

EMBEDDING EQUITY IN DATA INFRASTRUCTURE

TAKING A SYSTEMS-BASED APPROACH

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■ US PROGRAM VISION

All people navigating US education systems and job markets can **develop the knowledge, skills, and agency needed to thrive** in their communities such that **race, ethnicity, gender, and socioeconomic status are no longer predictors** of educational attainment and economic mobility and security.



Overcoming Obstacles to Success

Higher education wasn't necessarily built for the needs of today's students, who are more than just students – they are parents, employees, caregivers, and neighbors. And they need:



Access to aid to help them pay for their education.



Clear paths to credentials that have value.



Flexible programs and services that help them balance the demands of work, home, and school.

What We Do

We focus on **four things** to boost student success, focusing on Black, Latino, and Indigenous students and students from low-income backgrounds ...



What We Do



Policy: Making opportunity more affordable, accessible, and equitable



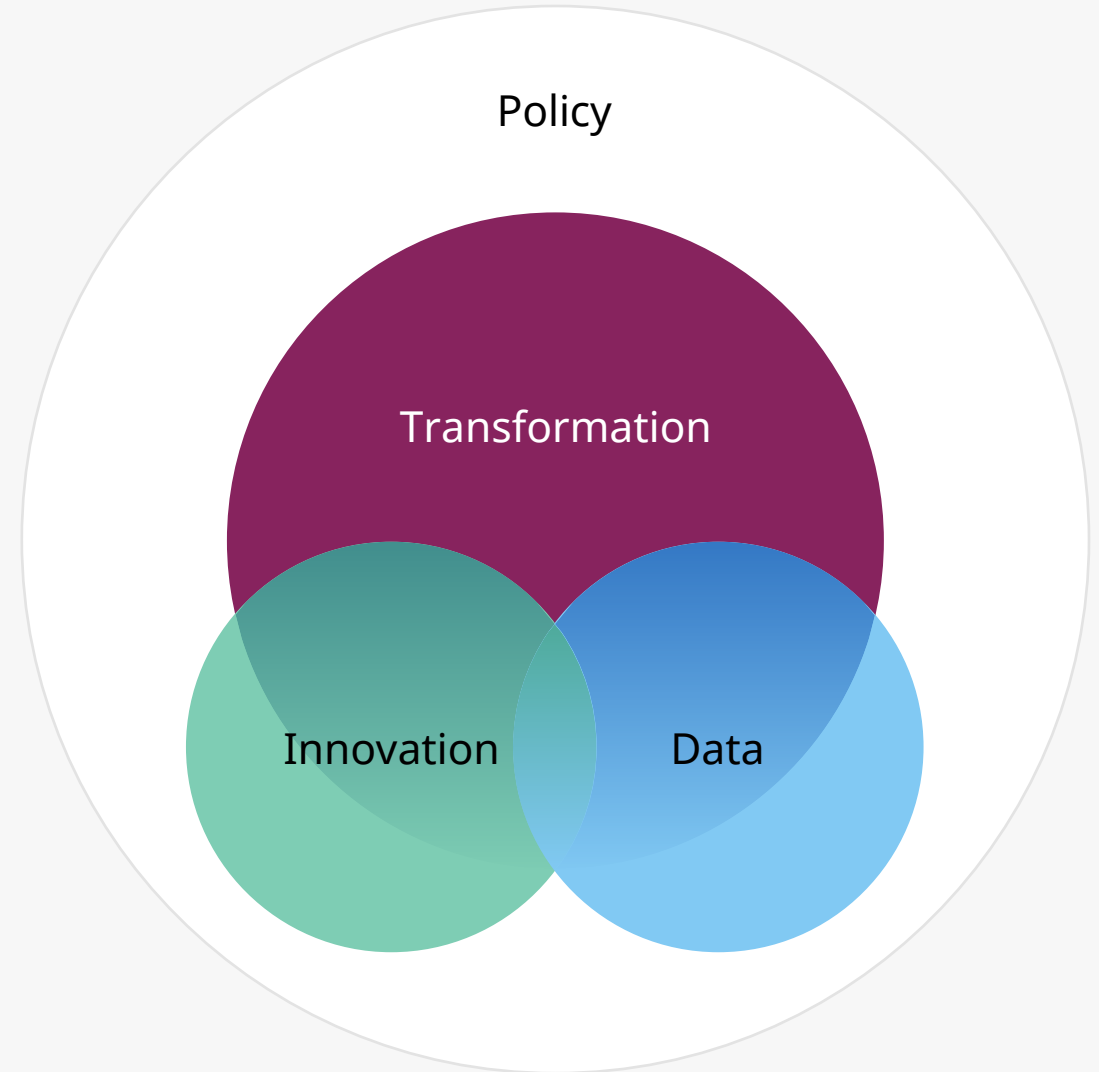
Transformation: Making policies and practices more student centered



Innovation: Creating clearer paths to certificates and degrees



Data/Information: Understanding what works and what could work better





What We Do:

Data and Information

Understanding what works and what could work better by:

- Promoting equitable value through better data
Postsecondary Value Commission
- Strengthening data systems
Postsecondary Data Partnership
- Building communities of practice for better data use
Value Data Collaborative



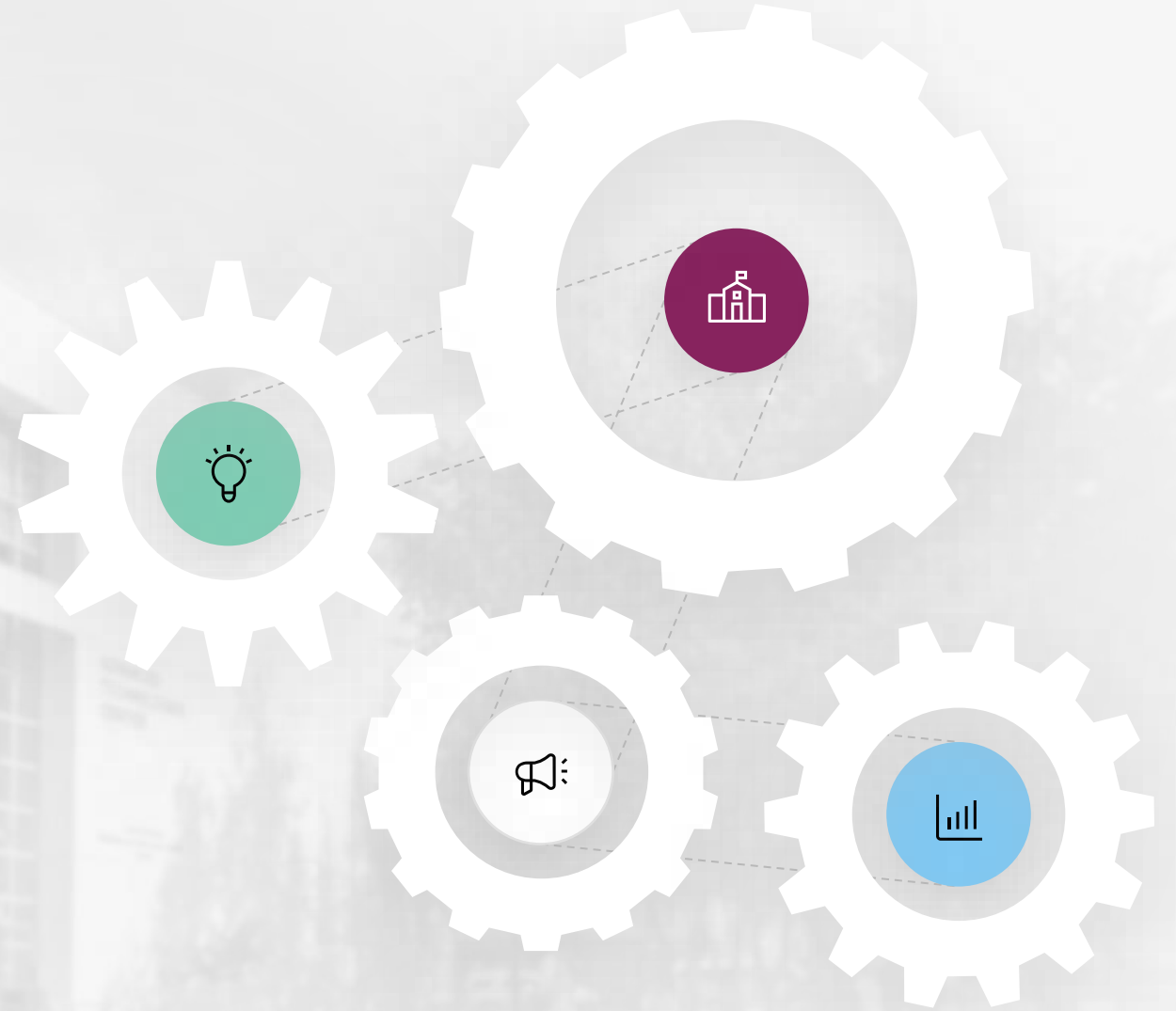
What We Do:

Transformation

Making policies
and practices more
student-centered by:

- Integrating **evidence-based practices** to create inclusive and coherent learning environments; and
- Prioritizing a **student-centered mission, committed and visionary leadership, strategic data use, and mission-aligned finance** in a robust continuous improvement process.

Transformation is where innovation, data and information, and policy come together to promote – and deliver – equitable student success.



How We Do It: Transformation

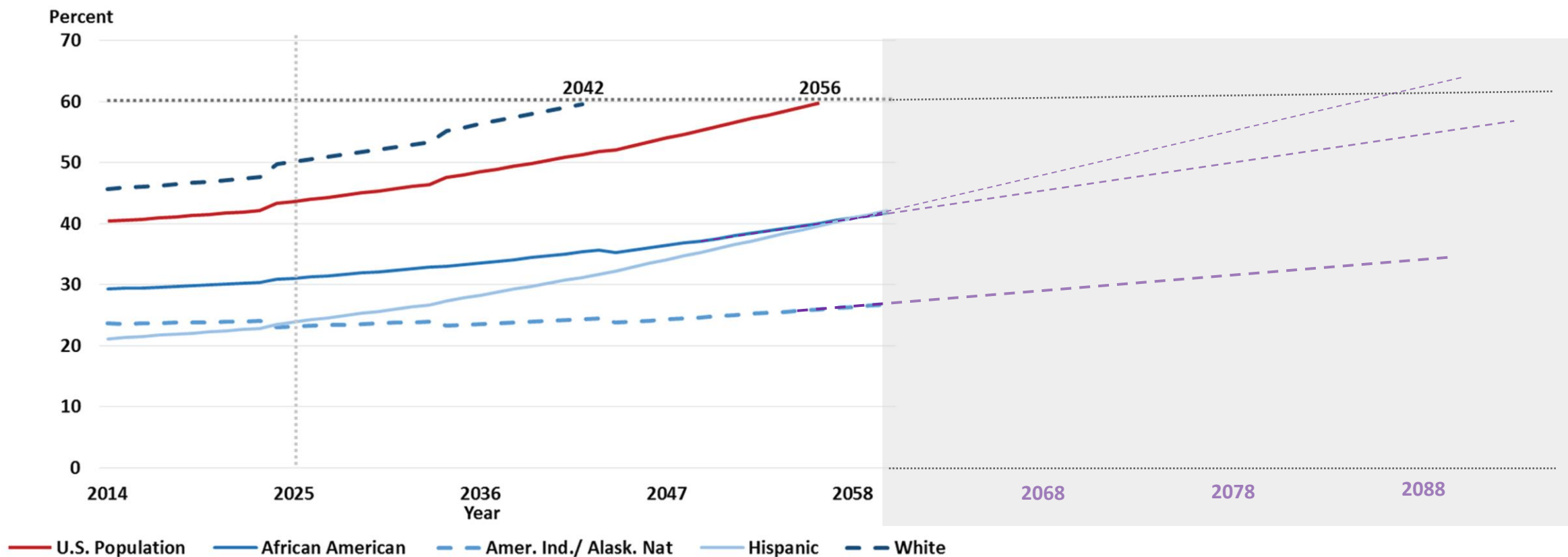
We support networks that provide guidance and assistance to colleges and universities on their transformation journeys:

- **Intermediaries for Scale:** Offering advice and strategies for approaching transformation
- **Solution Network Intermediaries:** Creating and disseminating knowledge about what works when it comes to boosting student success
- **Service Design and Delivery Network:** Connecting institutions with each other and with resources to promote and support transformation
- **Higher Ed Equity Network:** Creating the demand for change among institutional leaders and policymakers

WHY RACIAL EQUITY?

CHALLENGES AND OPPORTUNITIES IN ACHIEVING NATIONAL POSTSECONDARY DEGREE ATTAINMENT GOALS (2 OF 2)

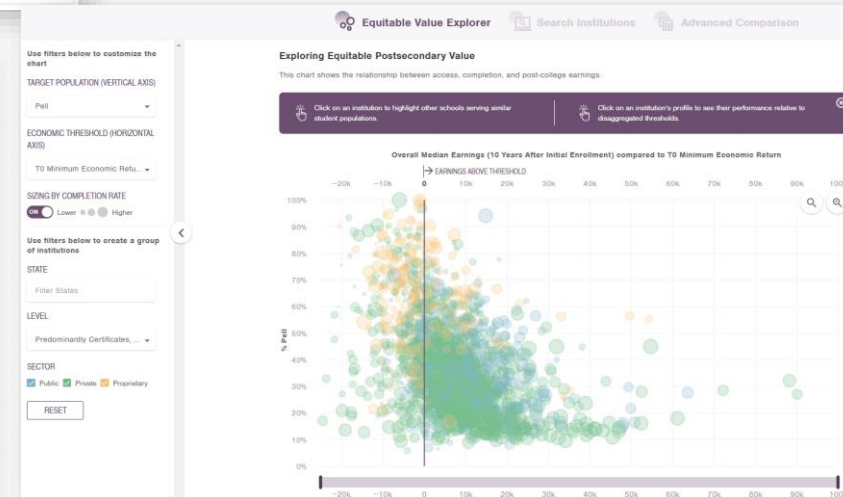
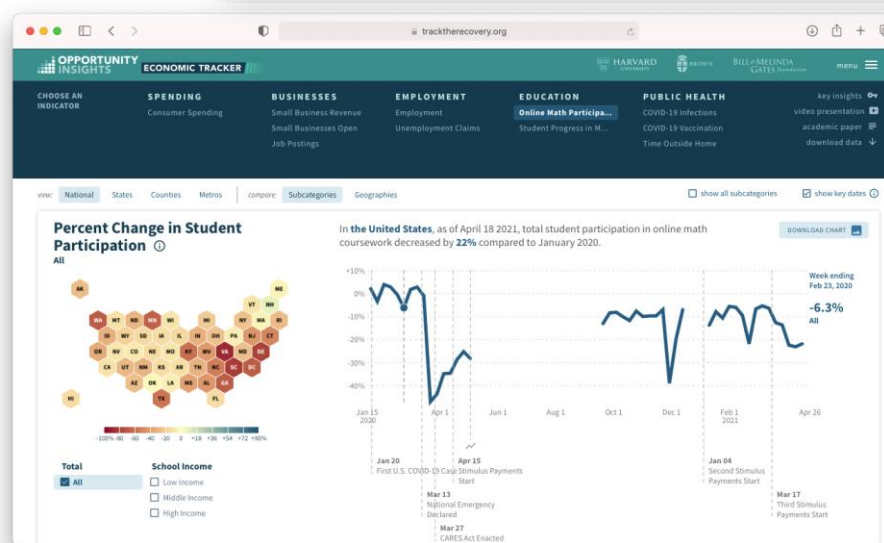
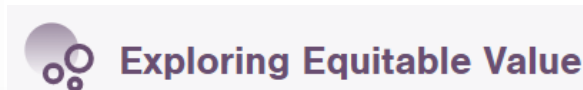
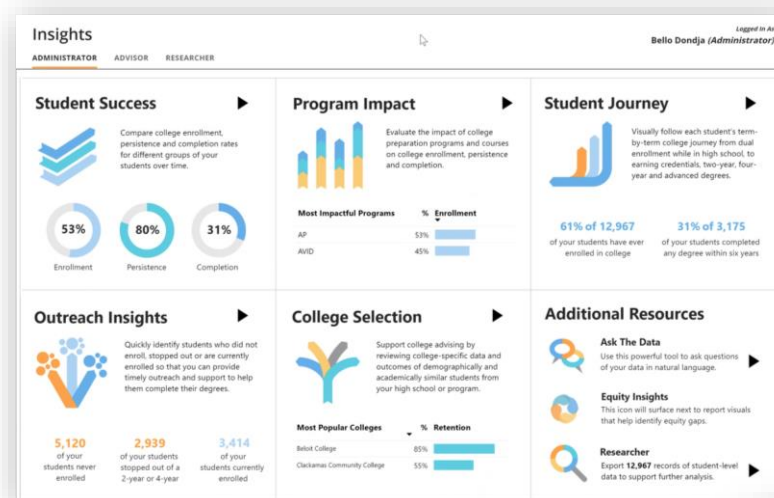
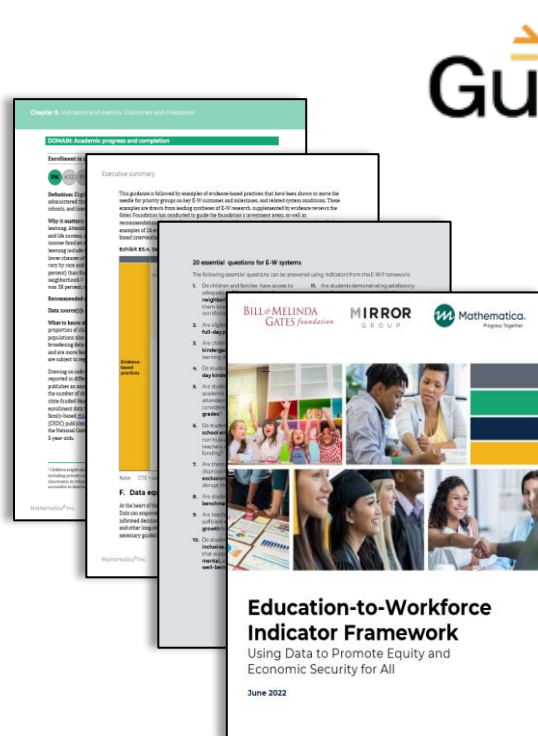
Nettles (2017) forecasted progress toward the U.S. government's degree attainment goal of 60% of adults age 25-34 holding AA or higher by 2020 and Lumina Foundation's goal of 60% of adults age 25-64 with high quality certificates/degrees by 2025.



Source: Nettles, M. T. (2017). *Challenges and Opportunities in Achieving the National Postsecondary Degree Attainment Goals*. Educational Testing Service. ETS Research Report No. RR-17-83. Retrieved from <https://onlinelibrary.wiley.com/doi/full/10.1002/ets2.12141>

EQUITY-DRIVEN DATA INITIATIVES

Projects that ensure data systems can answer the most critical questions about the education and workforce ecosystem



HOW DO WE MEASURE EQUITY?

E-W FRAMEWORK COMPONENTS PROVIDE HOLISTIC GUIDANCE FOR TRANSLATING DATA INTO ACTION TO IDENTIFY AND ADDRESS INEQUITIES

The Education to Workforce (E-W) Framework:

- **Synthesizes the best thinking in the field** to provide a coherent set of indicators and guidance that center equity and reflect the full pre-K-to-workforce continuum
- **Intended to serve as a public good for the field** and as a **blueprint** to guide our data modernization efforts at the state and national levels
- **Designed to encourage greater cross-sector collaboration and alignment** across local, state, and national data systems by promoting the use of a common set of metrics and principles to assess and address disparities along the pre-K-to-workforce continuum
- **Full Report** is here: <https://www.mathematica.org/publications/education-to-workforce-indicator-framework-using-data-to-promote-equity-and-economic-security>



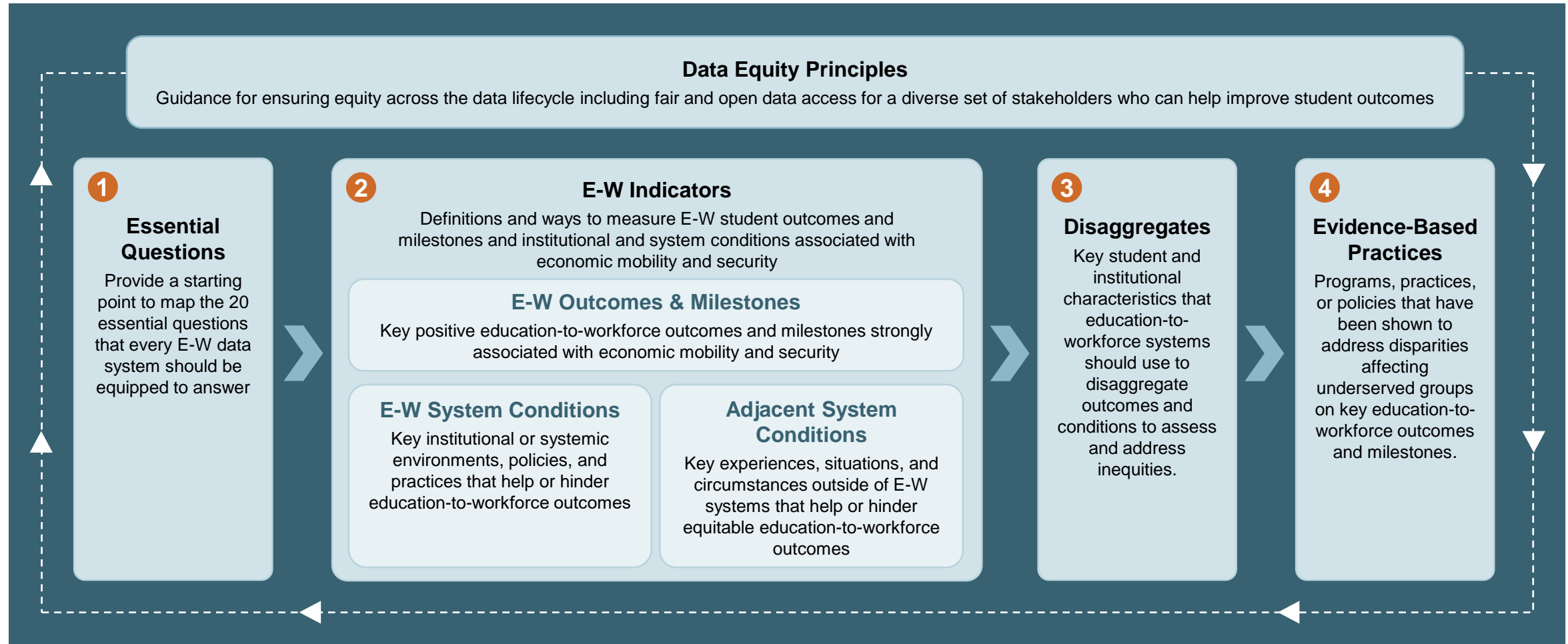
USP Data, in partnership with Mathematica, led a year and a half research and development effort that included a rigorous field synthesis, **convening an external expert advisory board with expertise spanning P20W research, policy, and data**, engaging community leaders, and consulting with all USP teams to inform, refine, and design an expanded Framework.

30+ leading field experts engaged

5+ community input sessions held

200+ indicators reviewed from **40+** source frameworks

E-W FRAMEWORK COMPONENTS PROVIDE HOLISTIC GUIDANCE FOR TRANSLATING DATA INTO ACTION TO IDENTIFY AND ADDRESS INEQUITIES



INCORPORATING DATA EQUITY PRINCIPLES FOR FAIR ACCESS AND USE

Field actors increasingly view data equity as critical to ensure fair data access, governance, and use that enables policymakers, practitioners, and researchers to use data to improve student outcomes

Technical Approach:

- Reviewed 32 source publications that discuss guiding principles and best practices for data equity in research and/or different phases of the data lifecycle
- Coded and synthesized these sources into seven common themes that undergird the recommendations in the updated E-W framework
- Solicited feedback from a range of stakeholders connected to education-to-workforce research, advocacy, policy, and practice at the local, state, and federal levels. These groups include:
 - An advisory board of 18 education-to-workforce data experts and leaders
 - Members of five collective impact initiatives that lead advocacy efforts in their communities
 - A working group of 10 BMGF program officers that work with grantees around the country on early learning, K-12, postsecondary, economic mobility and data initiatives

Each of the Seven Core Principles is explored in-depth in three-page guides that include additional details, examples, and recommendations to guide their practical application throughout the data lifecycle.



Data Equity Principles

Guidance for ensuring equity across the data lifecycle including fair and open data access for a diverse set of stakeholders who can help improve student outcomes

- 1 | Employ ethical, equitable behavior to respect the rights of data providers (e.g., students, workers), promoting wellbeing and reducing harm.
- 2 | Protect the privacy of data providers while ensuring appropriate ownership and access to information.
- 3 | Disaggregate data to help analyze disparities, monitor progress, and guide action.
- 4 | Examine social and historical contexts to identify root causes of disparities, inform data collection and use, and develop data-driven solutions.
- 5 | Question default methods and assumptions for data collection and analysis and triangulate quantitative data with other sources including qualitative data.
- 6 | Ensure data visualizations promote inclusion and awareness across culturally, linguistically, and racially diverse audiences.
- 7 | Restore communities as data experts using equity-based approaches to engagement and co-creation that support culturally-responsive data use.

ESSENTIAL QUESTIONS PROVIDE A GUIDING CHARGE FOR E-W FRAMEWORK

20 Essential Questions Shine a Light on Students' Journeys from PK to the Workforce

1. Do students and families have access to adequate **public supports** and **neighborhood conditions** to enable them to succeed academically and in the workforce?
2. Are eligible children enrolled in **quality, full-day pre-K programs**?
3. Are children demonstrating **Kindergarten readiness** across the five learning domains?
4. Do students have access to **full-day Kindergarten**?
5. Are students demonstrating satisfactory academic progress, consistent attendance, and positive behavior to be considered **on-track in the early grades**?
6. Do students have **access to quality school environments** including quality curricula and instruction, experienced teachers, effective leaders, and adequate funding?
7. Are there populations of students that disproportionately experience **exclusionary discipline practices** that disrupt their educational experience?
8. Are students meeting **reading and math benchmarks** in grades 3 and 8?
9. Are teachers and schools making sufficient **contributions to academic growth** for students?
10. Do students attend schools with **safe, inclusive, and supportive environments** that support their **social, emotional, mental, and physical development** and well-being?

11. Are students demonstrating satisfactory academic progress, consistent attendance, and positive behavior to be considered **on-track for high school graduation**?
12. Do students have access to and complete rigorous and accelerated **college-preparatory coursework**?
13. Are students taking the necessary steps to **apply to college** after high school with sufficient **counseling support**?
14. Are students **graduating from high school on-time** and successfully **transitioning into further education, training, or employment**?
15. Are there **quality pathways** for students who pursue career training that lead to employment in quality jobs?
16. Are students **matriculating to well-matched postsecondary institutions** that successfully graduate their students with credentials of value?
17. Do students attend postsecondary institutions that provide **adequate financial aid** and that are **adequately funded** to offer a quality educational experience?
18. Are students experiencing sufficient **early momentum in postsecondary education** to be on-track for on-time completion?
19. Are students **completing credentials of value** after high school and/or postsecondary education that set them up for success in the workforce?
20. Are students gaining access to **quality jobs** that offer **economic mobility and security** after high school and/or postsecondary training and education?

These questions not only identify **key outcomes and milestones** for students along the education-to-workforce pipeline, but also the **critical system conditions** necessary to enable their success.

To ensure these questions lead to meaningful action, **data should be disaggregated by race, income, gender, and other characteristics** to reveal equity disparities that may be masked in the aggregate.

In addition to tracking trends in localities over time, these questions should be used to **identify schools and institutions that are serving their students well – and those that are not** and to **test the efficacy of interventions** that can improve student outcomes and close equity disparities.

- Pre-K
- K-12
- Postsecondary
- Workforce

E-TO-W INDICATORS MAP ACROSS KEY DOMAINS AND SECTORS



DOUBLE CLICK ON INDIVIDUAL INDICATOR (SELECT EXAMPLE)

Indicator:

Early College Coursework Completion

Sector:

PK

K12

PS

WF

Indicator Type

Outcome & Milestone

Domain

Academic Progress and Completion

Definition

High school students successfully complete early college coursework (Advanced Placement, International Baccalaureate, or dual credit)

Why it Matters

Engaging in early college coursework has been shown to predict future success in college. For example, Texas high school graduates who took more than one AP/IB course were more likely to enroll in a four-year college. Beyond these positive relationships, there is growing evidence that participation in accelerated postsecondary pathways (such as early college high schools and dual enrollment) has a positive impact on students' high school graduation and postsecondary enrollment and completion (An 2013, Berger et al. 2014, Edmunds et al. 2017; Shields et al. 2021). Earning early college credit by passing an AP exam also has a positive impact on college admissions scores and on-time postsecondary degree completion (Warne et al. 2015, Smith et al. 2017). According to an analysis of national data, even in schools that offer similar access to Advanced Placement courses, Black, Latino, and Indigenous students are less likely to be enrolled and to earn college credit if they do enroll compared to other student groups. For instance, for every 1,000 Asian students in public high schools, 375 take an AP course and 215 pass an AP test, whereas for every 1,000 Black students, 105 take an AP course and 21 pass an AP test. There is also evidence of inequitable participation in dual enrollment courses.

Recommended Metric(s)

- Percent of high school students who enroll in at least one early college course (Advanced Placement, International Baccalaureate, or dual credit)
- Percent of students enrolled in early college coursework who earn credit-bearing scores on end-of-course tests (e.g., 3 or higher on AP tests or 5 or higher on IB tests) or earn credit within their dual enrollment courses.

Data Source

Student transcript data, assessments

What to Know About Measurement

As part of their regular operations, schools record student course enrollment and grade data, from which course completion can be determined. Schools also receive data on students' AP and IB exam scores. In the case of dual enrollment, however, K-12 districts must have formal agreements with nearby participating colleges where students enroll to ensure data are being shared (and that course offerings allow students to earn transferrable college credit). Although reporting of student transcript data and exam scores to higher levels (district, state, federal) varies, it would be feasible to report course completion and exam passing data at different levels.

Although course participation and AP/IB scores are comparable across contexts, not all students have equal access to these courses or exams, which affects the interpretation of our suggested metrics, particularly when comparing them across localities. For instance, exam rates may be higher in districts where fewer students are given the opportunity to take the exams. Therefore, we provide additional information on measuring access under the E-W system indicator on Access to early college coursework. Twenty-five states require districts to offer AP, IB, dual enrollment, or other similarly rigorous courses, and many also mention the following early college coursework options for meeting college and career readiness requirements in their ESSA plans: AP (22 states), dual credit/dual enrollment (18 states), advanced courses and/or accelerated learning (15 states), and IB (12 states).

Source Frameworks

Ten source frameworks reviewed for this report discussed the importance of early college course completion, AP, IB, and dual enrollment, or both. For example, our choice to include both enrollment in and completion of AP, IB, or dual enrollment courses aligns with the recommendations of the National Academies' Educational Equity Indicator Systems.

DISAGGREGATES ENABLE DEEPER ANALYSIS TO IDENTIFY STUDENT GROUPS AND SCHOOLS THAT NEED ADDITIONAL SUPPORT

Disaggregates

Key student and institutional characteristics that education-to-workforce systems should use to disaggregate outcomes and conditions to assess and address inequities across groups and schools

👤 Race/Ethnicity	👤 Age Group (e.g. Adult Learners)
👤 Income Level	👤 Student from Migrant Family Household
👤 Gender	👤 K12 School Type
👤 Disability Status	👤 Justice Involvement
👤 English Learner	👤 LGBT Status
👤 Individuals Experiencing Homelessness or Housing Instability	👤 Postsecondary Institution Classification
👤 Individual or Family Military Status	👤 Credential Seeking Status
👤 Individuals with Current or Past Child Welfare Involvement	👤 Transfer Enrollment Status
👤 Urbanicity	👤 First Generation College Student
👤 Home Language	👤 Postsecondary Major
👤 Parental Education Level	👤 Occupation Category
👤 Attendance Intensity (Part or Full-Time)	👤 Dislocated Worker Status
	👤 Literacy Level

To identify our recommended list of disaggregates, we reviewed **42 internal and external source frameworks** and focused on common disaggregates that were feasible to measure in E-W systems.

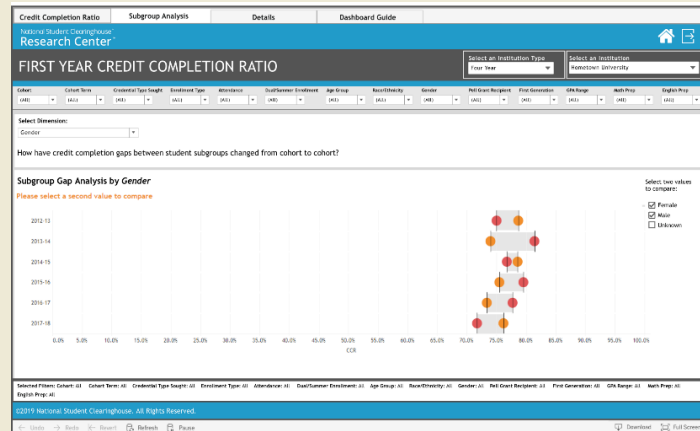
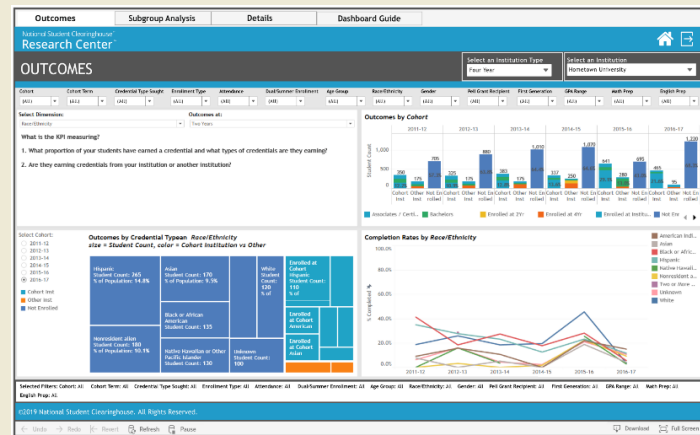
We recommend that E-W systems include some or all of the **25 disaggregates** identified depending on their sector and the data available to them.

Full report details sector, significance, and measurement considerations

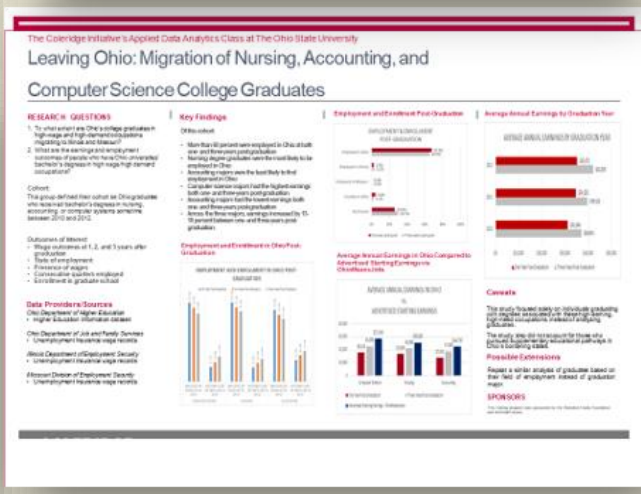
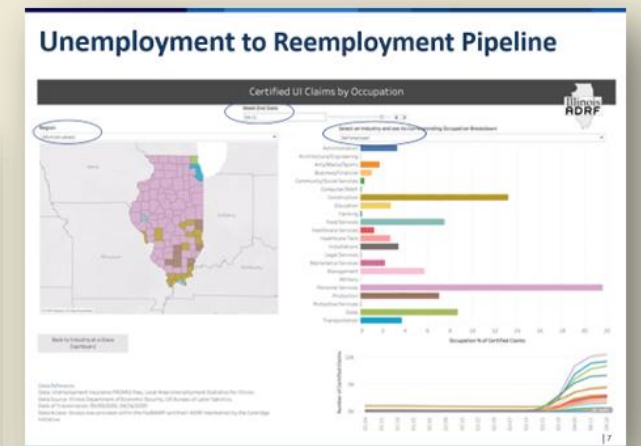
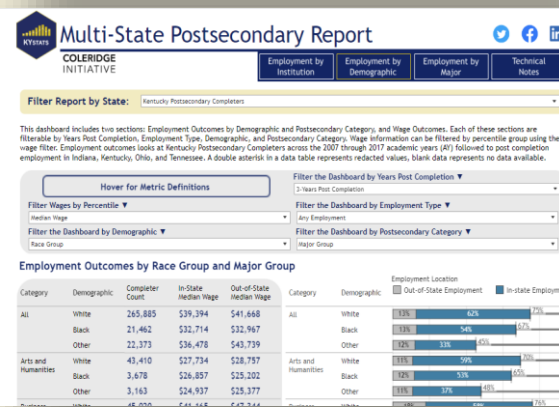
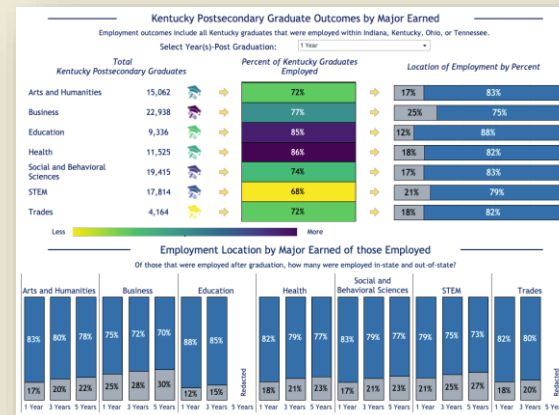
Disaggregate	E-W	Significance	Measurement Considerations
English learner* A student or individual who is classified as an English language learner (EL) or having Limited English Proficiency (LEP)	All	Disaggregating data for emerging multilingual students and individuals can be useful for assessing whether they have meaningful access to federal programs under Title IV of the Civil Rights Act, which prohibits discrimination based on national origin, and per a recent executive order that requires federal agencies to improve access for individuals with limited English proficiency (LEP.gov). Additionally, disaggregating outcomes for English Learners is required for accountability in grades K-12 under ESSA, and the Department of Labor considers LEP individuals to be one of the groups of individuals most in need of services.	In ECE and K-12, students with a home language other than English are assessed for their English proficiency. Students who do not meet local standards are classified as English learners. Some districts further classify students by whether they are a current EL (vs. ever EL, for students who are later reclassified), a newcomer EL (<4 years in U.S. schools), or long-term EL (>=7 years) (William T. Grant Foundation 2017). In PS and WF, the federal government defines limited English proficiency as "individuals who do not speak English as their primary language and who have a limited ability to read, speak, write, or understand English" (LEP.gov).

DATA VISUALIZATIONS CAN SUPPORT BETTER ANALYSES

National Student Clearinghouse Postsecondary Data Partnership



Coleridge Initiative Administrative Data Research Facility



WHY EQUITABLE VALUE?

BEYOND COMPLETION

The higher ed field is shifting focus to consider returns on college investment for students

Examining Different Approaches for Reconsidering the Higher Education North Star

*As the field has expanded its focus from access to completion, we believe further evolution will point toward the concept of **“equitable value”**.*

Completion

Benefit

In today's economy, higher education is a necessity for economic opportunity – but this value proposition for students largely hinges on whether or not they have received their credential: a signal of their economic value.

Successful completion often leads to better life outcomes for students on average, but results vary considerably for students of color and students from low-income backgrounds

Affordable Completion

Cost/Benefit

Affordable completion builds off of the completion value proposition, but takes price into account relative to the benefits of postsecondary education.

Focusing solely on completion may not properly account for the true costs of success or failure in the system for students, especially underserved student populations.

Completion of Value

Return on Investment

Post-college outcomes, such as continuing education, employment, and upward economic mobility are a major consideration for many students and families who are seeking a return on their investment for postsecondary education, and yet here too the benefits of higher education do not accrue equally students of color and students from low-income backgrounds.

WHY VALUE? COLLEGES CAN SERVE AS ENGINES OF ECONOMIC MOBILITY

But stark inequalities by race and income means postsecondary education is currently the great divider, not the great equalizer, in our society

5x

Increased chances of moving out of poverty by going to college

1/2

Latinx adults (26%) are half as likely to earn an AA degree or higher than white adults (50%), and Black adults (36%) are just over 2/3 as likely.

20%

Fewer resources spent per student at institutions where many Black and Latinx students receive their credentials compared with white students.

\$7K

More educational debt borrowed by Black graduates on average compared with their white peers.

38%

Percentage of Black students who defaulted on federal student loans within 12 years compared to 12% of white students.

25%

Latinx adults with a bachelor's degree or higher earn 25% less than their white peers, while Black adults earn 21% less.

8x

More wealth for white college-educated households compared with Black college-educated households (\$180,500 vs \$23,400).

As postsecondary institutions are still scrambling to adapt to online instruction due to the COVID-19 pandemic, many students across the country are questioning the value they're currently receiving, with petitions for tuition reductions or refunds continuing to grow.

POSTSECONDARY VALUE COMMISSION OVERVIEW

Objectives of the commission

DEFINE

A **shared definition of college value** that can inform both programmatic and policy efforts in the field.

1

MEASURE

A **measurement framework** for how individual colleges and universities create equitable value for students.

2

ACT

An **action agenda** to encourage widespread application of the value definition and measurement framework.

3

EQUITABLE VALUE: FINAL CONCEPTUAL FRAMEWORK

Institutional leaders, federal and state policymakers, and other stakeholders deliver:

Value for Students

By equitably promoting their economic mobility, ensuring opportunity to build wealth, and improving individuals' wellbeing and academic, civic, and social engagement.

Value for Society

By equitably increasing attainment to expand the nation's public economic resources, improve public health and security, and promote civic engagement and empowerment.



MEASURING ECONOMIC RETURNS VIA THRESHOLDS

These thresholds provide a unifying framework to converge and extend the research on postsecondary value in the field over the last five years

Thresholds	
0	Minimum Economic Return: A student meets this threshold if they earn at least as much as a high school graduate plus enough to recoup their total net price within ten years.
1	Earnings Premium: A student meets the economic premium threshold if they reach at least the median earnings in their field of study, which accounts for expected variations in pay across fields.
2	Earnings Parity: Informed by the University of Texas System's research on in-field pay inequities, this threshold measures the percent of students of color, low-income students, and women who meet the median earnings of their more advantaged peers (white students, high-income students, or men).
3	Economic Mobility: Informed by the Opportunity Insights measurement of economic mobility across institutions, this threshold measures the percentage of students earning enough to enter the fourth (upper middle) income quintile regardless of field of study.
4	Economic Security*: While sufficient earnings can create a stable life, wealth is key to building the type of security needed to withstand life's financial shocks, so this threshold measures the percent of students who reach median levels of wealth.
5	Wealth Parity*: Mirroring the earnings parity threshold, this threshold measures the percent of students of color, low-income students, and women who reach the level of wealth attained by their more privileged white, high-income, or male peers.

Note: Thresholds 0-3 can be estimated at the national level using College Scorecard data with some caveats. Institutions and systems with advanced data collections can measure these thresholds with greater specificity. Due to a lack of quality data to measure wealth, Thresholds 4 and 5 are currently understood as conceptual thresholds rather than operable analyses.

THE FIELD IS SEEDING COMPLEMENTARY INITIATIVES



2021 College Guide and Rankings

"We rank four-year schools [...] based on their contribution to the public good in three broad categories: social mobility, research, and providing opportunities for public service. We also rank Best Bang for the Buck colleges, which help non-wealthy students obtain marketable degrees at affordable prices."



Student outcomes and earnings in higher education policy

"New data reveal what individual cohorts of students earn after they complete a *particular program* in a *particular institution* of higher education."



Carnegie Foundation
for the Advancement of Teaching

The Carnegie Foundation and the American Council on Education Announce Partnership on the Carnegie Classifications

"The work will include how the Classifications can help to address the national imperative to improve social and economic mobility. [...] This shared vision will be important during a time of heightened focus across the nation on issues of social and economic mobility, diversity, equity, and inclusion. The current moment compels serious attention to the manner in which higher education institutions address these areas."

GEORGETOWN UNIVERSITY

Center on Education and the Workforce

"The Colleges Where Low-Income Students Get the Highest ROI

finds that low-income students have a lower return on investment (ROI) than all students, largely because they tend to earn less as adults."



THIRD WAY

Out With the Old, In With the New: Rating Higher Ed by Economic Mobility

"Instead of prioritizing reputation and selectivity, we propose a new rating system known as the Economic Mobility Index (EMI) that attempts to answer the question: 'If the primary purpose of postsecondary education is supposed to be to catalyze an increase in economic mobility, which schools are succeeding in that goal?'"