

Why Are Foundation Courses and Early GPAs Important?

“A college degree can be a ticket out of poverty.”¹ Yet, only 22% of the country’s Black population and 15% of the Hispanic population have a minimum of a bachelor’s degree, compared with over one-half of Asians and about one-third of whites.² In 2019, although the college enrollment rate of recent high school graduates for Asian students was 62%, the rate did not differ widely among white, Black, and Hispanic students—41%, 37%, and 36%, respectively.³ However, the range in the six-year graduation rates was larger—75% and 66% for Asian and white students, respectively; 57% for Hispanic students; and only 42% for Black students.⁴

Strong academic success in foundation courses and courses that fulfill general education requirements has been demonstrated to be related to success throughout a student’s academic career, including credential completion and into the labor force.^{5,6} Foundation courses are the introductory courses in a program where base-level concepts and knowledge are taught and, optimally, mastered. General education courses, such as college algebra, composition, and communications, are noted to help with success in the workforce and society by helping improve critical thinking, quantitative skills, and communications and teamwork.⁷

Historically underserved students—Hispanic, Black, Native American, first-generation, and Pell Grant recipients—often attain lower grades in these introductory and foundation courses than their peers.⁸ This analysis includes data from five higher education institutions to examine if these gaps are realized and, if so, to what extent. This brief describes a sample data inquiry that can help institutions identify inequities and provides guiding questions to assist campuses in facilitating discussions about equity as related to their own policies and programs.

Members of the American Association of State Colleges and Universities (AASCU) are access-oriented regional public four-year institutions meeting the educational needs and advancing the economy of their local communities. AASCU has been working closely with a group of five institutions—Austin Peay State University (Tenn.); Bowie State University (Md.); California State University, San Bernardino; Lehman College of the City University of New York; and Northwest Missouri State University—to refine the institutional transformation process at the heart of its student success strategy. This effort is supported by the Bill & Melinda Gates Foundation⁹ and aligns with AASCU’s strategic goals to assist its members in achieving equitable student outcomes across race/ethnicity, income, and first-generation status.¹⁰

Two questions are the focus of this analysis of more than 70,000 students enrolled at the five partner institutions between 2014–15 and 2018–19:

- 1 What are the grade attainment patterns in high-enrollment, early general education, and foundation courses?
- 2 What are the patterns in students’ first-term and first-year grade-point averages (GPAs)?

The findings reveal patterns that can be examined alongside institutional policies and practices to help institutions understand where to focus their efforts to improve equitable academic achievement and promote social mobility.

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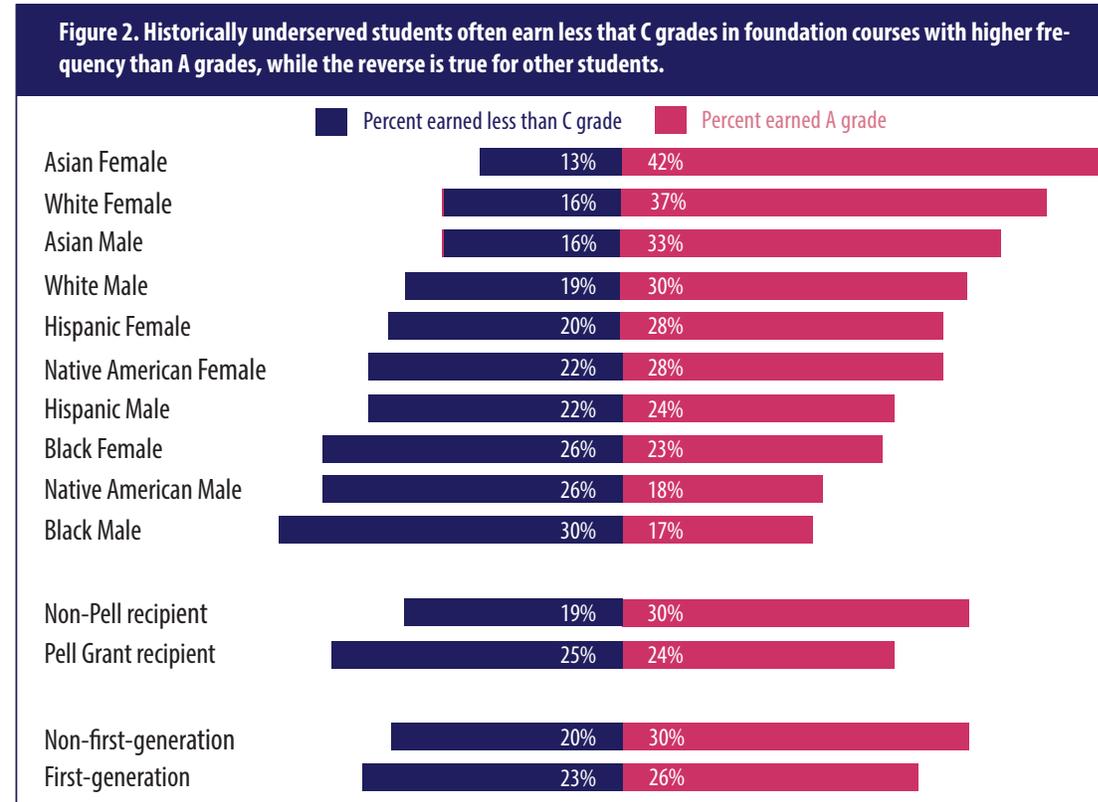
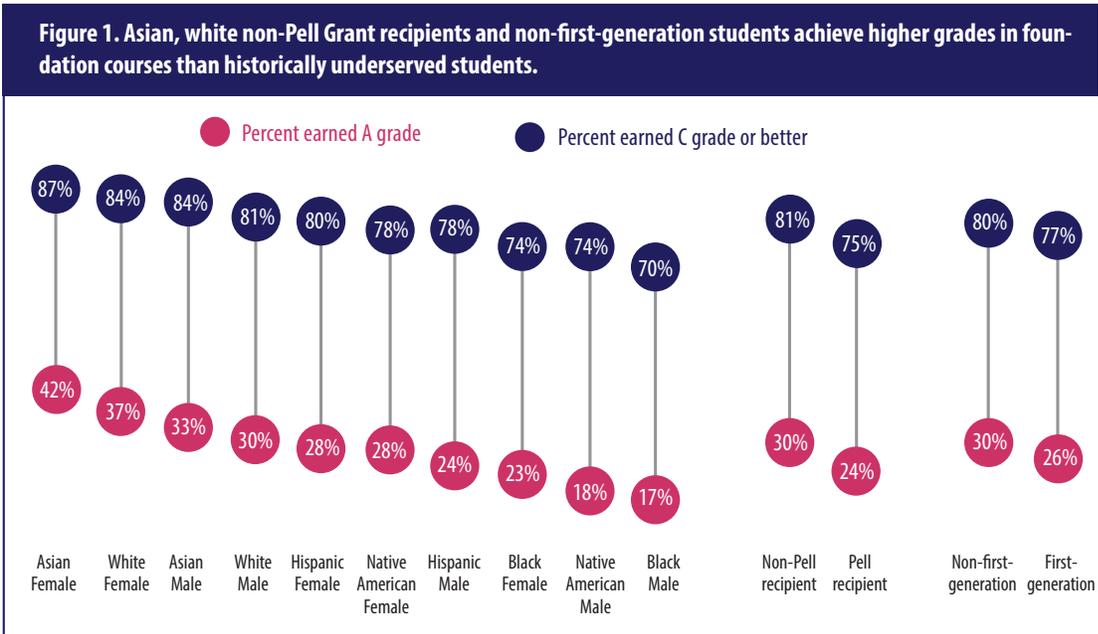
❶ What are the grade attainment patterns in high-enrollment, early general education, and foundation courses?

Mastering concepts in foundation courses provides a strong academic base to support a student's high achievement in subsequent higher-level courses and success beyond graduation. Achieving a C grade (2.0) or better in a course typically relates to "successful" course completion and allows the student to move on. But, a student earning a C grade likely does not acquire as strong of a

knowledge base and will likely struggle more in higher-level courses compared with a student who achieves an A grade. Research shows that students who earned A or B grades in a required foundation English composition course had a 67% graduation rate, compared with a 48% graduation rate for students who earned a C grade.¹¹

The grades achieved by students in 8 to 10 of the highest-enrollment foundation or general education courses from each of the five institutions were analyzed (see Methodology and Terms section or courses included for each institution). Historically underserved students are less likely to complete foundation courses with at least a C grade, and, for many student populations, are less likely to achieve an A grade in the course.

Additionally, the magnitude of the grade difference between historically underserved students and their peers can be substantial. For example, 42% of Asian females¹² achieve A grades in foundation courses, while Black and Native American males are the least likely—17% and 18%, respectively—a 25-percentage-point difference (Figure 1).



Similarly, 30% of non-first-generation students and students without Pell Grants earn A grades, while fewer Pell Grant and first-generation students do so—24% and 26%, respectively.

The trends persist when considering the satisfactory threshold of C grade attainment, but the gap is narrower. For example, 70% of Black males earn a C grade or better, compared with 87% of Asian females—a 17-percentage-point difference.

The share of students who earn less than a C grade (0.0 to 1.9¹³), withdraw, or do not complete differs across student characteristics. Historically underserved students are less likely to earn an A grade and more likely to earn less than a C grade. Pell grant recipients, Black students, and Native American male students earn grades less than a C (25% to 30%) more often than A grades (17% to 24%; Figure 2). Yet, Asian females are more than three times as likely to earn A grades than grades less than a C, while white female and Asian male students are more than twice as likely to earn A grades than grades of less than a C.

What are the patterns in students' first-term and first-year GPAs?

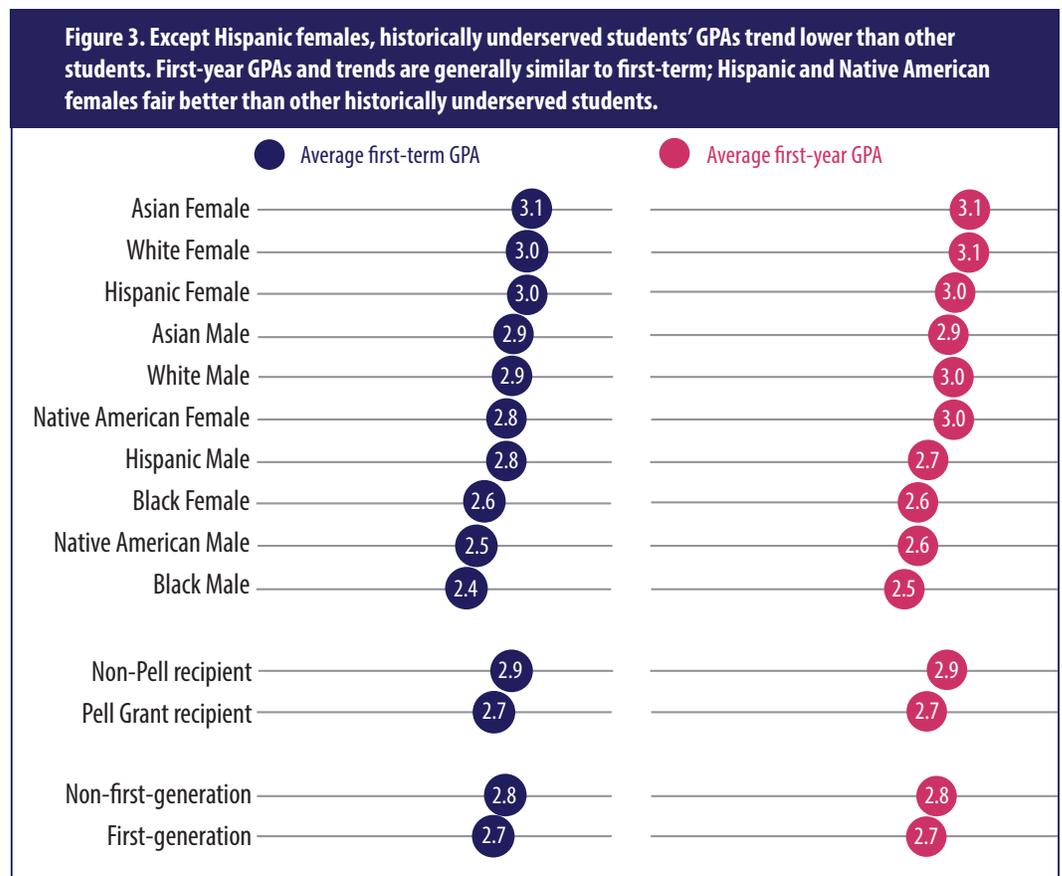
Students with stronger GPAs during the first semester and first year are more likely to persist and graduate.^{14, 15, 16} One research study shows that students with first-term GPAs just above the “successful” zone (2.0 to 2.3) are about half as likely to graduate as those with GPAs of 3.68 or higher.¹⁷ Another analysis suggests that students in the “murky middle”—those

with first-year GPAs between 2.0 and 2.9—should be considered academically challenged and be provided access to supports similar to those provided to students whose GPAs fall below the 2.0 threshold.¹⁸ Notably, the return on investment of providing supports to students with a 2.0 to 2.9 first-year GPA is large. An incremental increase in GPA for these students, or a higher grade in just a couple of courses, increases the chances for the students to complete their credentials by as much as 10%.¹⁹

This analysis shows that, except for Hispanic females, the average first-term GPAs of historically underserved students are lower than that of other students. Female

Asian, white, and Hispanic students earn GPAs of 3.0 to 3.1 during the first term, while all other students' first-term GPAs are below the 3.0 threshold (Figure 3). The first-term GPA gap is 0.7 points—almost an entire letter grade—from 3.1 for Asian females to 2.4 for Black males. First-generation and Pell Grant recipients' first-term GPAs are only slightly lower than non-first-generation and non-Pell Grant recipients—2.7 and 2.8, respectively.

In large part, GPAs for the first year for many students are similar to the first-term GPAs. The exception is Native American females, whose average GPA increased from 2.8 for the first-term to 3.0 for the first-year GPA.



Questions to Consider

Examining achievement in foundation courses (or courses that provide the basic constructs for future topical coursework and frameworks to develop critical thinking)—along with strong grades in all courses attempted early on—allows institutions to assess how they may address the different academic and personal needs of students. Assessing outcomes across the various courses; examining courses or subjects individually will reveal more detailed patterns. Evidenced patterns of historically underserved students earning A grades in foundation courses with less frequency than others and earning lower grades overall lead to questions about policies and programs and can help institutions identify and understand practices that may perpetuate or reduce inequities. Examples follow.

Only 17% to 28% of Black, Hispanic, and Native American students achieve A grades in high-enrollment foundation classes, while 30% to 42% of white and Asian students do so.

Research shows that students in high-quality, culturally responsive courses are more engaged and active learners and have better outcomes.²⁰ What does this mean for teaching and pedagogy? How can faculty ensure that they do not fall victim to racism in their grading procedures? Are faculty trained and have they designed quality course content and curricula that is culturally responsive? Have faculty developed grading procedures that eliminate the impacts of racial bias—whether it be conscious or unconscious? How can faculty and staff elevate the student voice and engage Black, Latinx, and Native American students to better understand their first-year experiences and related challenges?

Grades achieved by first-generation students in high enrollment foundation courses and first-term and first-year GPAs trend lower than non-first-generation students.

First-generation students often come to campus with lower levels of academic preparation and study skills.²¹ Are academic supports in place for first-generation students, such as study skills workshops or tutoring centers, to provide the help that may not be available elsewhere? Do students have access to study groups and are they encouraged to interact with faculty outside of class and during office hours? Do faculty routinely meet with students to discuss their course performance? Has the institution connected to K–12 or community partners to identify first-year barriers for historically underserved

COVID-Era Equity Considerations

In the throes of the pandemic, conditions heightened inequities in policies and practices that likely existed prior to the pandemic but went unrealized. A survey conducted by The Hope Center during Spring 2020—the first semester severely affected by the pandemic—found that about three out of five students who enrolled in four-year institutions experienced basic needs insecurities at the time of the survey.²⁴ Examining data and understanding students' response to the pandemic conditions can help ensure current and future practices and policies are in place that work to close equity gaps. When examining equity gaps in student learning, consider the following:

- How did students fare in online foundation and general education courses? Did depth of student learning differ across student groups? Was there a loss of learning we need to be cognizant of as these students move into upper-level courses?
- For students who continue to take courses online, do they have what they need to attend classes regularly and communicate with the instructor outside of class?
- Consider the design and content of online classes. Are lectures an appropriate length to ensure engagement? Is the curriculum designed with inclusivity in mind? Are instructors trained to use the teaching tools and technology, and do they make effective use of the tools?
- Do students have access to supports online, such as advising, tutoring, and counseling?
- In the short term, institutions have access to federal funds to provide students with emergency grants. To ensure students can remain in class, how can your institution continue to provide emergency funds to students after the COVID-related funds are depleted?
- What new practices and student services did your institution implement because of COVID that are showing promise of being effective? How do you know? How can your institution continue to support these in the future?

students and deliver supports? Are supports and services provided without singling out or stigmatizing students? Sensitively developed programming can help assimilate and engage first-generation students, such as cohort-based summer and first-year transition programs and first-generation living-learning communities.²²

Non-Pell Grant recipients are more likely to earn an A grade in foundation courses than Pell Grant recipients (30% and 24%)

“A minor financial setback can be enough to derail low-income students and cause them to stop or drop out.”²³ When money is tight, coming up with the funds needed for a car repair or child care may result in a student missing class time and important course content, handing in an assignment, or taking an exam or quiz. Does the institution have an emergency financial assistance fund for students, especially low-income students, when they experience unexpected financial emergencies or hardships?

On average, 4 out of 10 students included in this analysis earn grades less than a B in foundation courses, and the rate is as high as 6 out of 10 for some historically underserved students.

Does the institution have systems in place to identify students struggling with coursework early in the semester? Do early alert systems refer students to appropriate support and assign staff to follow up with students who have received alerts? Are some courses highly predictive of future academic success? If so, should a higher threshold of “success” be considered and/or should struggling students be required to complete supplemental tutoring or other extra academic support? Note: Raising the success threshold will lead to more students needing to repeat the course and institutions considering this policy should explore the financial implications and student engagement and frustration, particularly for historically underserved students who attain grades less than a B in higher numbers than their peers.

Native American males and Black males and females have the lowest first-term and first-year GPAs.

It is well-evidenced that a student’s sense of belonging and engagement—and thus, academic achievement—is higher when students have role models with whom they can identify. How diverse are faculty and staff? What are the institutional hiring practices? Does the institution employ creative methods to seek diversity? Are curricula designed with inclusivity in mind? How can the institution identify supports that are effective in helping historically underserved students earn GPAs above 3.0?

Conclusion

This analysis provides an example of a data inquiry to assess equity in grade attainment. Examining the strength of learning in foundation courses, often considered high-stakes courses, can lead to the exploration of policies, practices, or supports that may create barriers and help design services and practices to better meet the needs of historically underserved students. With a stronger academic foundation, more students will persist, complete their credentials, and attain higher paying jobs.

Among these five institutions, for example, historically underserved students do not, on average, achieve A and B grades in foundation and general education courses at the same rates as other students. In addition, their first-term and first-year GPAs trend lower than other students. It is imperative to assess the policies and practices that are related to academic achievement. Are the supports students need to succeed purely academic, or are there personal needs too? Do students feel a sense of belonging and are they engaged? Is course content inclusive and relatable?

When conducting an equity inquiry, it is crucial for institutions to understand all systems and the related obstacles that act on students. Make sense of data as related to practice, not student deficits. Interpret equity gaps as a signal that practices are not working as they should; develop your inquiry to question how and why current practices are failing to serve students. Following are questions institutions can consider regarding processes, policies, and programs that may address inequities, both explicitly and implicitly.

- Which student populations should be included in equity conversations? What types of data can be collected to better understand students’ experiences and outcomes?
- Who most likely benefits from the policy or program? Is the program meant to serve all students equally?
- How might a practice disadvantage some students, particularly those historically underserved?

- What is prioritized, rewarded, and normalized to consistently privilege those in certain groups?
- How did those who designed the policy take equity into account? Was equity considered?
- Who might not meet eligibility requirements? Does this have uneven effects?
- Conducting a detailed equity inquiry across the intersectionality of student characteristics may reveal even more patterns.

Methodology and Terms

Analytical note. The grades achieved by students in 8 to 10 of the highest enrollment foundation or general education courses from each of the five institutions were analyzed. These are “100-level” or introductory courses, or courses that satisfy a general education requirement. In some cases, there are two similar courses from which the student would select one, depending on the program or major. Achievement in the selected foundation courses was analyzed over the student’s first year of enrollment. If a student attempted a given course more than once during the year, only the first attempt was included in the analysis. If a student attempted two different courses in the same subject (e.g., two different biology courses), only the first attempt was included. The courses included in the analysis follow.

Austin Peay State University	Bowie State University	California State University, San Bernardino	Lehman College of the City University of New York	Northwest Missouri State University
<ul style="list-style-type: none"> • English Composition I • Elements of Statistics • Early United States History • Introduction to Biology • General Biology I • Physical Geology • General Psychology • Fundamentals of Public Speaking • Introduction to Sociology 	<ul style="list-style-type: none"> • Expository Writing • College Algebra • Life and Health • Oral Communications • Afro-Amer History Since 1865 • Afro-Amer History to 1865 • Computer Literacy and Applications • General Psychology • Biological Science 	<ul style="list-style-type: none"> • The Ideas of Mathematics • College Algebra • Accelerated Stretch Composition II • Advanced First-Year Composition • Accelerated Stretch Composition I • Oral Communication • American Civil • Introduction to Psychology • Topics in Biology 	<ul style="list-style-type: none"> • English Composition I • College Algebra • Precalculus • Introduction to Statistics • Introduction to Macroeconomics • Introduction to Microeconomics • General Psychology • The American Political System • Anatomy and Physiology I • Essentials of General Chemistry • Principals of Accounting I 	<ul style="list-style-type: none"> • Composition I: Academic Literacies • General Statistics • College Algebra • Introduction to American Government & Politics • Computers and Information Technologies • Fundamentals of Oral Communication • General Psychology • General Biology

Computation of averages. The five institutions vary in size; as such, simple averages were computed across the institutions so that one institution does not weigh more or less than the others.

Course grades and first-term and first-year GPAs. Institutions report 4.0 to 0.0 for A through F grades, or values for missing, incomplete, withdraw, audit, drop, or other. Institutions report first-term and first-year GPAs based on credits used toward a student’s credential on a four-point scale; pass/fail classes, D grades, and retakes are reported in the same methodology as used for the student’s credential.

Native American. Native American includes students identifying as American Indian and Alaska Native.

Endnotes

- 1 Michael Greenstone, Adam Looney, Jeremy Patashnik, and Muxin Yu, "Thirteen Economic Facts About Social Mobility and the Role of Education," The Hamilton Project, Brookings, June 2013. <https://www.brookings.edu/research/thirteen-economic-facts-about-social-mobility-and-the-role-of-education>.
- 2 Kevin McElrath and Michael Martin, "Bachelor's Degree Attainment in the United States: 2005 to 2019," *American Community Survey Briefs*, U. S. Census Bureau, February 2021, <https://www.census.gov/library/publications/2021/acs/acsbr-009.html>
- 3 National Center for Education Statistics, "College Enrollment Rates," Institute for Education Statistics, U.S. Department of Education, May 2021, <https://nces.ed.gov/programs/coe/indicator/cpb>.
- 4 National Center for Education Statistics, "Graduation Rate From First Institution Attended for First-Time, Full-Time Bachelor's Degree-Seeking Students at 4-Year Postsecondary Institutions, by Race/Ethnicity, Time to Completion, Sex, Control of Institution, and Percentage of Applications Accepted: Selected Cohort Entry Years, 1996 Through 2013," *Digest of Education Statistics*, Institute for Education Statistics, U.S. Department of Education, n.d., https://nces.ed.gov/programs/digest/d20/tables/dt20_326.10.asp?current=yes.
- 5 Kasia Kovacs, "When a C Isn't Good Enough," *Inside Higher Ed*, September 23, 2016, <https://www.insidehighered.com/news/2016/09/23/students-who-earn-cs-gateway-courses-are-less-likely-graduate-new-data-show>
- 6 Jessie Kwak, "What Are Gateway Courses and Why Do They Matter to Equity in Higher Ed?," *Every Learner Everywhere*, June 2020, <https://www.everylearnereverywhere.org/blog/what-are-gateway-courses-and-why-do-they-matter-to-equity-in-higher-ed>.
- 7 Ibid.
- 8 Gardner Institute, Gateways to Completion, n.d., <https://www.jngi.org/gateways-to-completion>.
- 9 The findings and conclusions contained within are those of the author and do not necessarily reflect positions or policies of the foundation.
- 10 "Strategic Directions and Goals: FY 2020–2025," American Association of State Colleges and Universities, 2020, <https://www.aascu.org/strategic-plan/StrategicDirections>.
- 11 Jessie Kwak, "What Are Gateway Courses and Why Do They Matter to Equity in Higher Ed?"
- 12 The partner institutions report gender values of male and female only.
- 13 Some institutions award plus or minus grades (e.g., C- or D+, which equate to 1.7 and 1.3, respectively).
- 14 University of Illinois at Urbana-Champaign, "First-Semester GPA a Better Predictor of College Success Than ACT Score," *Phys.org*, February 2, 2016, <https://phys.org/news/2016-02-first-semester-gpa-predictor-college-success.html>.
- 15 Anne K. Driscoll, "Beyond Access: How the First Semester Matters for Community College Students' Aspirations and Persistence," *Policy Brief*, Policy Analysis for California Education, August 2007, <https://eric.ed.gov/?id=ED498154>.
- 16 James H. Yizar Jr., "Enrollment Factors That Predict Persistence of At-Risk (Low Income and First Generation) Students' Journey Towards Completion of a Baccalaureate Degree at Idaho State University," December 2010, <https://www.proquest.com/docview/859608178>
- 17 University of Illinois at Urbana-Champaign, "First-Semester GPA a Better Predictor of College Success Than ACT Score."
- 18 Ed Venit, "What Can We Learn From First-Year GPA?," *EAB*, April 4, 2014, <https://eab.com/insights/blogs/student-success/what-can-we-learn-from-first-year-gpa>.
- 19 Ibid.
- 20 Heather C. Hill, "Culturally Responsive Teaching Is Promising. But There's a Pressing Need for More Research," *Education Week*, March 6, 2020, <https://tinyurl.com/3fykvh7w>.

- 21 Michael J. Stebleton and Krista M. Soria, "Breaking Down Barriers: Academic Obstacles of First-Generation Students at Research Universities," *The Learning Assistance Review*, Fall 2012, <https://eric.ed.gov/?id=EJ1002281>.
- 22 Abby Miller and Sue Clery, *Social Mobility*. ASA Research, forthcoming.
- 23 Ibid.
- 24 Anna Helhoski, "Emergency Financial Aid for College Students: What Are Your Options?," NerdWallet, May 13, 2021, <https://www.nerdwallet.com/article/loans/student-loans/emergency-food-housing-college>.



About the American Association of State Colleges and Universities

The American Association of State Colleges and Universities (AASCU) is a Washington, D.C.-based higher education association of nearly 400 public colleges, universities, and systems whose members share a learning- and teaching-centered culture, a historic commitment to underserved student populations, and a dedication to research and creativity that advances their regions' economic progress and cultural development. These are institutions Delivering America's Promise.



Prepared in Partnership With ASA Research

This AASCU Data Brief was prepared by Sue Clery, founding partner of ASA Research, in collaboration with AASCU. ASA is driven by the belief that research—particularly in the fields of higher education and workforce—is essential for expanding opportunity, improving economic mobility, and contributing to personal and social well-being. ASA is pleased to partner with AASCU in support of student success and to provide strategic data consulting and assistance to AASCU.

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