CHAPTER 1:

# Introduction and Overview

The evidence is abundantly clear that a college degree is essential to economic success and social mobility in the 21st century, especially for low-income students and students of color, who historically have been left out of our higher education system.[1] However, many speculate about the value and outcomes of specific programs and institutions—in terms of both supporting students through to graduation and providing them with sufficient payoff for their investment. Better, more transparent data are needed to provide students, policymakers, and institutions with the information they need to answer important questions about college access, progression, completion, cost, and outcomes. Yet, with today's outdated data systems, answers to these questions remain elusive:

- How many low-income, first-generation, adult, transfer, and part-time students, who make up the new majority on today's campuses, attend each college?
- Do these students graduate?
- How long does it take students, particularly students who enter with less academic preparation or fewer financial resources, to complete college?
- Do the students who don't graduate transfer, or do they drop out?
- How much do students borrow, and can they repay these loans?
- Can students find jobs in their chosen field, and how much do they earn?
- What do students learn in college?

Equitable access to and success in higher education relies on information that reflects the higher education experience of *all students* at *all institutions*, yet many of today's students are missing or invisible in current data systems. Without answers to these key questions, *progress toward equity and success for all students is quite simply stagnated*—prospective students and policymakers will continue to be forced to make key decisions in a world lacking sufficient information. To advance the goals of social mobility and equity, the field needs a key set of comprehensive and comparable metrics that answer these critical questions about who attends college, who succeeds in and after college, and how college is financed. Specifically, the answers must provide information on how underserved students fare. Improved data that target student success will enable policymakers and institutions to help students—especially students of color, low-income students, and first-generation students—overcome barriers to college success, as well as empower the students themselves.

Recognizing this problem, the Institute for Higher Education Policy has partnered with the Bill & Melinda Gates Foundation (BMGF) to develop a Metrics Framework (see Table 1-1) built on a decade of research and experimentation by the field. BMGF's recent paper, *Answering the Call*, echoes the need for better and more complete data, calling for metrics that are reflective of all students, all institutions, and all outcomes.[2] It also outlines the proposed framework, which is designed to

**Table 1-1: A Field-Driven Metrics Framework**

| | ACCESS | PROGRESSION | COMPLETION | COST | POST-COLLEGE OUTCOMES |
|---|---|---|---|---|---|
| PERFORMANCE | Enrollment | Credit Accumulation<br>Credit Completion Ratio<br>Gateway Course Completion<br>Program of Study Selection<br>Retention Rate<br>Persistence Rate | Transfer Rate<br>Graduation Rate<br>Success Rate<br>Completers | Net Price<br>Unmet Need<br>Cumulative Debt | Employment Rate<br>Median Earnings<br>Loan Repayment and Default Rates<br>Graduate Education Rate<br>Learning Outcomes |
| EFFICIENCY | Expenditures per Student | Cost for Credits Not Completed<br>Cost for Completing Gateway Courses<br>Change in Revenue from Change in Retention | Time/Credits to Credential<br>Cost of Excess Credits to Credential<br>Completions per Student | Student Share of Cost<br>Expenditures per Completion | Earnings Threshold |
| EQUITY | Enrollment by (at least) Preparation, Economic Status, Age, Race/Ethnicity | Progression Performance by (at least) Preparation, Economic Status, Age, Race/Ethnicity | Completion Performance by (at least) Preparation, Economic Status, Age, Race/Ethnicity | Net Price and Unmet Need by (at least) Economic Status, Preparation, Age, Race/Ethnicity<br>Debt by (at least) Economic Status, Age, Race/Ethnicity, Completion Status | Outcomes Performance and Efficiency by (at least) Preparation, Economic Status, Age, Race/Ethnicity, Completion Status |

**Key Student Characteristics**

Enrollment Status
Attendance Intensity
Credential-Seeking Status
Program of Study
Academic Preparation
Economic Status
Race/Ethnicity
Age
Gender
First-Generation Status

**Key Institutional Characteristics**

Sector
Level
Credential/Program Mix
Size
Resources
Selectivity
Diversity
Minority-serving Institution (MSI) Status
Post-traditional Populations
Modality

serve dual purposes. First, institutions can leverage these metrics to guide internal improvement efforts and better serve all students. Second, policymakers at the state and federal levels can incorporate these metrics into their respective data systems for wider consumer use and public consumption as well as to support the development of student-focused policies. With these purposes in mind and informed by thorough research into the metrics that many states and institutions already are voluntarily using, this paper builds on *Answering the Call* to provide additional details on the metrics and definitions in the framework.

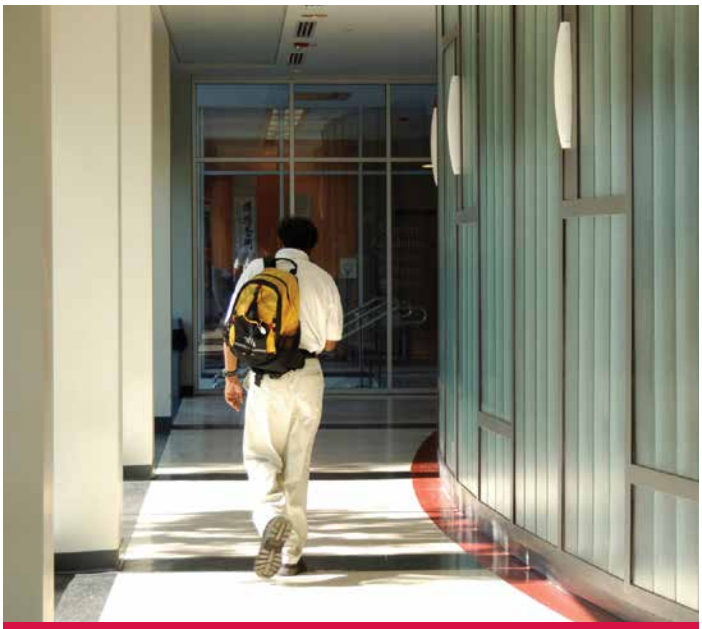
To be clear, these metrics and definitions were not chosen in a vacuum. For more than 10 years, institutional and state initiatives have recognized the pressing need for better data and have implemented a series of voluntary data collections to fill the gaps left by federal data systems in particular.[3] We analyzed the metrics and definitions these voluntary initiatives use, along with data specifications in national and state data collections, to identify points of consensus in the field. Appendix 1 shows which initiatives reviewed use each of the metrics included in the framework. The resulting metrics fall into three major categories:

- **Performance** metrics measure institutional performance related to student access, progress, completion, cost, and post-college outcomes. Because many voluntary initiatives are designed to promote student access and success, most define and collect these types of performance indicators.
- **Efficiency** metrics consider how resources impact college completion, driven by increased interest in attainment and affordability. Much of the methodology presented in this paper is derived from the Delta Cost Project, a leader in the development of comparable metrics on college costs.
- **Equity** metrics seek to include all students, disaggregate by key student groups, and accurately represent the higher education experience of populations that are underserved and may be invisible in current data collections. Although some of these disaggregates are common practice in the field, this framework encourages increased disaggregation to support attainment goals for more underserved student groups.

The metrics selected for the framework aim to measure each element as accurately and comprehensively as possible while balancing field convergence and data availability and feasibility. Institutions should be able to calculate the metrics as described using a variety of sources, including internal student information systems, the National Student Loan Data System (NSLDS), the College Scorecard, the National Student Clearinghouse, and state earnings and employment records (if available). In the report, we note where institutions may have

difficulty obtaining data, but because data availability is continuously evolving, we also expect capacity and accuracy to continue to improve over time. Table 1-2 shows the metrics included in this framework and the associated definitions, with color coding to designate the current availability of these data in federal data sources.

The field has spent the past decade refining a set of postsecondary metrics, with the goal of using these data to help advance student success. This experimentation has led to substantial consensus on what we should measure and how in higher education. At this point, we should no longer rely on the fortitude, creativity, and willingness of a set of institutions and states to produce this information, but rather, should incorporate these metrics into federal and state data systems. Doing so will make the data available for all institutions, not only those that voluntarily collect and report it. These government data systems can make the results widely available to and usable by the public and policymakers, creating the transparent postsecondary system our students so desperately need, with respect for data privacy in security, as outlined in Sidebox 1. With this transparent system, policymakers can design effective policies and students can make informed choices.



***We should no longer rely on the fortitude, creativity, and willingness of a select set of institutions and states to produce this information, but rather should incorporate these metrics into federal and state data systems.***

**Sidebox 1: Data Privacy and Security**

**Considering that student data are needed to calculate the metrics in this framework, protecting student privacy and ensuring the security of collected student data are essential. The Metrics Framework can be implemented as part of an aggregate or student-level collection, but the latter would be more flexible and easy to update over time. Institutions should take all appropriate measures under federal and state laws to ensure personally identifiable information is kept secure and confidential, while making aggregate results available transparently for consumers, policymakers, and the general public through state and federal collections. Secure access to postsecondary data is not an oxymoron, but an imperative to protect students—through both data privacy and transparency about student outcomes. The U.S. Department of Education has a number of cybersecurity initiatives to ensure student data privacy and stop identity theft,[4] and makes available to institutions a number of resources[5] to build capacity and strengthen data protection.[6] Institutions should leverage these and other tools and resources to strengthen their systems and governance structures.**

1 Carnevale, A., Rose, S., & Cheah, B. (2011). *The college payoff*. Washington, D.C.: Georgetown Center on Education and the Workforce. Retrieved from https://cew.georgetown.edu/report/the-college-payoff/; Baum, S., Ma, J., & Payea, K. (2013). *Education pays 2013*. Washington, D.C.: The College Board. Retrieved from: http://trends.collegeboard.org/sites/default/files/education-pays-2013-full-report-022714.pdf

2 Engle, J. (2016, February). *Answering the call: Institutions and states lead the movement for better metrics to measure postsecondary performance and progress*. Washington, D.C.: The Bill & Melinda Gates Foundation. Retrieved from http://postsecondary.gatesfoundation.org/wp-content/uploads/2016/02/AnsweringtheCall.pdf

3 For more information on each of the initiatives reviewed for this project, refer to pages 9 and 10 in Engle, J. (2016, February). *Answering the call: Institutions and states lead the movement for better metrics to measure postsecondary performance and progress*. Washington, D.C.: The Bill & Melinda Gates Foundation. Retrieved from: http://postsecondary.gatesfoundation.org/wp-content/uploads/2016/02/AnsweringtheCall.pdf

4 Tang, C. (2015, December). *What FAAs need to know about cybersecurity initiatives, data protection, and identity theft*. Poster session presented at the Federal Student Aid Conference. Retrieved from http://fsaconferences.ed.gov/conferences/library/2015/2015FSAConfSession43.ppt; Higher Education Compliance Alliance. Privacy/student records. Retrieved from http://www.higheredcompliance.org/resources/privacy-student-records.html

5 Department of Education. (2014, July). *Protecting student information* (Dear Colleague Letter) Washington, D.C.: The U.S. Department of Education. Retrieved from http://www.ifap.ed.gov/dpcletters/attachments/GEN1518.pdf; National Institute of Standards and Technology. Special publications list. Retrieved from http://csrc.nist.gov/publications/PubsSPs.html; The Department of Education. Safeguarding student privacy. Retrieved from https://www2.ed.gov/policy/gen/guid/fpco/ferpa/safeguarding-student-privacy.pdf

6 Educause. (2014, April). *What leaders need to know about managing data risk in student success systems*. Washington, D.C.: Educause. Retrieved from http://net.educause.edu/ir/library/pdf/PUB4007.pdf; Educause. (2015, May). *IPAS evaluation and assessment guide*. Washington, D.C.: Educause. Retrieved from http://net.educause.edu/ir/library/pdf/ERS1506.pdf

**Table 1-2: Recommended Metrics and Definitions Along With Availability in Federal Data Sources (Integrated Postsecondary Education Data System [IPEDS] and National Student Loan Data System [NSLDS])**

| | Key Performance Indicator | Key Performance Indicator Definition |
|---|---|---|
| PERFORMANCE | Enrollment | Twelve-month headcount that includes all undergraduate students who enroll at any point during the calendar year |
| | Credit Accumulation | The percentage of students earning sufficient credits toward on-time completion in their first year |
| | Credit Completion Ratio | The number of credits completed, divided by the number of credits attempted by first-year students |
| | Gateway Course Completion | The percentage of students completing college-level, introductory math and English courses tracked separately in their first year |
| | Program of Study Selection | The percentage of students in a cohort who demonstrate a program of study selection by taking nine credits (or three courses) in a meta-major in the first year |
| | Retention Rate | The percentage of students in a cohort who are either enrolled at their initial institution or transfer to a longer program at the initial or subsequent institution, calculated annually up to 200% of program length |
| | Persistence Rate | The percentage of students in a cohort remaining enrolled or earning a credential at their initial or subsequent institution, measured annually up to 200% of program length |
| | Transfer Rate | The percentage of students in a cohort who transfer into longer programs at the initial or subsequent institution(s), up to 200% of program length |
| | Graduation Rate | The percentage of students in a cohort who earn the credential sought at their initial institution, up to 200% of program length |
| | Success Rate | The percentage of students in a cohort who either graduate with the credential initially sought at the initial institution or transfer to a longer program at the initial or subsequent institution(s), up to 200% of program length |
| | Completers | The number of students who complete a credential in a given year |
| | Net Price | The average cost of attendance for an institution less all grant aid in a given year |
| | Unmet Need | The average net price for an institution less the average expected family contribution (EFC) in a given year |
| | Cumulative Debt | The median amount of debt student borrowers incur while attending an institution or program |
| | Loan Repayment Rate | The percentage of borrowers in a cohort who make at least $1 of progress on their loan principal in a fiscal year, measured at one, three, five, and 10 years into repayment |
| | Cohort Default Rate | The percentage of borrowers who enter repayment in a fiscal year and default within three fiscal years |
| | Graduate Education Rate | The number and percentage of bachelor's recipients enrolling in post-baccalaureate or graduate programs within one, five, and 10 (optional) years of completion |
| | Learning Outcomes | Public display of student learning goals, assessments, and outcomes using the National Institute for Learning Outcomes Assessment's (NILOA) Transparency Framework |
| | Employment Rate | The percentage of former students with any reported earnings at one, five, and 10 years after exit from the institution |
| | Median Earnings | The median annual earnings of former students one, five, and 10 years after exit from the institution (excludes zeros) |
| | Earnings Threshold | The percentage of former students earning more than the median high school graduate salary ($25,000 in 2014; includes zeros) at one, five and 10 years after exit from the institution |
| EFFICIENCY | Expenditures per Student | Education and related expenditures per full-time equivalent (FTE) student based on 12-month enrollment |
| | Cost for Credits Not Completed | The per-student expenditures for credits attempted but not completed by first-year students |
| | Cost for Completing Gateway Courses | For all gateway course completers in a given year, the per-student expenditures associated with all developmental and gateway courses attempted before gateway completion, tracking English and math courses separately |
| | Time to Credential | The average time accumulated from first date of entry to the institution to date of completion for all completers in a given year |
| | Credits to Credential | The average credits accumulated from the first date of entry to the institution to date of completion for all completers in a given year |
| | Change in Revenue from Change in Retention | The impact of changes in first-year retention rates from one cohort to another on tuition revenue available to the institution |
| | Cost of Excess Credits to Credential | The per-student expenditures for excess credits to credential for all completers with excess credits in a given year |
| | Completions per Student | The number of completions divided by the number of FTE students (based on 12-month enrollment) in a given year expressed as completions per 100 FTE |
| | Student Share of Cost | The percentage of education and related expenditures covered by net student tuition revenue versus public subsidies in a fiscal year |
| | Expenditures per Completion | Education and related expenditures divided by the number of completions in a fiscal year |
| EQUITY | Enrollment Status | First-time, transfer-in, or continuing students |
| | Attendance Intensity | Full time and part time, determined by the institution based on the number of credit hours taken |
| | Credential-Seeking Status | Certificate-, associate's-, bachelor's-, or noncredential-seeking students |
| | Program of Study | Six-digit Classification of Instructional Program (CIP) codes and reported for seven meta-majors |
| | Academic Preparation | Institutions classify students as "not college ready" and "college ready" in math and English as defined by institutional standards |
| | Economic Status | Pell Grant receipt as proxy for low-income or economic status |
| | Race/ethnicity | Current IPEDS categories: Hispanic or Latino, American Indian or Alaska Native, Asian, Black or African-American, Native Hawaiian or Other Pacific Islander, White, Two or more races, Nonresident alien, and Race/ethnicity unknown |
| | Age | Collected by date of birth, if available; otherwise reported by three categories: 19 and under, 20–24, 25 and over |
| | Gender | Male, female, or other |
| | First-Generation Status | Students whose parents' highest education level is some college but no degree or below (e.g., some college, no degree; vocational or technical training; high school diploma or equivalent; did not complete high school) |

Note: These metrics measure undergraduate populations only.

Key: Available with minor modifications needed; Available with moderate modifications needed; Available with major modifications needed; Not available