

# REPLENISHING OPPORTUNITY IN AMERICA

The 2012 Midterm Report of Public Higher Education Systems  
in the Access to Success Initiative

TECHNICAL APPENDIX



The Education Trust

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NATIONAL ASSOCIATION OF SYSTEM HEADS

# The Access to Success Data Metrics Technical Appendix

The public higher education systems in the Access to Success Initiative, launched in fall 2007, have committed to increasing overall attainment while cutting access and success gaps in half by 2015. This report provides data on the progress of A2S systems toward these goals over a five-year period from 2005-06, the baseline year, to 2009-10, the most recent year of available data. In some systems, the baseline was adjusted on some or all indicators to a later year due to unavailable data or some systems were excluded from the analyses, as outlined in detail below (*see "Exclusions," next page*).

## KEY DEFINITIONS

**Full-time and part-time students** are included in all A2S metrics. As a result, these numbers may vary from other publicly reported data in the system, particularly graduation rates, which may focus on first-time, full-time students only.

**Associate's program** refers to students seeking associate's degrees, most of whom attend two-year colleges, but some of whom attend four-year institutions in some systems.

**Bachelor's program** refers to students seeking bachelor's degrees, most of whom attend four-year institutions, but some of whom attend two-year colleges in some systems.

**Freshmen** are students who were not previously enrolled in a postsecondary institution inside or outside of the system (with the exception of students earning dual-enrollment credits in high school).

**Transfer students** are those who previously attended a postsecondary institution outside of the system from which the institution accepted college credits as well as those who

transitioned from an associate-level program to a baccalaureate-level program (or vice versa) within the system.

**Underrepresented minority students (URM)** refer to African-American, Hispanic or Latino, and American-Indian or Alaska-Native students. Non-URM refers to white and Asian students (including Native Hawai'ian and Pacific-Islander students). In some systems, however, Native Hawaiians, Pacific Islanders, and other underrepresented Asian groups are reported separately from other Asians and are included as URM students, as noted on the progress reports of these systems. The new race-reporting requirements of the Integrated Postsecondary Education Data System (IPEDS) were not in effect during the time period covered by this report. However, some systems opted for early adoption of the new categories on some indicators, which is also noted on the progress reports of the affected systems.

**Pell Grant recipient status** is used as a proxy for income status in the metrics. Access and success metrics use Pell-recipient status at entry; degree metrics use Pell-recipient status at any time.

**Non-resident aliens** are excluded from all calculations as they are ineligible for Pell Grants and cannot be classified as URM or non-URM. Students with race unknown and other are also excluded from all race calculations, since they cannot be assigned as URM or non-URM.

## ACCESS METRICS

The access metrics compare the economic and racial diversity of the entering student population for each system with that of their state. These metrics are calculated separately for (1) associate's degree-seeking cohorts and bachelor's degree-seeking cohorts, and (2) freshmen and transfer students. Full-time and part-time students are combined in all access metrics.

### ACCESS GAPS

% of High School Graduates in State Who Are Low Income  
**minus**  
% of Entering Undergraduates Who Are Pell Recipients

% of High School Graduates in State Who Are URMs  
**minus**  
% of Entering Undergraduates Who Are URMs

For the income metrics, the economic diversity of the entering class is measured by the percentage of students who were Pell Grant recipients at entry. While using Pell Grant receipt as a proxy for low-income status has its limita-

tions (*see Pell sidebar*), it is the only income measure that is widely available across all participating systems at this time and represents an improvement over existing information since most institutions and systems do not currently report any access or success data by income or financial-aid status.

The economic diversity of the state population is measured by the percentage of high school graduates who are low income — or below 200 percent of the federal poverty level. In 2009, the year that corresponds with the most recent A2S access data, a family of four living at 200 percent of the poverty level had an annual income of about \$44,000; an individual at 200 percent of the poverty level had an annual income of about \$22,000.<sup>1</sup> Seventy-nine percent of dependent Pell recipients and 97 percent of independent Pell recipients (without dependents) have incomes below \$40,000 and \$20,000, respectively.<sup>2</sup> The access metric compares the percentage of entering students who are low income in a given college year (such as 2009–2010) with the percentage of high school graduates in the state who are low income in that year (2009, for example).

For the race metrics, the percentage of entering students

## System Exclusions in the Access to Success Progress Report Analyses

This report examines the progress of the initiative in the aggregate from the baseline year, 2005–06, to 2009–10, the most recent year of available data. All currently participating systems are included in the aggregate analyses with the following exceptions:

- The systems that joined the initiative this year, Colorado State University and University of Texas System, are not included in the analyses.
- The Kentucky Council of Postsecondary Education (KCPE) is not included in the aggregate analyses due to data-quality issues and the University of Maryland System (USM) is not included in the aggregate analyses due to a late submission. However, system-level reports are available for KCPE and USM.
- The State University of New York is excluded from all income-related measures due to lack of available data.

- The Rhode Island Board of Regents is excluded from all success measures in bachelor's programs due to lack of available data.

Finally, some systems were missing data on some measures in the baseline year (for instance, success rates by Pell status) due to lack of availability, but were able to report data on these measures in later years. For those systems, the baseline was adjusted on some or all indicators to a later year for purposes of their progress reports, as noted on the affected systems' reports.

These systems remain in the aggregate analyses for all years, however, because the impact of their later inclusion was determined not to significantly alter the aggregate trends. Therefore, the aggregate analyses are as maximally inclusive of participating systems as possible, rather than constrained to a subset of systems that had data on all measures at all points in time.

who are underrepresented minorities (URMs) in a given year is compared with the percentage of high school graduates in the state who are URMs. In our metrics, URMs include African-American, Latino, and American-Indian populations. As previously noted, Native Hawaiians, Pacific Islanders, and other underrepresented Asian groups are reported separately from other Asians and are included as URM students in some systems (such as California, Wisconsin, and Hawaii). Students with “race unknown/other” are excluded from all race metrics because they cannot be classified as URM or non-URM. Students who are nonresident aliens are excluded from all metrics because they cannot be classified accurately in terms of race and are not eligible for federal financial aid. The new IPEDS race-reporting requirements were not in effect during the time period covered by this report; however, some systems did begin reporting the new categories early on some indicators as previously noted.

We use data from the Census Bureau’s “2000 Census” and the “American Community Survey” for our comparison data for the access metrics. We use an age range of 18–24 for freshman bachelor’s degree-seeking students and a range of 18–34 for all associate’s degree-seeking and transfer students to reflect the different populations from which these entering classes draw.<sup>3</sup> We limit our comparison to high school graduates only so as not to hold higher education systems accountable for low high school graduation rates in their states. Three-year averages are used to smooth the Census data, given larger fluctuations in smaller states.

The access gap is the reference group performance on the

indicator minus the target group performance on the indicator. For example, the percentage of high school graduates who are low income in the state minus the percentage of students who are Pell recipients among entering students. A positive difference means that the target group is lagging behind the reference group on the given indicator. A negative difference means that the target group is exceeding the reference group. A negative change in the gap indicates that the gap has narrowed and improved. A positive change in the gap means the gap has grown and gotten worse.

Measuring the performance of systems on the access metric in relation to their state populations puts their progress in context. In particular, the access metric accounts for the rapid growth in the low-income and minority populations in many states by ensuring that systems are setting goals to enroll more underserved students not only to close current access gaps, but to keep up with changing demographics in their states as well.

## SUCCESS METRICS

The success metrics aim to measure how the success outcomes of low-income and underrepresented minority students compare with that of their peers in the A2S systems. These metrics are calculated separately for (1) associate’s degree cohorts and bachelor’s degree cohorts and (2) freshmen and transfer students. Full-time and part-time students are combined in all success metrics. All success metrics measure success *anywhere within the system*, not at the initial institution of entry only.

For **bachelor’s degree cohorts**, the metrics compare the

### Defining diversity among high school graduates by state using Census Bureau data

	Bachelor’s Cohorts		Associate’s Cohorts	
	Low Income	URM	Low Income	URM
Freshmen	High school graduates in the state ages 18–24 <b>without</b> bachelor’s degrees who are low income (below 200 percent of the poverty level)	High school graduates in the state ages 18–24 <b>without</b> bachelor’s degrees who are URM	High school graduates in the state ages 18–34 <b>without</b> associate’s degrees who are low income (below 200 percent of poverty level)	High school graduates in the state ages 18–34 <b>without</b> associate’s degrees who are URM
Transfer	High school graduates in the state ages 18–34 <b>without</b> bachelor’s degrees who are low income (below 200 percent of poverty level)	High school graduates in the state ages 18–34 <b>without</b> bachelor’s degrees who are URM	High school graduates in the state ages 18–34 <b>without</b> associate’s degrees who are low income (below 200 percent of poverty level)	High school graduates in the state ages 18–34 <b>without</b> associate’s degrees who are URM

## Selecting Appropriate Comparisons for the Access Metrics

One of the most useful aspects of the A2S metrics — comparing the diversity of the systems' incoming students and completers to state demographics — is also one of the most challenging in terms of quality data. Here we offer a brief description of the process we used to select the most appropriate comparisons for the access metrics, including our choices among imperfect data sources and definitions. While limitations with the data remain, this is our best attempt to make use of existing sources for the important purpose of setting goals to improve access to and through higher education for low-income and underrepresented minority students.

1. Our parameters for choosing appropriate data sources and definitions from participating systems included two elements. First, the systems requested that we only use the demographics of high school graduates as the basis for comparison so as not to hold them responsible for low high school graduation rates in their state, particularly among low-income and minority populations. Secondly, the systems requested that we use an expanded age range for students entering as transfers and students entering associate's degree programs, in order to reflect the wider pool from which these groups draw.
2. We had considered using the NCES Common Core of Data, which provides data on a state's high school graduating class each year, for the access metrics for freshmen. This source is limited in several ways, however: It does not include the income level of high school graduates, does not include "race unknown/other" category as does A2S data, includes limited information about GED recipients, does not include private school students, and does not account for students who do not immediately enroll in postsecondary education.
3. With our other available option, the "American Community Survey" data from the U.S. Census Bureau, we considered using high school graduates with no college for the access metric for freshmen. While this appears to better match our definition for freshmen (no prior college), we concluded that this is not the fairest comparison for systems. To use high school graduates with no college would penalize systems by comparing the demographics of the population that did get access to the population that did not get access — rather than to the population that was available for access, particularly since we are estimating the diversity of the young adult population within an age range.
4. With the Census data, we also considered using all high school graduates, regardless of educational attainment level, to get a population estimate of race and income levels in the state population within our age ranges. This definition presented two major problems, for the low-income access metrics, and for the associate's degree and transfer metrics.

- a. For the low-income metrics, we recognized that income levels increase as a result of degree attainment.<sup>5</sup> Therefore,

using all high school graduates, including those who had already attained degrees, would unfairly lower the estimate of the college-eligible, low-income population in the state.

- b. For the associate's and transfer metrics, we are using an age range of 18–34 at the request of the A2S two-year colleges. In this age range, we concluded that the demographics of the entire high school graduate population did not accurately reflect the target population of the two-year colleges, which is more narrowly focused on the young adult population that has not yet gained access to postsecondary education, or earned a degree.
5. In order to be consistent across the different categories of students (such as freshmen and transfer, minority and low-income) and institutions (two-year and four-year), we defined our comparison groups as follows:
    - a. For freshmen in bachelor's programs, we use students aged 18–24 who have not yet earned bachelor's degrees.
    - b. For transfers in bachelor's programs, we use students aged 18–34 who have not yet earned bachelor's degrees.
    - c. For freshmen and transfers in an associate's program, we use students aged 18–34 who have not yet earned associate's degrees.

The data definitions from the U.S. Census Bureau we used for the access metrics are intended to be estimates of the racial and economic diversity of the state's population that is eligible to gain access to the degree being sought (such as associate's or bachelor's degrees), not the actual pool of potential applicants. In short, our metrics are a refined population estimate, not an applicant pool.

percentage of Pell-at-entry or URM students who obtained bachelor's degrees in the system within six years with the percentage of non-Pell-at-entry (or non-URM) students who obtained bachelor's degrees within six years.<sup>4</sup>

<p><b>SUCCESS GAPS FOR BACHELOR'S DEGREE PROGRAMS</b></p> <p>% of Non-Pell Recipients (at Entry) Who Earn Bachelor's Degrees Within Six Years</p> <p style="text-align: center;"><b>minus</b></p> <p>% of Pell Recipients (at Entry) Who Earn Bachelor's Degrees Within Six Years</p> <p>% of Non-URM Students Who Earn Bachelor's Degrees Within Six Years</p> <p style="text-align: center;"><b>minus</b></p> <p>% of URM Students Who Earn Bachelor's Degrees Within Six Years</p>
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For **associate's degree cohorts**, the metrics compare the percentage of Pell-at-entry or URM students who were successful in the system within four years with the percentage of non-Pell-at-entry or non-URM students who were successful within four years.

<p><b>SUCCESS GAPS FOR ASSOCIATE'S DEGREE PROGRAMS</b></p> <p>% of Non-Pell Recipients (at Entry) Who Are Successful Within Four Years</p> <p style="text-align: center;"><b>minus</b></p> <p>% of Pell Recipients (at Entry) Who Are Successful Within Four Years</p> <p>% of Non-URM Students Who Are Successful Within Four Years</p> <p style="text-align: center;"><b>minus</b></p> <p>% of URM Students Who Are Successful Within Four Years</p>
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For freshman associate's students, the success rate is an unduplicated count of the percentage of students who transfer or transition into bachelor's programs within the system, earn certificates, or earn associate's degrees within the system. For transfer students, the success rate only measures whether students earn associate's degrees within the system.

The success gap is the performance of the reference group (here, non-URM or non-Pell students) on the indicator minus the performance of the target group (in this case, URM or Pell students). Take, for example, the percentage of non-URM students who earn bachelor's degrees within six years minus the percentage of URM students who do so. A positive difference means that the target group is lagging behind the reference group on the given indicator. A negative difference means that the target group is exceeding the reference group. A negative change in the gap indicates that the gap has narrowed and improved. A positive change in the gap means the gap has grown and gotten worse. A success gap that has narrowed in full or in part due to a decline in non-Pell or non-URM performance is not considered progress, however.

Measuring success gaps helps system and campus leaders track the success rates of low-income and minority students along with those of their peers. In other words, to close achievement gaps, the success rates of Pell and URM students must increase faster than any improvement among their peers.

## Using Pell Grant Receipt as a Proxy for Income Status in the A2S Metrics

The Access to Success Initiative is committed to closing enrollment and achievement gaps for underrepresented minority and low-income students in public higher education. Although data on enrollment and success rates now are regularly published by race and ethnicity, no such data currently are widely published by income status. In our metrics, we use whether students receive Pell Grants as our indicator of income status because it is the only income measure that is widely available across all participating systems. It does, however, have its limitations, which are discussed here.

### Access

In our access metrics, we measure the economic diversity of our systems' entering classes by comparing the percentage of students who receive Pell Grants at entry to the percentage of high school graduates living below 200 percent of the federal poverty level in the state. Using Pell as a proxy in the Access metrics may *overstate* the size of the access gap because some low-income students may not receive Pell Grants due to factors that affect eligibility. For instance, Pell Grant eligibility cutoffs are lower for students who attend part-time than for full-time students.

Further, a number of Pell-eligible students do not apply for financial aid because they lack information about and experience with the complicated process. In fact, in 2003–04, more than 20 percent of the lowest income students did not complete the Free Application for Federal Student Aid (FAFSA). The American Council on Education estimates that an additional 1.5 million students likely would have received a Pell Grant in 2003–04 had they applied for federal financial aid.<sup>6</sup>

Using 2008 National Postsecondary Student Aid Study data, though, we found that the percentage of entering students with incomes below 200 percent of the federal poverty level roughly corresponds with the percentage of entering students with Pell Grants in the Access to Success data. In 2007–2008, the percentage of entering freshman students with incomes below 200 percent of the federal poverty level was 26 percent among bachelor's degree-seeking students and 43 percent among associate's degree-seeking students. By comparison, 29 percent of freshman bachelor's seekers and 45 percent of freshman associate's seekers were Pell Grant recipients in the 2007–2008 Access to Success data.

The Pell Grant program expanded considerably in the 2009–2010 academic year, however. In 2009–2010, 35 percent of freshman bachelor's seekers and 57 percent of freshman associate's seekers were Pell Grant recipients in Access to Success systems. According to the U.S. Department of Education, some 60 percent of the growth in the cost of the program is attributed to changes in the eligibility criteria as well as an increase in the award amount; 40 percent of the growth is attributed to growth in the number of eligible students, which has increased as economic conditions have worsened.<sup>7</sup> Since newer income and poverty data are not available

from NPSAS, we are unable to update the poverty-level comparison for the 2009–2010 year.

### Success

In our success metrics, we track and compare the success of students who received Pell Grants at entry to students who did not receive Pell Grants when they entered the system. Unlike with the access metrics, using Pell status as a proxy for income in the success metrics may actually *understate* the success rate gap for two reasons. First, some non-recipients are low income but don't receive aid, as noted above. Because these needy students without aid are considered non-recipients, they may lower the completion rate of the comparison group and understate the gap. Second, there is likely a positive impact for low-income students who receive Pell Grants, because getting the grant helps them stay in college, which also narrows the graduation gap with non-recipients.

Despite the limitations, the success rates for Pell recipients reported in our metrics are the first set of national benchmarks on the performance of low-income students at public two-year and four-year colleges collected annually. To date, the only nationally representative data on the success rates of low-income students comes from sample studies conducted by the National Center for Education Statistics (NCES), such as the Beginning Postsecondary Students (BPS) study and the National Education Longitudinal Study (NELS). While this information has been invaluable in understanding the gaps in success between low-income students and their peers, the studies are not conducted annually and are not available at the institution or system level. It is our hope that the data generated here will move the colleges and universities in our systems forward faster in closing achievement gaps for low-income students.

### Degrees Conferred

As an indicator of low-income status in the degrees-conferred measure, we use whether students received Pell Grants at any time during their undergraduate tenure. This definition allows systems to earn additional credit for serving low-income students who might not be counted, if we used Pell receipt at entry or exit only. We only report this number descriptively and not to construct a metric, because there is not an appropriate reference group with which to compare it that provides meaningful information for system leaders to act upon.

## ENDNOTES

1. U.S. Census Bureau, "Poverty Thresholds for 2009 by Size of Family and Number of Related Children Under 18 Years" (Washington, D.C.: U.S. Census Bureau; Social, Economic, and Housing Statistics Division, 2009), <http://www.census.gov/hhes/www/poverty/data/threshld/thresh09.html>.
2. U.S. Department of Education, "2009-10 Federal Pell Grant Program End-of-Year Report" (Washington, D.C.: U.S. Department of Education, Office of Postsecondary Education, 2011), <http://www2.ed.gov/finaid/prof/resources/data/pell-2009-10/pell-eoy-09-10.pdf>.
3. The age ranges were selected because they cover about 90 percent of entering students in their respective categories (that is, 92 percent of bachelor's degree-seeking students began postsecondary education between the ages of 18 and 24, and 92 percent of associate's degree-seeking students began postsecondary education between the ages of 18 and 34) according to Ed Trust analysis of National Postsecondary Student Aid Study (NPSAS): 2008.
4. The success metrics track outcomes for both first-time and transfer students over the same number of years, six for bachelor's cohorts and four for associate's cohorts, because there was no minimum credit amount at entry for transfer students that was appropriate to set across all systems. Because the metrics include both students who transfer into the cohort with no or few credits and students who transfer in with a degree, transfer students are tracked for the same amount of time as freshman students from their entry into the system. As a result, transfer success rates tend to be higher than freshman success rates due to the longer time frame from initial entry to postsecondary education elsewhere through their completion in the system. However, freshman students who persist beyond the first year generally have higher success rates than transfer students.
5. We recognize that there are several limitations to the Census Bureau's poverty data, particularly with regards to estimated poverty levels among young adult populations. In brief, there are two issues of concern. First, some populations are excluded from poverty estimates, including most students living in college dorms. Secondly, some dependent college students (meaning financially dependent on their parents) may be considered independent for purposes of Census sampling (meaning their income is counted separately from the parents), if they do not live at home. Because higher income students may be more likely to live in college dorms and less likely to live at home than lower income students, it is possible that the percentage of young adults living in poverty may be inflated due to these sampling problems. We chose to use the Census data despite these limitations because the percentage of young adults living below 200 percent of the federal poverty level is (1) within three percentage points of the percentage of children living below 200 percent poverty in more than half of the A2S states, indicating that the sampling error is not a major problem in these states; (2) is slightly lower than the percentage of children below 200 percent poverty in most of the rest of the states, which was expected since the former excludes young adults who did not graduate from high school while the latter does not; and (3) was higher in only three states, which could be an indication of sampling error since some of these states are small, but could also be explained by other factors such as low median incomes in those states or in-migration among lower-income populations. We also chose to use the young-adult estimates because more than half of Pell Grant recipients are financially independent from their parents, and a considerable number of dependent Pell Grant recipients live at home with their parents, which means they would not be affected by the sampling issues. Finally, we would not have been able to accommodate the systems' parameters for using only high school graduates and different age ranges in the comparison data, if we had used the percentage of children living below 200 percent poverty instead of the percentage of young adults.
6. "Missed Opportunities Revisited: New Information on Students Who Do Not Apply for Financial Aid" (Washington, D.C.: Center for Policy Analysis, American Council on Education, February 2006). Available at [www.acenet.edu/AM/Template.cfm?Section=Search&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=14244](http://www.acenet.edu/AM/Template.cfm?Section=Search&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=14244).
7. U.S. Department of Education, Fiscal Year 2012 Budget Request (Washington, D.C.: U.S. Department of Education, 2012).



# ACCESS TO SUCCESS

## THE ACCESS TO SUCCESS INITIATIVE

Launched in 2007, the Access to Success Initiative joins the leaders of public higher education systems in working toward two ambitious goals: increase the number of college graduates in their states and ensure those graduates more broadly represent their states' high school graduates. Indeed, A2S leaders have pledged that by 2015 their systems will halve the gaps in college-going and completion that separate African-American, Latino, and American-Indian students from their white and Asian-American peers — and low-income students from more affluent ones. Now counting 22 member systems, 312 two-year and four-year campuses, and 3.5 million students, the A2S initiative remains the nation's only concerted effort to help public college and university systems boost attainment.

## ABOUT THE EDUCATION TRUST

The Education Trust promotes high academic achievement for all students at all levels — pre-kindergarten through college. We work alongside parents, educators, and community and business leaders across the country in transforming schools and colleges into institutions that serve all students well. Lessons learned in these efforts, together with unflinching data analyses, shape our state and national policy agendas. Our goal is to close the gaps in opportunity and achievement that consign far too many young people — especially those who are black, Latino, American Indian, or from low-income families — to lives on the margins of the American mainstream.

# NASH

NATIONAL ASSOCIATION OF SYSTEM HEADS

## ABOUT THE NATIONAL ASSOCIATION OF SYSTEM HEADS

The National Association of System Heads (NASH) is the association of the chief executive officers of the 52 public college and university systems of higher education in the United States. Unique among higher education associations in its focus on systems, NASH seeks ways to leverage system capacity to meet current and future needs for higher education. NASH collaboratives, such as the partnership with The Education Trust, are voluntary, and bring together system and campus leaders interested in working together toward the common goal of improved effectiveness.

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**NASH**  
NATIONAL ASSOCIATION OF SYSTEM HEADS



**The Education Trust**

1250 H STREET, N.W., SUITE 700, WASHINGTON D.C. 20005  
T 202/293-1217 F 202/293-2605 WWW.EDTRUST.ORG