

SYSTEMS METRICS TASK FORCE RECOMMENDATIONS REPORT

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TABLE OF CONTENTS

PAGE 3: **Overview**

PAGE 8: Recommendations: Degree & Credential Completion

PAGE 14: Recommendations: Social Mobility

PAGE 20: Recommendations: Student Debt

PAGE 25: Research Agenda

PAGE 27: Appendix

Overview

INTRODUCTION

The COVID-19 pandemic exposed and exacerbated inequities including limited access to healthcare for vulnerable populations, the overwhelming effects of systemic injustices, and extreme gaps in economic opportunity. Simultaneously, public higher education systems were forced to make immediate transitions to remote learning and reevaluate their roles as healthcare providers, community anchors, and engines of upward social mobility.

In response to myriad challenges, in early 2020, National Association of System Heads (NASH) members took time to "get on the balcony" to reimagine public higher education systems, and the new roles they might play in strengthening our country. NASH saw that its network of higher education systems could build on a tradition of collaboration to increase equitable student success through a concept called "systemness" – leveraging diverse campus assets within and across systems to create value greater than the sum of its parts.

Over an 18-month period during 2020-21, a group of 100 system leaders supported by five design teams developed a transformation agenda for NASH that is today known as the Power of Systems. Moving beyond competition toward integrated services, shared academic programming, and predictive data analytics, the Power of Systems offers a compelling vision and guideposts for how to close equity gaps and deliver access, completion, and success for all students, state by state, by 2030.

Throughout the collaborative design phases of the Power of Systems, one consistent theme was the need for common metrics to measure progress toward our goals. The reason is simple – we can't improve what we can't measure.

As a result, we identified three metrics to drive our collective work: Degree and Credential Completion, Social Mobility, and Student Debt Reduction. NASH convened a Systems Metrics Task Force drawn from a broad group of stakeholders and content experts to draft system-level benchmarks and targets for each metric.



Grounded in our metrics as detailed in this recommendations report, the Power of Systems is an opportunity for public higher education systems to genuinely and meaningfully work together to make real change for students and families of all walks of life. Through our NASH Improvement Communities and the new Catalyst Fund¹, we are poised to accelerate progress on our metrics by rapid prototyping, refining, replicating and scaling interventions are proven to move the dial.

Why bother to lay this all out? Because public systems, research universities, local community colleges and independent institutions all have one goal in common: to educate more students and to educate them better. A better-educated citizenry is healthier, wealthier, and more civically engaged. By aligning on common goals and metrics, we can ensure that the taxpayer dollars and philanthropic funds invested in this cause, year after year, could prove to be a good investment. **We are truly on our way to making a collective impact.**

BACKGROUND

The National Association of System Heads (NASH) is the association of the chief executives of the college and university systems of public higher education in the United States. Formed in 1979 for the purpose of seeking improvement in the organization and governance of public higher education systems, NASH serves as a forum for the exchange of views and information among its members and on leveraging the power of systems to advance innovation and change in public higher education. NASH has defined a public higher education system as a group of two or more colleges or universities, each having substantial autonomy and headed by a chief executive or operating officer, all under a single governing board which is served by a system chief executive officer.

The 48 NASH member systems include multiple four-year institutions, and nearly half include two-year institutions. Together, public university systems educate approximately three-quarters of the nation's students in public, fouryear higher education and a significant proportion of students seeking twoyear degrees. How these systems are organized—that is, multiple institutions operating with a single system governing board and chief executive—makes them particularly well-positioned to tackle issues critical to the future of their states. NASH mobilizes expertise within participating systems and partners with other organizations to focus on increasing student access and success in college, especially for low-income students and minoritized.



¹ https://powerofsystems.org/catalyst-fund/

Through NASH, higher education system leaders convened in December, 2021 in Washington D.C., to author and adopt The Power of Systems: Advancing Prosperity for the Nation by realizing the following five imperatives:

- Learning: System-wide support for flexible and responsive programs to meet the unique needs to each student.
- Talent: A civically engaged and globally competitive workforce that contributes to community vitality and economic development.
- **Equity:** Just and accessible opportunities that empower all students through the removal of structural and systemic barriers.
- Investment: Collective resource sharing and efficiencies to reinvest in students.
- Systemness: Leveraging the power of public higher education systems to better serve students and society.



Through the Power of Systems initiative, the NASH network of post-secondary systems is working collaboratively to deliver impact in student success at scale, with particular emphases on the redress of inequities and promotion of economic and social mobility for all. Our agenda actualizes the power of "systemness", moving beyond competition within and across systems and toward collaboration.

One consistent theme recurring throughout the design stages and launch of the Power of Systems was the critical need for common metrics in order to measure progress toward our goals of closing equity gaps and advancing prosperity for the nation. Simply put, the NASH community understands that we cannot improve at scale what we cannot measure.

DEVELOPMENTAL METRICS

Developmental work on metrics began in the fall of 2021, when NASH convened a team of data and analytics experts drawn from five NASH member systems. The team initially developed a set of ten metrics aligned with the five Power of Systems imperatives. Through stakeholder feedback and discussion, the team then streamlined the metrics into three key system-level metrics which were to serve as the starting point for refinement by the Systems Metrics Task Force:

- **Degree and Credential Completion:** This modernized completion metric aims to capture the complexity of student completion patterns across institutions as well as shorter term credentials, such as certificates and certifications, that have value to industry and students.
- **Social Mobility:** This metric aims to capture the impact of public higher education systems on student social mobility. The Social Mobility Index will track the movement of undergraduate completers between income quintiles-based annual earnings and will incorporate measures of minoritized and low-income students.
- Student Debt: This metric aims to capture the relationship between student debt and the ability to repay student loans.

These three metrics were presented and discussed at The Big Rethink Superconvening on December 8-9, 2021 in Washington, DC. While the initial feedback from the NASH community on this developmental work was positive, more research, discussion, and stakeholder engagement was needed to finalize the metrics and develop targets to scale across multiple systems.



SYSTEM METRICS TASK FORCE

Building on the developmental work of the Big Rethink Metrics Committee, NASH convened a national task force to draft recommendations for three system level metrics and targets for consideration by NASH leadership and key stakeholders. Drawn from a broad group of stakeholders and content experts (see Appendix A), the Systems Metrics Task Force (SMTF) held a virtual kickoff meeting on May 26, 2022. The group was organized into four primary functional areas:

- **System Members** represented the public higher education system perspective. They provided expertise and worked collaboratively with Task Force members to develop final recommendations for the three system level metrics and targets.
- **Research Members** provided content expertise and guidance to Task Force members on topics and questions of interest as they developed and finalized the three system level metrics and targets.
- Advisory Members provided feedback and guidance on the development of the system level metrics and targets from their organization's perspective.
- NASH Staff provided leadership, coordination, support, communications, and project management to the Task Force.

The group was chaired by System Member Tristan Denley, Deputy Commissioner for Academic Affairs and Innovation at the Louisiana Board of Regents and given the following charge:

"Building on the developmental work of the Big Rethink Metrics Committee, the NASH Systems Metrics Task Force will draft recommendations for three system level metrics and targets for consideration by NASH leadership and key stakeholders: Credential and Degree Completion; Social Mobility; and Student Debt. Related to these three areas, the Task Force will engage in research, consider stakeholder feedback for revisions, provide updates on progress to NASH leadership and staff and contribute to a baseline study of system performance related to the three metrics. The final recommendations report and baseline study will be delivered no later than December 1, 2022 and include metrics definitions, targets, methodologies, data requirements and gaps, and considerations for implementation and scaling."

The SMTF held virtual monthly meetings monthly via Zoom, and collaborated between meetings through shared documents and small group calls. The SMTF was divided into three subgroups based on interest and expertise to address each of the three metrics. The subgroups' work was presented and discussed by the full SMTF at the monthly meetings, with recommendations of each subgroup vetted by all SMTF members, under the leadership of Chair Denley. SMTF Research Member Brian Prescott, Vice President at the National Center for Higher Education Management Systems (NCHEMS) led the development of the baseline study for the project in response to feedback and direction from the SMTF.

As detailed below, the SMTF completed the project on a roughly seven-month timeline, allowing time for extensive stakeholder feedback and revisions. The final goal was to present the metrics and targets at the December 2022 Convening in Washington DC, and ask NASH member systems to agree to support the NASH Power of Systems goals, metrics, and targets; embrace evidence-based practices within and among systems to collectively improve outcomes for students; and to disseminate research findings and best practices to accelerate progress toward goals, metrics and targets. (NASH will not be publishing disaggregated data by system, nor will the organization ask for data directly from system offices.)



Recommendations: Degree & Credential Completion

RATIONALE

Employers require a workforce with skills provided through higher education. Looking at the demand side of that statement, the Georgetown Center on Education and the Workforce (CEW) has provided estimates of labor market demand for skilled labor at national and state levels.² CEW projected that 65% of the jobs in the nation's economy will require some post-secondary education by 2020: 35% at least a bachelor's degree; 30% some college or an associate degree, and 35% would not require education beyond high school. Building on CEW's projections, the Lumina Foundation adopted the completion goal of 60% by 2025. According to Lumina's published reports, post-secondary educational attainment of Americans aged 25 to 64 has increased by 11.9 percentage points to 51.9% since 2009, which includes individuals with at least a postsecondary certificate or industry recognized certification.³ While this represents significant progress, it still lags well behind the 60% goal. However, it should be noted that CEW's projections include 'some-college-no-degree students (estimated at 20-24% of the total),' who by definition have not earned a degree-level credential. A significant portion of the improvement was achieved by including certificates and those with some college and no degree in the count, though not all individuals with some college and no degree are counted with the 51.9% - just those estimated to have a postsecondary certificate or industry recognized certification.

These projections provide guidance to the supply side—higher education systems and institutions—for how they can do their part in meeting the demand through their own goal setting, policy making, academic planning, and resource allocation processes.

² Carnevale, Anthony P., and Nicole Smith. 2013. Recovery: Job Growth and Education Requirements through 2020. Washington, DC: Georgetown University Center on Education and the Workforce. http://cew.georgetown.edu/recovery2020

³ Lumina Foundation (2022). A Stronger Nation: Learning Beyond High School Builds American Talent. 2022 National Report, Lumina Foundation. blob:https://www.luminafoundation.org/3ee686f2-7312-4f6c-987d-41162c01cefa. Accessed October 30, 2022.

The rationale for understanding the Degree and Credential Completion baseline and setting collective targets for systems to track systems' overall contribution and level of improvement over time to meeting state and national completion goals, and to track improvement on one of the Power of Systems' core imperatives: closing equity gaps.

BASELINE FINDINGS

To determine system level baseline data for all three metrics, NASH analysts mapped Integrated Postsecondary Education Data Systems Unit IDs for each campus within a NASH member system to their appropriate system using internal documents supplied by member systems. These lists were crosschecked with publicly available institutional lists available on websites. This crosswalk produced a novel data set with the unit of analysis being public higher education systems.⁴

NCHEMS calculated baseline Degree and Credential Completion results by summing all undergraduate degrees and certificates awarded by NASH member systems/institutions. Awards are aggregated annually from the NCES, IPEDS "A" Completions File (awards conferred by program, award level, race/ethnicity, and gender). Aggregations are limited to first-majors only to reduce duplication of awards. Initial baseline calculations were from the 2009-10 and 2019-20 academic years.⁵

Equity gaps are measured by calculating the proportion of undergraduate awards conferred by a given system to collegeeligible population age 18-44 (persons with just a high school diploma/GED or some college but no degree) within the system's state for White Non-Hispanic and minoritized students (Black Non-Hispanic, Hispanic, and Native American/Alaska Native). Closing equity gaps would mean systems/institutions would be serving minoritized students such that this metric for White Non-Hispanic and minoritized students are equal.⁶

According to the baseline data, NASH member systems have shown significant improvements in degree and credential completion across the 10-year span of 2009-10 to 2019-20. While there is wide variability between systems, on average NASH member systems increased degree completion by 34.7% over this time period. NASH systems produced 664,098 undergraduate certificates and degrees in 2009-10 and 894,247 in 2019-20, an increase in annual production of 230,149 (34.7%), resulting in 1,265,820 million additional awards over that period.

⁴ This recommendations report will present aggregate results from all NASH member systems for both baseline findings and to set targets. We defer to each individual system as to whether they wish to make their system's data publicly available.

⁵ Aggregating undergraduate completers from the NCES, IPEDS "C" Completions File (Number of students receiving awards/degrees, by award level and by gender, race/ethnicity and age categories) would have been most appropriate (counting students earning awards rather than awards themselves) but the earliest this file is available is for the 2011-12 academic year. Also note that detailed certificate levels (<12 weeks, 12 weeks to < 1-year) were not reported until the 2018-19 academic year so award aggregations for the 2009-10 and 2019-20 baseline years include all undergraduate certificates.

⁶ Note: Native Hawaiian and Other Pacific Islanders are normally included in minoritized calculations but race/ethnicity breakouts in IPEDS do not separate Asian and Native Hawaiian/Other Pacific Islanders until academic year 2010-11. The award numbers are small; Native Hawaiian and Other Pacific Islanders are included in the 2019-20 aggregations but can't be separated out to include in the 2009-10 aggregations.

Regarding equity gaps by race/ethnicity, while undergraduate award production has improved between 2009-10 and 2019-20, there remains significant room for improvement in closing equity gaps. As shown in Figure 1, undergraduate award production improved by 5.7 awards for white, non-Hispanic students and 5.9 awards for minoritized students.



Although the percent change in award production slightly favored minoritized students (.2), this was not enough to offset longstanding equity gaps. As a result, there remains a double-digit absolute equity gap (10.4) in undergraduate award production between white, non-Hispanic students and minoritized students (Figure 2).



DEFINITION

The Degree and Credential Completion metric is designed to capture public higher education systems' contributions to state and national attainment goals. The metric encapsulates students' completion of degrees and credentials across time and place, while also allowing for ongoing measurement of equity gaps.



TARGETS

As shown in the baseline data, given NASH member systems proven ability to improve, we propose to repeat this level of improvement over an accelerated period of seven years through collective impact. Beginning in 2023, by 2030 we propose that NASH member systems collectively increase degree and credential completion by 35% from 2019-20 baseline levels. While ambitious, this goal should nevertheless be achievable, given past performance.

In addition, we propose that equity gaps should be reduced by 50% from 2019-20 baseline levels. Using our current definition of equity and taking into account projected equity rates and projected population changes, reducing the equity gap by 50% between 2019-20 and 2029-30 would result in an additional 80,000 degrees and credentials across systems for minoritized students.

Collectively, the result of achieving these goals would produce an estimated over 1.2 million additional credentials by 2030 over 2019-20 baseline levels. Using 2019-20 as a baseline, increasing annual production by another 35% by 2029-30 yields an annual production of 1,204,156, an increase of 309,909 annually and total additional awards produced of 1,704,500 which far exceeds production from 2010-20. If we consider an increase in annual award production out to 2030 matching the previous decade's 230,149 awards (a 25.7% increase from 2020), we realize an annual production level of 1,124,396 awards and a total additional award production of 1,265,820 consistent with the production from 2010-20.

To achieve this goal NASH institutions will collectively need to combine a trifold set of strategies: firstly, institutions will need to increase college going, and initiate methodologies to engage populations of students; secondly institutions will need to build on the work of the last decade to improve college success and completion; lastly institutions will need to introduce new more nimble credentials that better meet the needs of the modern workplace.



LIMITATIONS

An overall limitation across all three metrics is that baseline numbers obscure significant differences between systems (especially differences in the quantity of sub-Baccalaureate programs), between institutions within each system, and between academic programs within each institution. While aggregations allow for general views of collective impact, it is important to keep in mind the variability that is obscured through multiple levels of aggregation.

Regarding degree and credential completions specifically, the baseline data collapses completions at different levels (Certificates, Associate Degrees, Bachelor's Degrees) together. Subsequent research should work to disaggregate these types of awards and examine their relationship to student outcomes. Counts of completions do not directly address "timely" completion, which we recognize is another important variable related to student success. The IPEDS data also does not specifically identify the number of students receiving their first award, which National Student Clearinghouse (2022) research indicates is declining.⁷ NASH values all degree and credential completions, including 'stackable' credentials, but recognizes that first-time completions are particularly important for learners. Finally, equity gaps are measured relative to state-level population which may not be the most appropriate service region for many institutions (actual service regions for each institution are not known).

While the NASH system-level targets are focused on increasing degree and credential completion counts over time, we recognize that many systems may need to consider setting their targets in the context of national and/or state attainment goals. Therefore, it is important to distinguish clearly between (a) the national or state attainment goal of a projected percentage of the workforce with a certain level of skills provided through higher education, and (b) the completion rates of colleges and universities.

⁷ Karamarkovich, S., Ryu, M., and Scheetz, A. (June 2022), Undergraduate Degree Earners Academic Year 2020-21 Herndon, VA: National Student Clearinghouse Research Center

NASH Systems Metrics Task Force Recommendations Report

First, the denominator for state and national attainment goals is the state's population, whereas the denominator for the completion rate is the system's enrollment. Second, our systems are not the only players in the educational sector producing a skilled workforce, so it would be unreasonable to expect systems to pick up responsibility for closing the entire gap. Third, skilled labor is mobile to some extent, such that some states make progress toward meeting demand through import of people who already possess the needed skills rather than through their own higher education systems. Fourth, the relationship between the demand side of the labor market and the supply side occurs in very different state and local contexts comprised of numerous variables such as the state's economy, state appropriations, financial aid, demographic trends such as declining population and out-migration, structure of the higher education system, role of private institutions, student population that includes more firstgeneration and/or Pell eligible students, and availability of data. Fifth, this complex relationship between demand and supply is amplified by the longtime lags in many fields between the recognition of demand in the labor market and the ability of our systems to meet that demand.

Therefore, when considering a target of achieving, for example, a 60% postsecondary attainment goal for the country (in terms of undergraduate certificates and degrees), projections show that approximately 11.5 million total additional awards would need to be produced above expected levels of production (which account for an increase in production based on recent trends).

The same calculations could be used to assess contributions to state-level goals, but it is important to note that state-specific goals vary widely in attainment level, age group, and year which make state goals more difficult to compare. Some states do not yet have specific attainment goals.

As we consider the metric for degree and credential completion as part of The Power of Systems initiative, we must keep in mind the distinction between what the labor market is projected to demand, on the one hand, and on the other hand what our systems can reasonably produce. It would be unreasonable to expect a system with low numbers of completions to meet its state's goal on its own. Yet, even with all of the complexity, systems have an opportunity to lead in solving the completion gaps. In fact, given their scale and scope, the problem cannot be solved without systems leading the way.



Recommendations: Social Mobility

RATIONALE

Even for degree completers, some students realize the benefits of a college education more than others, and there are wide variations in how well higher education institutions perform in raising the social mobility of their graduates. Economist Raj Chetty's (2017)⁸ research has demonstrated that, while students from low-income and high-income families have similar earnings outcomes based on their college of attendance, elite institutions proportionally enroll a small percentage of low-income students. In contrast, public institutions such as City University of New York and the California State University System serve as robust engines of upward social mobility for low-income students.

Third Way notes that traditional college rankings systems largely reward prestige, which tends to skew rankings away from institutions that enroll higher percentages of low-income students.⁹ As an alternative, Third Way developed an Economic Mobility Index that takes into account the return on investment for students and the proportion of low-income students as part of the overall student body. Not surprisingly, public higher education institutions rank the highest on these metrics. In fact, of the top 10 schools that offer the most economic mobility, all 10 are part of NASH member systems.

These efforts provide an evidence base to address a growing public skepticism and an erosion of trust in higher education to deliver on the promise of upward social mobility. According to Gallup surveys by 2018 less than half (48%) of U.S. adults expressed "a great deal" or "quite a lot" of confidence in the higher education sector, a drop of 9 percentage points from 2015.¹⁰ While there are significant partisan differences and the erosion of confidence is likely due to multiple factors, the decline was evident across the political spectrum and a significant driver is negative perceptions of debt, quality, and employment outcomes (Marken, 2019)¹¹ – all key factors in boosting or inhibiting the social mobility of students.

⁸ Chetty, Raj; Freidman, John; Saez, Emmanuel; Turner, Nicholas and Yagan, Danny (2017) Mobility Report Cards: The Role of Colleges in Intergenerational Mobility, NBER Working Paper No. 23618

⁹ Tzkowitz, Michael (2022) Out with the Old, In with the New: Rating Higher Ed by Economic Mobility. Third Way | Report. Located at: https:// thirdway.imgix.net/pdfs/override/Out-with-the-Old_In-with-the-New.pdf

¹⁰ Jones, Jeffrey M. (2018) Confidence in Higher Education Down Since 2015. Gallup | Blog. Located at: https://news.gallup.com/opinion/ gallup/242441/confidence-higher-education-down-2015.aspx

¹¹ Marken, Stephanie (2019) Crisis in Confidence in Higher Ed. Gallup | Blog. Located at: https://news.gallup.com/opinion/gallup/248492/ crisis-confidence-higher.aspx



BASELINE FINDINGS

NCHEMS calculated baseline Social Mobility results by accessing data made available by Opportunity Insights.¹² Opportunity Insights use de-identified data from federal income tax returns and the U.S. Department of Education's College Scorecard data (which includes all students, not just those receiving federal student aid) for college attendance of individuals born between 1980 and 1982, earnings of students by age 34 from those birth cohorts that attended college, and their parents' household income (average of parents' family income over the five years when the child is aged 15-19). One limitation of these data is that they are only provided by institution for students that attended 'on-time', that is, students attending between the ages of 19-22, and may thus skew findings toward greater upward mobility. However, this is potentially offset by the inclusion of non-completers, who tend to have less earnings over time than degree-completers. In addition, at this time, it is not possible to report on racial/ethnic gaps in social mobility because parents' household income data by students' race/ethnicity is not part of the publicly available data.

Generalized across all income quintiles, there was relatively little upward mobility, as only 24% of NASH member system students moved up any number of quintiles from their family income. However, this picture changes when focusing in on students from low-income families (1st and 2nd quintiles). As shown in Figure 3, 69% of NASH member system students attending 'on-time'¹³ from the 1st quintile of parental income advanced to the top three quintiles (60th percentile of income distribution) by age 34; within the 2nd quintile of parental income, this same pattern was true for 73% of students. Taken together, NASH member systems have advanced 71% of students from families in the bottom 40th percentile to the top 60th percentile of the income distribution when they are aged 34.

¹² https://opportunityinsights.org/

¹³ Students who attended 'on-time' are defined as attending college between ages 19-22.

This stands in stark contrast to students who never attended college. As shown in Figure 4, data from the Brookings Institution's report on middle class economic mobility in higher education (2020), only 30% of individuals who never attended college from the 1st quintile of parental income advanced to the top three quintiles (60th percentile of income distribution) by age 34; this pattern was true for only a slightly higher percentage of individuals from the 2nd parental income quintile (38%).¹⁴



Figure 3: NASH Member System Student Income Quintile by Age 34, by Parental Income Quintile

Moreover, looking at students from low-income families who rose multiple quintiles, 48% NASH member system students from the 1st quintile rose to either the 4th (24%) or 5th (24%) quintile compared to only 13% of individuals who did not attend college; 52% from the 2nd quintile rose to either the 4th (26%) or 5th (26%) quintile compared to only 18% of individuals who did not attend did not attend college (Figure 5).

Taken together, these data suggest that approximately twice as many NASH member system students from the bottom 40% of family income rose to the top 60th percentile of the income distribution by age 34, and approximately three times as many rose to the top 40th percentile, compared to individuals from the bottom 40% of family income who never attended college.

¹⁴ Reber, S., & Sinclair, C. (2020, May). Opportunity engines: Middle-class mobility in higher education. Retrieved October 27, 2022, from https://www.brookings.edu/wp-content/uploads/2020/05/0pportunity-Engines_Final.pdf



It is worth noting that these data do also shed light on inequities in the social-mobility impact of higher education. For instance, while 52% of students from the bottom 40% advance to the top 40% by age 34, 65% of their peers from top income quintile families have earnings in the top 40% at age 34 (Figure 5).

One of the limitations of the methodology described above is the extensive lag time needed to see any potential movement of income quintiles by age 34 (approximately 10 years for 'on-time' students). The following analysis illuminates the relationship between students family income and earnings immediately post-college attendance with less data lag. Figure 6 represents data from 2018, inflation-adjusted to 2020 dollars. For context, during the same period, the median income across the U.S. for those age 25-49 was \$41,767.16. For those with a high school diploma or less, it was \$29,237.01; for those with some college, no degree it was 35,502.09, and for those with at least an Associate's degree, it was \$56,385.66. The graph represents the weighted distribution of system average institutional median earnings (for both completers and non-completers). The top of each box is the 75th percentile among NASH systems, and the bottom of each box represents the 25th percentile. These data include only students who received federal aid, and so may not completely be representative of higher-income students, but are likely very representative of the lower income tercile. Data only include students who are working and not enrolled anywhere, so they exclude people still in graduate school.

Students from lower-income families earn less post-college than students from higher-income families. This gap grows larger in dollars from 6 to 8 to 10 years post-entry. For example, eight years after entering college, students from the lowest income tercile earn a median of \$40,000 per year, 11.1% less than students from the middle income tercile (\$45,000) and 20.0% less than students from the top income tercile (\$50,000).

While public higher education does appear to be a significant engine of upward economic mobility, the gains remain unequally distributed depending on a student's family income.



DEFINITION

The Social Mobility metric is designed to capture public higher education systems' contributions to social mobility of degreeseeking undergraduate students. The metric tracks students' movement between income percentiles over time, relative to their parents' household income.

TARGETS

Beginning in 2023, by 2040 we propose that NASH member systems will advance 85 percent of students from families in the bottom 40 percent of the income distribution to the top 60 percent of the income distribution, and that 65 percent of students in the bottom 40 percent to the top 40 percent. The timeline is extended from the other proposed targets to 2040 to allow for students to graduate by 2030 and be measured at the 10 year point from graduation.

To chart progress in the interim, we propose that by 2030 NASH member systems will advance the median income of students in the bottom tercile 8 years after enrollment to exceed the national median. Collectively, achieving this goal in conjunction with the other NASH targets would result in an additional 1.5 million graduates who would improve their prosperity trajectory.



Figure 6: NASH Member Systems Former Students' Earnings System Averages of Institutional Median Earnings, by FAFSA family income Includes completers and non-competers who received federal aid

LIMITATIONS

Worth noting is that the students whose income is captured in these data will have been enrolled as undergraduates at least a decade prior to their incomes being measured. This metric therefore assesses past performance of NASH systems in their ability to boost social mobility, not current or future performance. Given the timeline between attendance and measurement of these outcomes, there are factors that influence social mobility that may currently be under relatively limited institutional control. Still, attainment of this goal will require a continued examination of the economic and social trajectories of students who attend public higher education systems over time. We need a much deeper understanding of how curricular design, and the elements of degree structure may impact future career trajectory for graduates. So too, modifications to the current structure of higher education that move more towards a cycling-in-and-out approach to life-long-learning across a career, rather than the current one-and-done may hold the key to an increased social mobility impact. We also recognize that there are many other measures that meaningfully impact social mobility, such as health outcomes and civic engagement; the measure proposed here focuses on economic mobility via earnings. Over time NASH aims to continue to research outcomes and consider including them in the social mobility measure. Nevertheless, given the scope of this project and the current availability of data for public higher education systems, gaining insights into economic mobility will provide important insights into the social mobility of students. Particularly regarding tracking the movement of students into the upper quintiles, we do not intend to place lesser value on important professions that do not provide earnings within this range. There are a host of jobs that are essential to the well-being of society that to not provide earnings within the top 40 percent of incomes. That said, these data do provide a window into the ways that higher education systems are a critical engine of social mobility in the US, and it is important that the public understands this value and provides both support and incentives to not only continue but accelerate this work.

Regarding social and economic mobility data, it is important to keep in mind that there is typically a significant time lag. In the Opportunity Insights dataset, adult earnings are captured at around age 34. While the lag is important since earnings tend to stabilize around that age, it means that the earnings data reflect conditions and practices at institutions in the early 2000s. Opportunity Insights data are not updated on a regular schedule, though they have a plan to implement this in the future. They are also only public if the team of researchers who create it make it publicly available. These data are also not disaggregated by race/ethnicity, limiting the analysis of equity gaps. The Opportunity Insights data is provided by institution only for students that attended on-time (completers and non-completers who attended college between ages 19 and 22), which limits the analysis to 'traditional' age students. Variation in cost of living is not part of Opportunity Insight's analysis, and earnings should ideally be considered in this context. Future research should attempt to contextualize earnings in relation to cost-of-living. Finally, the College Scorecard earnings data cannot be disaggregated by both completion status and Pell status at the same time, which limits an analysis of social mobility of low-income completers compared to non-completers.

Recommendations: Student Debt

RATIONALE

Student debt is a major concern for students, families, and policy makers, although the issue is more nuanced than the typical 'crisis' narrative in the press might suggest. The average student graduating with debt from a public four-year college in 2020-21 owed about as much in inflation-adjusted dollars (\$27,400) as her peers a decade earlier—but 17% more than the average in 2000-01 (College Board, Trends in College Pricing 2017 and 2022)¹⁵. Many students do not borrow at all, but the average one-year amount of federal loans for undergraduate borrowers was \$6,440 in 2020-21 (slightly lower after adjusting for inflation than in 2006-07).

¹⁵ Accessed here: https://research.collegeboard.org/trends/college-pricing/highlights

NASH Systems Metrics Task Force Recommendations Report

Access to federal student loans makes it possible for many students who would not otherwise be apple to pay for college to enroll and complete degrees. But repayment obligations can interfere with other post-college expenses. Delinquency and default can make it difficult for borrowers to access credit for other purposes or even to rent an apartment or get a job.

Even with the federal income-driven repayment system that allows borrowers to make monthly payments that are set at an affordable share of their incomes, many borrowers struggle to repay. Among students who began college in 2011-12, 17% of those who borrowed had defaulted on at least one loan by 2017. One-third of those who left school without completing their programs had defaulted.

In addition to non-completers, Black students and those who attend for-profit institutions are particularly vulnerable to problems with student debt. Black students tend to come from households with lower levels of income and wealth and to have had less access to high quality elementary and secondary education. Consequently, at all degree levels, Black students borrow more than those from other racial and ethnic groups.¹⁶ Black students disproportionately attend for-profit institutions and are older than others when they complete their degrees. Their higher debt levels and their lower post-college earnings combine to create loan repayment difficulties.

Students who attend for-profit institutions (both two- and four-year) take out more loans, originate more debt, and have higher default rates than students attending public institutions.¹⁷ In 2017–18, 43% of students who graduated from public institutions with bachelor's degrees had no federal student loans at all. This was the case for only 34% of those from private nonprofit institutions and 22% of those who earned their degrees in the for-profit sector. Only 17% of public sector graduates borrowed \$30,000 or more, compared with 23% of private nonprofit graduates and 46% of for-profit graduates. The pattern was similar for associate degree recipients: 71% of those who earned their degrees at public institutions graduated without debt, compared with just 10% of for-profit graduates.¹⁸ Public higher education systems, then, are well-positioned to solve the college debt 'crises' by delivering high quality, low-cost programs to students at scale.

If President Biden's plan to forgive up to \$10,000 of debt for most borrowers and up to \$20,000 for most of those who received Pell Grants as undergraduates successfully navigates the current legal challenges, a large share of borrowers will have their debts eliminated. One-third of borrowers owe \$10,000 or less and 54% owe \$20,000 or less.¹⁹ But this policy will not reduce students' need to borrow in the future. Unless they receive the need-based grant aid they need to limit their reliance on loans and graduate with degrees and certificates, many students will continue to struggle with student debt.

¹⁶ Baum, Sandy (2019) Student Debt: The Unique Circumstances of African-American Students in Race and Ethnicity in Education: A Status Report. American Council on Education (ACE),

¹⁷ Luis Armona, Rajashri Chakrabarti, and Michael F. Lovenheim (April, 2017; revised October 2021). Student Debt and Default: The Role of For-Profit Colleges. Federal Reserve Bank of New York Staff Reports, no. 811; JEL classification: D14, H81, I22, I23, J24.

¹⁸ National Postsecondary Student Aid Survey (2018). https://nces.ed.gov/statprog/handbook/pdf/npsas.pdf

¹⁹ https://studentaid.gov/data-center/student/portfolio

DEFINITION

The Student Debt metrics are designed to capture both the amount that student debt borrowers accrue during their postsecondary undergraduate education as well as their ability to repay this debt over time. To that end, two separate metrics were developed:

- Metric one, **median debt at graduation or withdrawal**, tracks the median cumulative amount of federal loans borrowed by undergraduate, measured either at their point of graduation or withdrawal from the institution.
- Metric two, **three-year repayment rates**, tracks the percentage of a system's borrowers who are making progress, or whose loans are discharged or fully paid, three years after entering repayment.

BASELINE FINDINGS

Metric one, median debt at graduation or withdrawal, utilized the most recent College Scorecard data to calculate the median cumulative amount of federal loans borrowed by undergraduates, measured at their point of either graduation or withdrawal from the institution. Systemwide numbers are an average of institutional medians, weighted by the size of each institution's debt cohort. We disaggregate this metric by completion status; non-completers have lower debt levels than completers because they generally spend shorter amounts of time in school.

Equity gaps are measured by disaggregating by Pell status, in order to specifically address the debt loads taken on by students from low-income backgrounds. Across NASH member systems, 35.8% of students receive Pell grants. The College Scorecard does not currently provide data disaggregated by race/ethnicity, and data are not available for Pell completers separately from Pell non-completers.

According to the baseline study provided by NCHEMS, while there is wide variability between systems, the median level of student debt across NASH member systems is as follows:

- \$19,134 (degree completers)
- \$8,171 (non-completers)
- \$13,786 (Pell recipients)²⁰
- \$12,544 (non-Pell recipients)

One key finding is that approximately two thirds of undergraduates (66.6%) do not borrow any federal loans for their education.

²⁰ At present, College Scorecard data do not allow for disaggregation by both Pell status and completion status. NASH will continue to advocate for data disaggregating completers and non-completers among Pell-recipients and non-Pell recipients to better track progress on this metric.

Metric two, three-year repayment rates, also utilized the most recent College Scorecard data to calculate the percentage of a system's borrowers who are making progress, or whose loans are discharged or fully paid, three years after entering repayment. "Making progress" is defined as making regular payments and the sum of all outstanding loan balances is less than the sum of the original loan balances. Similar to median debt, this metric is disaggregated by completion status and, separately, by Pell status.

As shown in Figure 7, the lowest repayment rates are for non-completers and for Pell recipients, with large equity gaps for both groups. When comparing repayment rates for completers (44%) to non-completers (27%) there is a 17 point gap. Similarly, there is a 19 point gap between Pell-recipients (29%) and non-Pell recipients (48%). Among all borrowers, the three-year repayment rates stands at 35%.



TARGETS

One key focus of the Power of Systems initiative is to narrow or eliminate equity gaps, including those between wealthy and low-income students. Therefore, the targets for student debt focus on alleviating the debt burdens carried by low-income students from current baseline levels.

By 2030, we propose that NASH member systems collectively decrease the median debt borrowed by Pell students, both completers and non-completers, by 25% from 2020-21 baseline levels. Collectively, achieving this goal in conjunction with the other NASH targets would result in an estimated \$7 billion reduction in borrowing by 2030.²¹

In addition, we propose that equity gaps in three-year repayment rates between Pell recipients and non-Pell recipients should be reduced by 50% from 2019-20 baseline levels by 2030. We believe that the gap between completers and non-completers is best addressed by focusing attention on improving degree and credential completion, as outlined in metric one.

In proposing these targets, we are not suggesting that NASH institutions should limit the financial tools that low-income students need to successfully complete college. Rather, we propose that NASH systems should collectively employ strategies that, among other things, reduce time to degree, control increases in the cost of higher education and increase the availability of need based aid.



LIMITATIONS

Reducing median debt will be difficult in the context of the NASH goal of increasing completions. Completers tend to have higher debt loads than non-completers simply because they spend more time in school. Additionally, the goal of reducing median debt among Pell students may unintentionally incentivize practices that could actually reduce equity, such as funneling Pell students into shorter certificate programs as opposed to Bachelor's degrees. In future research, disaggregating the completion metric by award level and demographics will help avoid this.

Regarding the data, College Scorecard data are not disaggregated by race/ethnicity, which limits the analysis of equity gaps. Importantly, data cannot be disaggregated by both completion status and Pell status at the same time; this limitation is significant, as completion has a large influence on debt levels. Median debt only includes borrowers, not all students, and is limited to federal loans. As such, the available data and targets are likely undercounting the total debt borrowed by students and families from other sources. The data also collapse debt levels for students from different program levels (Certificates, Associate Degrees, Bachelor's Degrees) together, and we do not wish to imply that students should be discouraged from pursuing longer term credentials due to potentially higher debt levels.

²¹ The reduction was determined by calculating the reduction in debt by state, and then using the completion numbers and Pell % by state to estimate the cumulative reduction by 2030.

There are possible unintended outcomes incentivized by the goal of reducing median debt, including:

- Median debt will be lower if students stay in school for a shorter amount of time, which could encourage institutions to funnel students into shorter programs that do not increase economic mobility as much as long-term programs.
- If completion rates are lower, median debt will also be lower. This is especially salient when looking at Pell students' debt, which is not disaggregated by completion status.
- Eliminating/reducing debt for students who have small amounts of debt will actually increase median debt levels.

We do not want to reduce students' access to borrowing, which could reduce their access to higher education. The goal is to reduce debt by working to reduce students' costs and shortening time to degree.

Finally, we do not yet know the impact of the current federal program debt relief program on debt levels, repayment rates, and college costs over time. This context will be important to monitor and consider as we continue to analyze progress on student debt reduction.

Research Agenda

While the baseline study provides a useful snapshot of where NASH systems are given available data, there are robust opportunities to extend data infrastructure and engage in ongoing research. The following research questions were developed by the SMTF subgroups as a starting point for a research agenda for each of the three metrics.²²

DEGREE AND CREDENTIAL COMPLETION

- What are the large-scale barriers to credential completion?
- What are the large-scale phenomena that cause completion inequity?
- What are examples at scale that have proven successful in improving completion and closing equity gaps?
- What are strategies to improve not only completion but successful transition to career in "good" jobs?

²² Where applicable and data are available, NASH proposes that research questions should be examined for variance across race/ethnicity, gender, and income categories.

SOCIAL MOBILITY

- What are the causal factors for improving success, access, and social mobility?
- What institutional programs or policies improve success, access, and as a result social mobility?
- What system level programs or policies improve success, access, and as a result social mobility?
- What are the benefits of improved social mobility (e.g., improvements in health status, civic engagement, children's educational outcomes, employment)?
- What are examples of successful scaling of improvements within and across systems?
- How do partnerships impact results, including K-12 institutions, employers and local and state welfare agencies?

STUDENT DEBT

- What percentage of non-completers leave higher education with debt?
- · For non-completers who leave higher education with debt, how much debt do they accrue?
- How do debt levels vary by race/ethnicity, gender, income, institution, sector, and academic major/program?
- How much of the national student loan debt is attributable to public higher education systems (two-year and four-year)?
- How do tuition pricing and other costs of attendance relate to loan borrowing?
- What are the characteristics of institutions and public systems that have:
 - · Low/high rates of students taking out loans?
 - Low/high amounts borrowed?
 - Low/high default rates?
- How much student loan debt is 'too much'?
- Should and can private loans be considered as well as family transfer?

CONCLUSION

Despite its many challenges and limitations, higher education remains the primary pathway for economic mobility and redressing longstanding inequities in the United States. However, it is clear that there is much work to be done to realize the potential of the sector. Given their sheer scale, public higher education systems must not only lead these change efforts, but remain committed to successful implementation through commitment to shared goals, publicizing and sharing data, and engaging in continuous improvement.

The good news is that NASH member systems are already engaging in this critical work. The recommendations of the Systems Metrics Task Force address three key challenges facing our institutions: Degree and Credential Completion, Social Mobility, and Student Debt. However, the recommendations are only a starting point. For the recommendations to improve outcomes for students, NASH member systems and other stakeholders must endorse the metrics and targets, commit to sharing data and extending infrastructure, engage in ongoing research, and commit to collective impact through collaborative continuous improvement efforts.

Appendix A: Systems Metrics Task Force Members

Name	Title	Institution	Role
Tristan Denley	Chair, Deputy Commissioner for Academic Affairs and Innovation	Louisiana Board of Regents	Task Force Chair
Nancy Zimpher	Senior Fellow	NASH	Coordination & Support
Dan Knox	Director, Institute for Systems Innovation and Improvement	NASH	
James Johnsen	Senior Fellow	NASH	
Maria Khan	Research Associate	NASH	
Rohit Tandon	Principal	edBridge Partners	
Jeff Gold	Assistant Vice Chancellor, Student Success Initiatives, Research and Innovation	California State University System	System Representative
David Troutman	Associate Vice Chancellor and Chief Data Officer of Institutional Research	University of Texas System	
David Lassner	President	University of Hawaii System	
Saichi Oba	Vice Provost of Student Enrollment	Washington State University	
Mari Watanabe-Rose	Director of Undergraduate Education Initiatives	City University of New York	
Terrence Cheng	President	Connecticut System	
David Miller	Sr. Vice President and Chief Financial Officer	University of Tennessee System	
Brian Prescott	Vice President	NCHEMS	Research Advisor
Jeff Strohl	Director of Research	Georgetown Center for Education & Workforce	
Sandy Baum	Senior Fellow	Urban Institute	
Kathy Booth	Project Director, Educational Data and Policy	West Ed	
Davis Jenkins	Senior Research Scholar	Community College Research Center	
Mikyung Ryu	Director, Research Publications	National Student Clearinghouse	
Meghan Snow	Chief Data Officer	The Association of College and University Educators	Advisory Member
Clare McCann	Special Assistant	U.S. Department of Education	
David Tanner	Associate Director; State Services And Decision Support	Carl Vinson Institute of Government, UGA	
Jamey Rorison	Senior Program Officer	Gates Foundation	
Kent Phillippe	VP for Research and Student Success	American Association of Community Colleges	
Christina Whitfield	Senior Vice President and Chief of Staff	State Higher Education Executive Officers Association	

