for each institution type, the percentage of the starting cohort for whom graduation data were imputed:

Starting Institutional Sector	Percentage of the Cohort with an Imputed Completion
Private For-Profit Two-Year	0.16%
Private Nonprofit Two-Year	0%
Public Two-Year	0.36%
Private For-Profit Four-Year	0.31%
Private Nonprofit Four-Year	0.26%
Public Four-Year	0.24%
Total	0.28%

Adjusting Noncoverage through Weighting by State and Institution Type

The institutions participating in the Clearinghouse Enrollment Reporting service do not cover 100 percent of all Title IV, degree-granting institutions in the U.S. To account for possibilities of not capturing a student's enrollment outcome because of non-coverage of Clearinghouse data, weights were calculated using the 2019 coverage rate of the sector, control, and state of the institution where a student was enrolled for the last enrollment record. Our data covers three different groups of students: First, students who completed a degree at the starting institution or were still enrolled at the starting

institution by the end of the study period. Second, students who completed a degree or were still enrolled at a different institution by the end of the study period. And third, students who stopped out by the end of the study period. However, the number of students who stopped out is likely overestimated due to under coverage. Specifically, students that show up as no longer enrolled may have potentially transferred to an institution that does not submit data to the Clearinghouse. Therefore, the number of stop-outs in the U.S. is likely lower than observed in our data, and the number of transfer students is likely higher. To take this into account, we overcount transfer students and undercount stop-outs (“missings”). For students who completed a degree or were still enrolled at a different institution by the end of the study period, a “transfer” weight > 1 was applied. This transfer weight is based on the coverage of the sector, control, and state of the institution in which the student was enrolled for the last enrollment record, as calculated by the formula provided below:

$$\text{Transfer Weight} = \frac{\text{Transfer Counts} + [\text{Missing Counts} \cdot \text{Noncoverage Rate}] + \frac{\text{Transfer Counts}}{\text{Nonmissing Counts}}}{\text{Transfer Counts}} > 1$$

For students who stopped out by the end of the study period and for whom any further observations are missing, a “missing” weight < 1 was applied. This missing weight is based on the coverage of the sector, control, and state of the institution in which the student was enrolled for the last enrollment record, as calculated by the formula provided below:

$$\text{Missing Weight} = \frac{\text{Transfer Counts} - [\text{Missing Counts} \cdot \text{Noncoverage Rate}] + \frac{\text{Transfer Counts}}{\text{Nonmissing Counts}}}{\text{Transfer Counts}} < 1$$

Note for completeness that we assign a weight of one to the first group of students who completed a degree at the starting institution or were still enrolled at the starting institution by the end of the study period.

Data Limitations

The data limitations in this report center mainly on the data coverage, the methods used for cohort identification, and the definition of key constructs (as outlined above). The representation of private for-profit institutions in the Clearinghouse data is lower than that of other institution

types, with 80 percent coverage for four-year private for-profit institutions in fall 2015 compared to 95 percent and 99 percent respectively for four-year private nonprofit institutions and four-year public institutions. Despite the challenges presented by low participation in the early years covered in this report, current Clearinghouse data nevertheless offer near-census national coverage, representing 97 percent of U.S. postsecondary enrollments. In an effort to correct for coverage gaps in this study, data were weighted (as explained above).

Data limitations resulting from the cohort identification methods used in preparing this report should also be noted. Because the Clearinghouse data on designations for class year are incomplete, the researchers identified first-time undergraduate students via two indirect measures:

- No previous college enrollments recorded in the Clearinghouse data, and
- No previous degree awarded in the Clearinghouse’s historical DegreeVerify database.

Given these selection criteria, the sample for this report may include students who had more than 30 Advanced Placement (AP) or International Baccalaureate (IB) credits. It is also possible that a small number of graduate students are included in the study cohort because of inconsistencies in the historical depth of DegreeVerify database records.

Finally, although Clearinghouse data contain some demographic information on students, historical coverage rates for the demographic data elements are uneven. Consequently, results on gender are based partially on imputed values, as described above and nearly one in six students in the cohort had the race/ethnicity value unknown or missing. No imputation was attempted for missing race/ethnicity data.

Suggested Citation

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