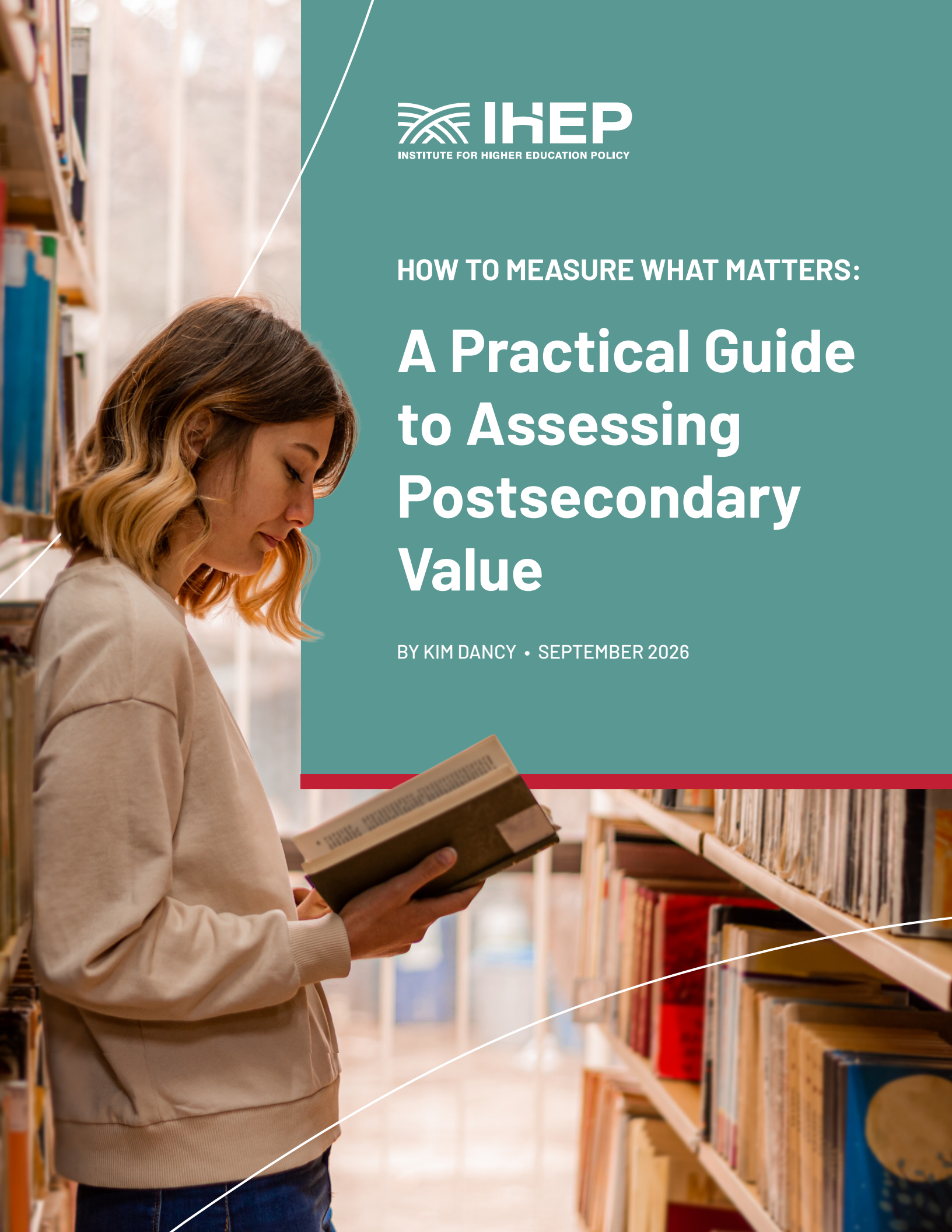




HOW TO MEASURE WHAT MATTERS:

A Practical Guide to Assessing Postsecondary Value

BY KIM DANCY • SEPTEMBER 2026



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How to use this guide to measure value

This is a step-by-step guide for anyone interested in using data to evaluate postsecondary value within a state, institution, or community. It is designed to equip researchers, policymakers, and practitioners with an overview of the necessary data elements, analytic considerations and tradeoffs, and potential metrics and comparisons to conduct value research.



This guide builds on the work of the Postsecondary Value Commission (PVC), a multi-year initiative that brought together college leaders, policymakers, researchers, advocates, and students to define postsecondary value, develop a measurement framework, and craft an action agenda to promote value for all students.¹ The guide provides technical explanations for calculating many of the PVC's proposed metrics as part of its Postsecondary Value Framework (PVF), as well as guidance on selecting the most relevant measures for specific use cases.

Many of the technical considerations described here can also be applied to other proposed measures of value. These include other approaches to estimating return on investment, such as comparisons of price to earnings² as well as evaluating program or institutional performance against existing or proposed federal and state earnings-based accountability standards.³

Why measure value?

Understanding the value that higher education delivers can help you:

1) Deepen understanding of higher education's economic benefits

Using data to measure value allows users to explore trends and complexities in postsecondary education with greater depth. Value-focused research provides a more robust understanding of the economic benefits of higher education, as well as the returns associated with specific postsecondary pathways and student populations. For example, high-quality administrative data can illustrate value across different state contexts, institutional types, credential types, fields of study, and geographic areas. These data also make it possible to examine differences in student outcomes by gender, family income, and race or ethnicity.

2) Support policy and practice

Developing and executing research about postsecondary value allows stakeholders to use their improved understanding of student outcomes to implement strategies that improve value. This is especially effective when research is aligned with state and institutional priorities and strategic initiatives. For example, examining the economic value of higher education for specific target populations, or as part of a program review, can help institutional leaders better understand—and ultimately improve—the economic value their institution provides to students.

3) Make value clear

When the value analysis is publicized through interactive dashboards, reports, and other tools, it can help students better understand the economic consequences of their college decisions. This type of transparency can also help address persistent skepticism and questions about the value of a degree.⁴

Who should measure value?

This guide is designed for individuals who have experience using and accessing the student data necessary to conduct postsecondary value analysis. You may work for institutions, state system offices, state higher education agencies or other state agencies, or external research partners. You may have strong technical skills, including familiarity with student data structures, elements, and sources, and proficiency with data analysis using a programming language or statistical software.

You should also know and understand institutional or state priorities and strategic plans. You should identify and prioritize ways to share your insights with leaders and key decision-makers, leveraging your expertise to help shape policy and practice in ways that improve the postsecondary experience for students.



State and institutional leaders have a vital role to play in supporting these efforts. These leaders can wield influence and champion postsecondary value analyses by providing the necessary resources and building buy-in. For example, leaders can allocate the staffing and technical resources needed for this work. They can also shepherd the approval of necessary legal agreements with relevant partner agencies, including data-sharing agreements and memorandums of understanding.

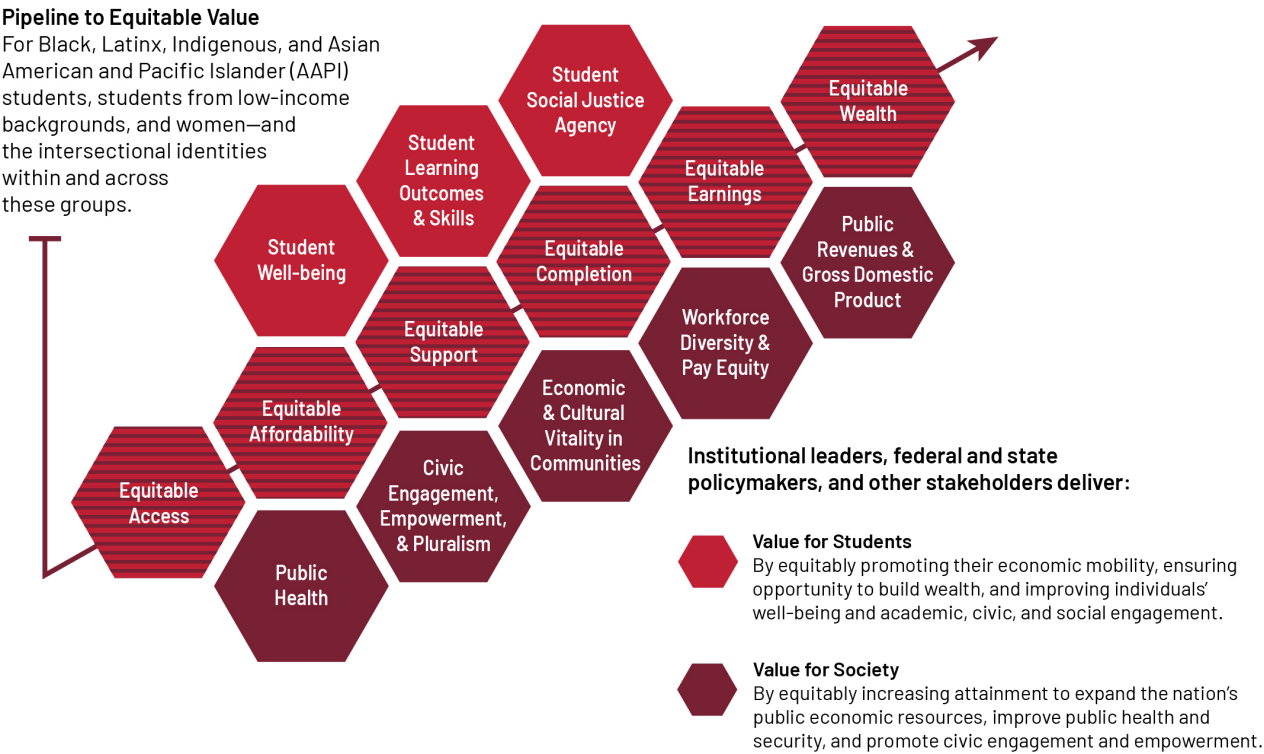
Campus and system leaders also have an obligation to understand what value looks like on their campuses. This requires engaging in meaningful conversations about what the data reveal, including identifying successes and proactively seeking opportunities for improvement. Using evidence to drive decision-making can anchor tough conversations about students' employment and earnings outcomes in ways that spur improvement for all students.

What established metrics can be used to measure postsecondary value?

Interest in higher education value is widespread, and many researchers have developed specific metrics to measure that value. These numerous value metrics reflect a strong interest in better understanding students' economic outcomes from higher education, as well as the reality that different metrics may be beneficial for different purposes. You can leverage any of these metrics to analyze value in your state or institution.

Because the PVC thoroughly engaged with experts offering a range of perspectives and paid close attention to the many dimensions of postsecondary value, this guide will focus on metrics developed as part of the PVF. Many of the practical steps outlined here, however, are relevant for analysis of other value metrics. As shown in Figure 1, the PVF goes beyond an individual student's economic return on investment by offering a conceptual basis for understanding the many components of postsecondary value. It also outlines the economic and non-economic value postsecondary education provides to students and society.

FIGURE 1:
The Postsecondary Value Framework goes beyond individual student's economic returns



Economic returns to individuals

The PVF includes a series of economic value thresholds that measure whether students experience economic returns over time (see Table 1). Thresholds 0 through 3 measure student earnings outcomes in comparison to a defined benchmark of population-level earnings, such as the median earnings of high-school graduates or the 60th percentile earnings for all workers in a state. Thresholds 4 and 5 measure student wealth outcomes, such as the acquisition of the median level of wealth in a state. Data on student wealth outcomes are needed to calculate wealth-based thresholds (T4 and T5). These data are unavailable in both nationally representative data from the Census Bureau and in most student-level data systems and therefore, Thresholds 4 and 5 are not covered in this guide.

Economic returns to society

The PVF also includes two indices that measure access and economic outcomes of traditionally underserved subgroups of students at an institution. The Economic Value Index (EVI) shows the percentage of all graduates who identify with a particular student subgroup *and* whose earnings meet or surpass the minimum

economic return threshold (T0). The Economic Value Contribution (EVC) is the amount by which the median earnings of a subgroup of completers exceed the minimum economic return threshold (T0), multiplied by the total number of completers in the subgroup.

TABLE 1.
Economic indicators of postsecondary value

Threshold	Description
0	Minimum economic return. A student earns at least as much as a high school graduate plus their total net price with interest amortized over 10 years
1	Earnings premium. A student earns at least the median earnings in their field of study and degree type; if earnings for field of study are not available, a student earns at least the median earnings for the institution's predominant degree type
2	Earnings parity. A student from a traditionally underserved background earns at least the median earnings of their systemically more advantaged peers with the same educational attainment; for example, a female student earns at least the median earnings of male workers
3	Economic mobility. A student earns enough to enter the 4th income quintile (i.e., at least the 60th percentile), regardless of field or level of educational attainment
4	Economic security. A student acquires median levels of wealth
5	Wealth parity. Students from traditionally underserved backgrounds attain median wealth of their counterparts from more systemically advantaged backgrounds
Economic Value Index	Economic Value Index (EVI) = (Percent of student group passing Threshold 0) × (Percent of students from selected student group)
Economic Value Contribution	Equitable Value Contribution (EVC \$) = (median earnings in student group – Threshold 0) × (# within student group) Equitable Value Contribution (EVC %) = student group EVC / Total EVC

Other value metrics

Other researchers have proposed ways to measure the value of a college education by focusing on the return on investment. California Competes has analyzed the features of many of these proposals, including similarities and key differences

across measures.⁵ Typically, these return on investment measures attempt to assess the increases in student earnings after they pursue higher education, relative to the costs of their investment in doing so. These return on investment measures are conceptually similar to the PVF's T0. Data on post-college earnings and measures of net price to students are crucial for assessing returns in this way.

Policymakers are also increasingly using measures of value to spur change in postsecondary education. At the federal level, the earnings of individuals with only a high school degree are frequently proposed as a minimum floor for higher education—meaning that students' post-college earnings should be at least high enough to meet this benchmark.⁶ In 2023, the U.S. Department of Education issued regulations requiring “gainful employment” programs to demonstrate that the earnings of their graduates exceed the median earnings of high school graduates in order to remain eligible for federal financial aid.⁷ In July 2025, Congress made similar requirements into law and extended this minimum earnings test to other types of programs.⁸

In addition, several states have introduced, and in some cases enacted, legislation that would prevent state funding from supporting programs with low earnings outcomes, close programs that fail to meet the federal earnings premium measure, or otherwise ensure that public higher education institutions provide economic benefit. For many states and institutions, understanding how specific programs might fare against proposed or approved accountability systems can be useful, and this guide is a helpful starting point for conducting such analyses.

You can leverage the six steps outlined below to be part of the value movement.

- **Step 1: Determine a research focus**
- **Step 2: Identify data and secure access**
- **Step 3: Define an earnings cohort**
- **Step 4: Calculate economic value**
- **Step 5: Compare student earnings to thresholds**
- **Step 6: Interpret data and share findings**

Each step is explained below and includes a description of actions to execute value research (“do this”) and questions to shape research priorities and decisions (“ask this”).





01

Determine a research focus

A well-defined research focus will help support sound analytic decisions, including which thresholds or other value metrics are most appropriate, which student populations to focus on, when to measure enrollment or earnings, and so on. Before you begin working with data, determine the focus of your analysis, including how it aligns with and can help inform policy and practice in your state or at your institution.

Do this:

Review current priorities and gather information

Gather information about the issues that matter most to your institution or state to narrow the scope of your research. Consult existing or proposed strategic plans or identify key initiatives at your campus, state, or institution. Discuss priorities and questions about the value of postsecondary education with leadership and other stakeholders on campus.

Ask this:

Once you have identified the most important topics or initiatives for your institution, consider the three questions below to refine your research focus and begin to develop analytic plans.

Which value metrics are most relevant?

Consider which value metrics best fit the goals of your analysis. For example, research connected to whether students recoup their investment in postsecondary education should leverage T0 or another return on investment metric. In contrast, research focused on reaching above average levels of earnings (T3), understanding inequities in economic outcomes (T2), or differences in earnings across fields (T1), may consider one of the other thresholds included in the PVF. Research focused on the



Before you begin working with data, determine the focus of your analysis, including how it aligns with and can help inform policy and practice in your state or at your institution.

economic returns to communities should consider using the EVC Contribution, while work that seeks to understand the importance of access to postsecondary education in increasing postsecondary value can draw from the EVI. In many cases, more than one value metric or threshold may be of use to fully address your research questions.

Which students must be included?

There may be specific student groups who will become the focus of your analysis, or your focus may be on student outcomes overall. To understand outcomes for student parents, for example, they must be included in the analysis. Including other students may not be necessary and could complicate interpretation of the results, although having a comparison group is often useful for context.

Will outcomes for any subgroups be disaggregated?

If your research focuses on understanding variation in economic outcomes across institutions, programs or fields of study, or student characteristics like race or ethnicity, gender, residency status, parenting status, or socioeconomic status prior to enrollment, disaggregating outcomes for these populations will be critical. In other cases, disaggregating outcomes can serve as a supplemental analysis or a way to extend primary research questions.

Disaggregated outcomes can be used to interrogate value for more specific subgroups, such as socioeconomic status, field of study, gender, racial or ethnic background, or student parenting status, across institutions. But disaggregation can result in subgroups with small numbers of students, which can create reliability and privacy issues. For this reason, prioritize the most important disaggregation in your analysis plans or consider aggregating multiple years of data.

THREE EXAMPLES OF VALUE RESEARCH ROOTED IN SPECIFIC CONTEXTS

The Pennsylvania State System of Higher Education (PASSHE) was interested in finding better ways to communicate the value of a PASSHE credential to prospective students and state appropriators to address skepticism about the value of higher education.⁹ PASSHE's analysis of former students' workforce outcomes showed that graduates see a strong earnings boost relative to those without a postsecondary credential, and that the vast majority of graduates recoup their investment within five years.¹⁰

The Dallas College Research Institute examined the long-term outcomes of transfer students, a project to assess whether Dallas College students were meeting their academic and professional goals. This work included evaluating bachelor's degree completion and economic mobility among community college entrants.¹¹ The researchers found that transfer students' economic mobility was much higher when students completed a bachelor's degree after transfer, and that vertical transfer pathways serve students with some characteristics better than others.¹²

The research team at the City Colleges of Chicago was interested in exploring students' success in achieving economic mobility, a goal tied to its strategic plan.¹³ The team is researching the extent to which students are achieving the economic mobility threshold (T3) and exploring students' minimum economic return (T0). The results of these analyses will be used to develop indicators for the system to measure improvement over time.



02

Identify data and secure access

After you have developed a clear research focus, consider what data sources you can access, and the data elements necessary for your research goals. Measuring value often requires de-identified, or otherwise privacy-protected and secure, student-level data on postsecondary enrollment and completion, matched to earnings data in order to assess workforce outcomes. In many cases, including measuring return on investment or other value metrics that include the costs to students, you need access to financial aid and cost information.

Do this:

Review the data sources available, including data on enrollment and completion, post-college earnings outcomes, and financial aid and costs (see additional details below, and in Table 2). Identify the specific data elements needed to address your research questions. Determine the years for which these data are available. Assess data coverage, quality, and consistency over time. Review the structure of each data source to determine the unit of analysis, such as whether postsecondary records are captured at the student-academic year or student-term level, which will be useful for combining data from different sources later.

Determine if there are any gaps in the available data. Assess your options for securing data access via administrative data sources or publicly available alternatives.

Review enrollment and completion records

Assess available data on enrollment and completion. These data typically come from institutions, state higher education agencies, or other entities with administrative data on student enrollment in and completion of postsecondary programs.



Review the data sources available, including data on enrollment and completion, post-college earnings outcomes, and financial aid and costs. **Identify the specific data elements needed** to address your research questions.

Review these data and identify whether each of the data elements are available. Assess data quality and the years of availability for the following information:

- **Hashed SSNs or other unique identifiers** for each student, to link enrollment and completion records to data from other sources, including workforce outcomes.
- The **date of a student's first enrollment** and **the date of last enrollment**, needed to develop cohorts for analysis and calculate the time it takes a student to finish a credential.
- **The Classification of Instructional Programs (CIP) code** and **degree level** (bachelor's, associate's, etc.) of each student's program as well as student **program completion status**. Program- and degree-level outcomes often vary substantially even within the same institution and based on whether a student completes a credential.¹⁴
- The **type and degree level of any previous degree awarded** as well as **the timing of that award**, to better understand degree progression, transfer outcomes, and postsecondary pathways.
- **Demographic details** such as gender, race or ethnicity, and other measures of interest such as age or year of birth, a student's parenting status, socioeconomic factors, or veteran status. These are crucial for evaluating the extent to which outcomes are equitable across different student groups and identifying populations that would benefit from additional supports in their higher education journey.
- **Information about a student's experience on campus** like residency status or housing type, depending on your research focus.
- **Campus ID, Integrated Postsecondary Education Data System (IPEDS), UNITID number, or OPEID number**, depending on your area of focus, to enable linkages to IPEDS or other publicly available data.

Assess post-college earnings outcomes

Next, review the availability of administrative data on students' earnings, needed to measure student outcomes related to employment and wages. Many postsecondary value analyses leverage unemployment insurance (UI) wage records held by state workforce agencies. These records include quarterly earnings for students living in the state but exclude those working out of state, those who are self-employed, federal government employees, and those who work in other non-covered employment.¹⁵

If necessary, you can obtain earnings outcomes from other sources, such as aggregate earnings outcomes from the College Scorecard or the Census Bureau's Postsecondary Employment Outcomes (PSEO).¹⁶ Avoid using student surveys to measure post-college earnings because low response rates can bias results, and self-reported earnings are often inaccurate. Administrative data sources available through data-sharing agreements, or free publicly available data sources like the Scorecard or PSEO, are more economical and more transparent than privately held data sources.

Review the availability of data on post-college earnings and determine the years of availability for the following three data elements:

- **Hashed SSN** or other **unique identifier** for each student, to link wages to postsecondary records.
- The **quarter** and/or **calendar year** in which the earnings were measured, and the **total earnings** during that period.
- **Additional data elements** that may be available, depending on the state you are in, including job location, hourly wages, hours or weeks worked, and occupation and/or industry codes.¹⁷

Identify student costs and financial aid information

Finally, assess whether financial aid and cost information are necessary for your research focus and what sources for this information are available.

If you need to assess the amount students are paying for their educational costs, you need access to data on student charges, living expenses, and any financial aid received. These data typically come from institutions, state higher education agencies, or other entities with administrative data on postsecondary education. However, unlike enrollment and completion data, financial aid data often carries additional privacy requirements and may not be included in state longitudinal data systems. In some cases, additional steps may be necessary for data access. In other cases, publicly available data from IPEDS may be a viable workaround.

Where available, the following six financial aid elements can help institutions, states, and state systems more precisely estimate their students' investment in postsecondary education:

- **Hashed SSN** or **student ID**, for merging with other education records and post-college earnings outcomes.
- A measure of each student's **total cost of attendance**, including actual tuition and fees charged, actual housing and meal plan costs for students living on campus, an estimate of housing and meal costs for students living off campus, and estimates for other expenses including books and supplies.ⁱ
- **The total amount of grant or scholarship aid received**, to calculate each student's net cost of attendance.
- **Attendance intensity or number of credits**, if you want to prorate costs for part-time students or to disaggregate outcomes based on attendance intensity.
- A measure of **a student's family income** or **socioeconomic status**, which could include expected family contribution or student aid index, the receipt of a federal Pell Grant and the amount of that award, or student and family income.ⁱⁱ
- **Other financial aid information**, such as the total amount of loans received, depending on your research focus and questions.

i. For more details and recommendations on measuring student investment, please see the PVC report by Diane Cheng, *Recommendations for Measuring Student Investment in College* (PVC, May 2021), <https://www.postsecondaryvalue.org/wp-content/uploads/2021/05/PVC-Cheng-FINAL.pdf>.

ii. Additional requirements apply to the use of any data elements that are considered federal tax information. For more information on this issue, see National Association of Student Financial Aid Administrators, *Navigating Federal Guidance on the Use and Disclosure of FAFSA Data and Federal Tax Information* (NASFAA, December 2025), https://www.nasfaa.org/uploads/documents/Navigating_Federal_Guidance_Use_Disclosure_FAFSA_Data_FTI_Report.pdf.

TABLE 2:
Key fields and data sources for measuring postsecondary value

Data Type	Core Data Elements	Optional Data Elements
Enrollment and Completion Records, from institutions, state systems, or state longitudinal data systems	Hashed SSN/unique identifier Academic year and term Degree level Date of first enrollment/program start date Date of last enrollment Completed program indicator and date degree conferred	CIP code Program name Highest prior degree awarded Date prior degree awarded Gender Race or ethnicity Student parenting status Veteran status Date or year of birth/age Campus Residency status Student's home zip code or another geographic marker IPEDS information for institution (UNITID or OPEID)
Post-College Earnings Data, typically from unemployment insurance records held by state workforce agencies	Hashed SSN/unique identifier Quarter and/or calendar year Wages	Employer Identification Number Location of employer Date or year of birth Hours worked Weeks worked North American Industry Classification System (NAICS) code
Financial Aid Data, from institutions, state systems, or state longitudinal data systems	Hashed SSN/unique identifier Financial aid year and term Total grants Federal Pell grants Residency status Tuition and required fees Housing and food costs Books and supplies, transportation and other costs	Attendance intensity Expected Family Contribution/Student Aid Index State grants Institutional grants Total loans Federal loans Private loans Family annual income Student gross income

Ask this:

What gaps exist in the available data, and how can they be addressed?

Consider the pros and cons of pursuing additional data-sharing agreements to secure the data you need, leveraging publicly available data sources that contain aggregate information on students' postsecondary experiences, or limiting your research framework to focus on those dimensions of value you are able to assess.

Can data sharing with other state partners help close gaps?

Assess which data elements you will require, and which state agencies or other partners might be able to provide access to those elements. This will likely require dedicating staff and material resources, pursuing data-sharing agreements, and adhering to relevant legal and regulatory requirements.¹⁸ The specific requirements for data sharing across agencies can vary substantially from state to state. However, at a minimum, you will need a legal agreement outlining the intended use of the data, the data elements and time period covered, and the security and privacy restrictions.¹⁹

Are publicly available data sources sufficient?

In some cases, data access may be limited due to factors outside your control. Consider whether publicly available data can supplement student-level enrollment records to evaluate value for those groups.

If your state or institution participates in the PSEO program, aggregate data on the earnings of graduates calculated by the Census Bureau is publicly available for download.²⁰ It can be paired with aggregate data on enrollment or financial aid to explore the postsecondary value of specific programs of study. However, the PSEO data exclude earnings outcomes of students who leave school without a credential and are only available for states and institutions who opt to work with the Census Bureau to produce aggregate earnings figures. And while PSEO earnings measures include students who leave the state, the many other limitations of UI wage records (such as a lack of data for those who are self-employed or who work for the federal government) remain.²¹

The College Scorecard is another publicly available data option. It includes institution and program-level earnings outcomes that can be combined with aggregate postsecondary records. The Scorecard includes earnings measures for students six, eight, or ten years after their initial enrollment at an institution regardless of whether they complete a credential, as well as post-graduation outcomes at both the institution and program level up to five years after students finish a credential.

However, Scorecard earnings data are only available for certain years, which limits the time in which student outcomes can be assessed. Many institution-level earnings outcomes were not updated in the March 2026 data release, making it more difficult to examine trends over time or



Assess which data elements you will require, and which state agencies or other partners might be able to provide access to those elements. This will likely require dedicating staff and material resources, pursuing data-sharing agreements, and adhering to relevant legal and regulatory requirements.



to understand earnings outcomes for specific subpopulations of students.²² In addition, the Scorecard only provides earnings outcomes for students who receive federal financial aid, and research has shown that federally aided students are not always representative of the full student population.²³ Finally, high rates of privacy suppression among institutions and programs with small numbers of students or completers limits the usefulness and coverage of the data, particularly at the program level.

In both Census and Scorecard data, aggregated earnings data cannot be connected to student-level education records to enable nuanced analysis. This means that aggregate earnings must be used for all students in the analysis, even though there is student variation within institutions and programs. Neither source allows for disaggregation of earnings by degree completion status, race or ethnicity, student parenting status, or other factors that may be of interest, such as campus location.

If your research focus requires cost or financial aid information and you cannot access that data at the student level, institutional averages for cost of attendance and/or net price may be a workable solution. For more information about the best ways to use IPEDS data to calculate annual measures of net price, please see the “Measuring Student Investment with Publicly Available and Nonpublic Institutional Data” section within *Recommendations for Measuring Student Investment in College*.²⁴

It is important to note that institution-level measures are less precise than student-level cost of attendance (COA) estimates, and they do not account for variation in actual student expenses across programs of study or other factors. Further, calculating net price is challenging for institutions that report to IPEDS on a program-year basis, so there may be institutions that cannot be included in an analysis using aggregate IPEDS data. Because of the limitations of using IPEDS data in place of student-level records, be cautious about using those sources for accountability, funding allocations, or other high-stakes consequences.



03

Define an earnings cohort

To calculate the post-college average or median earnings of students, you must define the students who are included. The resulting group of students is an earnings cohort.

A well-defined cohort must specify when students were enrolled, how long after they leave school before their earnings are measured, and whether certain students should be excluded from the analysis. For instance, the College Scorecard publishes institutional earnings outcomes for cohorts of students who first enrolled across two subsequent academic years, received federal financial aid, and were working but not enrolled in school ten years later. Multiple cohorts of students can be used to explore how postsecondary value has changed over time.

Ask this:

What are the common characteristics of your earnings cohort?

A cohort consists of a group of individual students with key shared characteristics. There are two primary ways researchers define earnings cohorts in research on postsecondary earnings outcomes: entry cohorts and exit cohorts (for details on the tradeoffs between entry and exit cohorts, see Table 3).

Entry cohorts, which group students based on their first observed enrollment, can help you assess the likely long-term outcomes of entering college, regardless of completion. That's because entry cohorts include both students who finish a program of study and those who enroll but leave school without a formal credential. If your goal is to include non-completers in your assessments of value, you might start with an entry cohort, incorporating all students who started at the same point in time regardless of the eventual outcome of their studies.

It is very difficult to conduct analysis at the program level using entry cohorts, since many students do not formally enter a program right away and others change their field of study during college. This means that entry cohorts are best used for research questions about value at the institution level.



A well-defined cohort must specify **when students were enrolled, how long after they leave school before their earnings are measured, and whether certain students should be excluded from the analysis.**

In contrast, exit cohorts consist of groups of students who leave an institution at the same time. Most often, exit cohorts consist of students who graduate together; however, it is also possible to include students who left the institution without a degree based on their last observed enrollment. Exit cohorts enable analysis of program-level value, as well as research questions about the value of degree completion.

TABLE 3:
Tradeoffs of entry and exit cohorts

	Best for:	Challenges:
Entry Cohorts	Evaluating the value of higher education from the perspective of students' initial enrollment. Understanding the total value of access to higher education in a state or a system.	Difficult for program-level analysis, since many students do not select a program right away, or change programs over the course of their enrollment. Does not allow for assessment of the value of earning a credential.
Exit Cohorts	Conducting most program-level analysis. Research questions about the value of degree completion or outcomes of specific programs.	Often limited to students who complete a credential, although students who withdraw can be included based on last observed enrollment.

What is your cohort time frame and how many cohorts will you include?

Once you have determined the characteristics of your cohort or cohorts, specify the relevant years of postsecondary enrollment or completion and how long the period after students have left school should be before measuring earnings outcomes.

For example, an entry cohort might look at students who first enrolled in a single academic year and measure earnings outcomes eight years later. Or an exit cohort might include all students who completed a credential across two subsequent academic years, while measuring earnings four years after completion. It may be worthwhile to measure earnings at multiple time periods, such as one, three, and five years after completion, or six, eight, and ten years after entry into college.

Data availability and data quality often limit the cohort timing. For example, if you can only access certain postsecondary enrollment or financial aid data elements in more recent years, it may be difficult to analyze value for older cohorts or to look at earnings outcomes many years after students leave school. Or you might have questions about the quality or accuracy of the data from certain years or have more difficulty matching enrollment and earnings records prior to a certain time period.

Each of these factors should be considered in determining which cohorts of students to include in your analysis, as well as the period over which you are able to measure earnings outcomes for each cohort.

In addition to these data constraints, think about what your time frame choices will mean for the interpretation of your results. Measuring post-college earnings is a retrospective process. This means that the longer after college you wait to measure earnings, the more difficult it will be to draw conclusions about value for current students. At the same time, more recent cohorts of students will not have had as much time to participate in the workforce, so results will not reflect longer earnings trajectories.

In some cases, multiple years of enrollment or completion data may be combined as one “pooled” cohort. This can help increase the number of students included in an analysis, which can improve the reliability of estimates for small populations and can protect privacy. It may also enable additional disaggregation. Alternately, multiple years may be considered separate cohorts in order to understand and evaluate trends over time. Decisions about cohort timing as well as pooling of cohorts will shape how many cohorts can be included in your analysis.

Your research focus will also influence the cohort and earnings timing. For instance, if you are interested in exploring workforce-oriented programs or short-term credentials, or in understanding whether students reach a minimum economic return, it may be appropriate to evaluate how students fare earlier in their careers. In contrast, if you are interested in understanding how higher education influences long-term outcomes, or in evaluating earnings growth trajectories, it may be better to wait longer before evaluating earnings.

Which students will be excluded?

While including as many students as possible in your earnings cohort can make for a more comprehensive analysis, data limitations and research considerations mean that some students will be excluded. For example, students who are not found in the UI records typically must be excluded, since there are no employment or earnings outcomes for these students. UI wage records are typically missing for students who are unemployed—either by choice or due to a lack of employment options. However, UI earnings are also unavailable for students who leave the state after finishing school or those who are self-employed or have federal government jobs, including the military.



Other exclusions may be appropriate. For example, you might choose to exclude:

- Students whose earnings suggest less than full-time work, such as students with only one or two quarters of wages, or earnings that are very low and suggest part-time work. You could exclude these individuals or decide to impute or annualize their earnings based on observed quarterly data. This exclusion or annualization should be grounded in your research question. Our strong recommendation is to include students with nonzero and non-negative earnings in your calculations, and to be consistent about this decision in student earnings calculations and threshold construction.
- Students who are currently enrolled in postsecondary education. Typically, students work fewer hours than those who have finished their education, resulting in lower annualized earnings. Including students who are still enrolled at the original institution or elsewhere can create misleading estimates of average earnings outcomes.
- Students who transferred or reenrolled at another institution or completed a subsequent program. While transfer and further education are both important pathways for students to reach their educational goals, both can add analytic complexity to assessments of value, since both the original and receiving institution play a role in students' education. Depending on the research focus, excluding these students may be necessary. You should be able to see students who transfer or pursue further education within the same state, institution, or system in the enrollment records. For a more holistic understanding of transfer and subsequent enrollment, including in different states, supplement enrollment files with National Student Clearinghouse data.
- Students who took an unusually long time to complete their degrees. You might want to focus on student populations who follow a more conventional pathway to finishing a credential. At the same time, understanding why these students did not complete a credential in the typical time frame, or how their post-college earnings might differ from those of students who finish more quickly are both important questions to explore. For example, understanding outcomes for students who enroll part-time throughout their education or who stop out for long periods of time are both crucial to understanding the nuances of postsecondary value.
- Students enrolled in dual enrollment programs or who were otherwise non-degree- or credential-seeking students. Dual enrollment students are typically still enrolled in high school. Other students pursue non-credit opportunities related to skill-building or personal enrichment. These opportunities are fundamentally different from structured academic degrees or certificates, which require accreditation and are eligible for federal financial aid.

Do this:

Map your cohort and develop an analytic file

Using the answers to each of the three questions above, map out a definition of the cohort(s) that will be included in your analysis. Using this definition, generate an analytic file that includes all relevant data elements, including standardization of financial aid, academic, and calendar years, and reconciliation of the unit of analysis across all data sources.

For example, convert earnings measures to annual amounts, aligned with the academic year. If using UI wage records as a data source for earnings, add quarterly earnings to arrive at an annual figure. Annual earnings will enable easier comparisons with value thresholds later (see step 5).



04

Calculate economic value thresholds

In addition to measures of student earnings outcomes, one or more comparison values—known as the Economic Value Thresholds—are needed to contextualize those outcomes. In preparing your research focus, you likely identified one or more thresholds of interest to your specific goals. The next step in the process is to calculate the dollar amount of that threshold.

Do this:

Download and clean data from the American Community Survey (ACS)

To evaluate population level earnings outcomes for your selected thresholds, start by downloading publicly available American Community Survey data from the IPUMS USA website.ⁱⁱⁱ You will likely need each of the variables listed in Table 4, but for some research questions not all of these will be necessary.



In preparing your research focus, you likely identified one or more thresholds of interest to your specific goals. The next step in the process is to calculate the dollar amount of that threshold.

iii. IPUMS was formerly known as the Integrated Public Use Microdata Series. This list comes from the *Descriptions of IPUMS Samples*, <https://usa.ipums.org/usa/sampledesc.shtml#us2020c>. Please note that if you download the data directly from the U.S. Census website, some variable names and values may differ from the IPUMS USA harmonized version.

TABLE 4:
Recommended American Community Survey variables from IPUMS USA

Variable Name	Variable Description
YEAR	Census year
MULTYEAR	Actual year of survey, multi-year ACS/PRCS
SAMPLE	IPUMS sample identifier
SERIAL	Household serial number
CBSERIAL	Original Census Bureau household serial number
HHWT	Household weight
CLUSTER	Household cluster for variance estimation
STRATA	Household strata for variance estimation
GQ	Group quarters status
STATEFIP	State (FIPS code)
METRO	Metropolitan status (where determinable)
PERNUM	Person number in sample unit
PERWT	Person weight
SEX	Sex
AGE	Age
RACE (general)	Race [general version]
RACED (detailed)	Race [detailed version]
HISPAN (general)	Hispanic origin [general version]
HISPAND (detailed)	Hispanic origin [detailed version]
SCHOOL	School attendance
EDUC (general)	Educational attainment [general version]
EDUCD (detailed)	Educational attainment [detailed version]
DEGFIELD (general)	Field of degree [general version]
DEGFIELD (detailed)	Field of degree [detailed version]
DEGFIELD2 (general)	Field of degree (2) [general version]
DEGFIELD2D (detailed)	Field of degree (2) [detailed version]
INCEARN	Total personal earned income*

*Other income variables, including *INCTOT* and *INCWAGE*, are also available through IPUMS and may be more appropriate for your analytic purposes.

Once you have your data, streamline your analysis file. We recommend six steps:

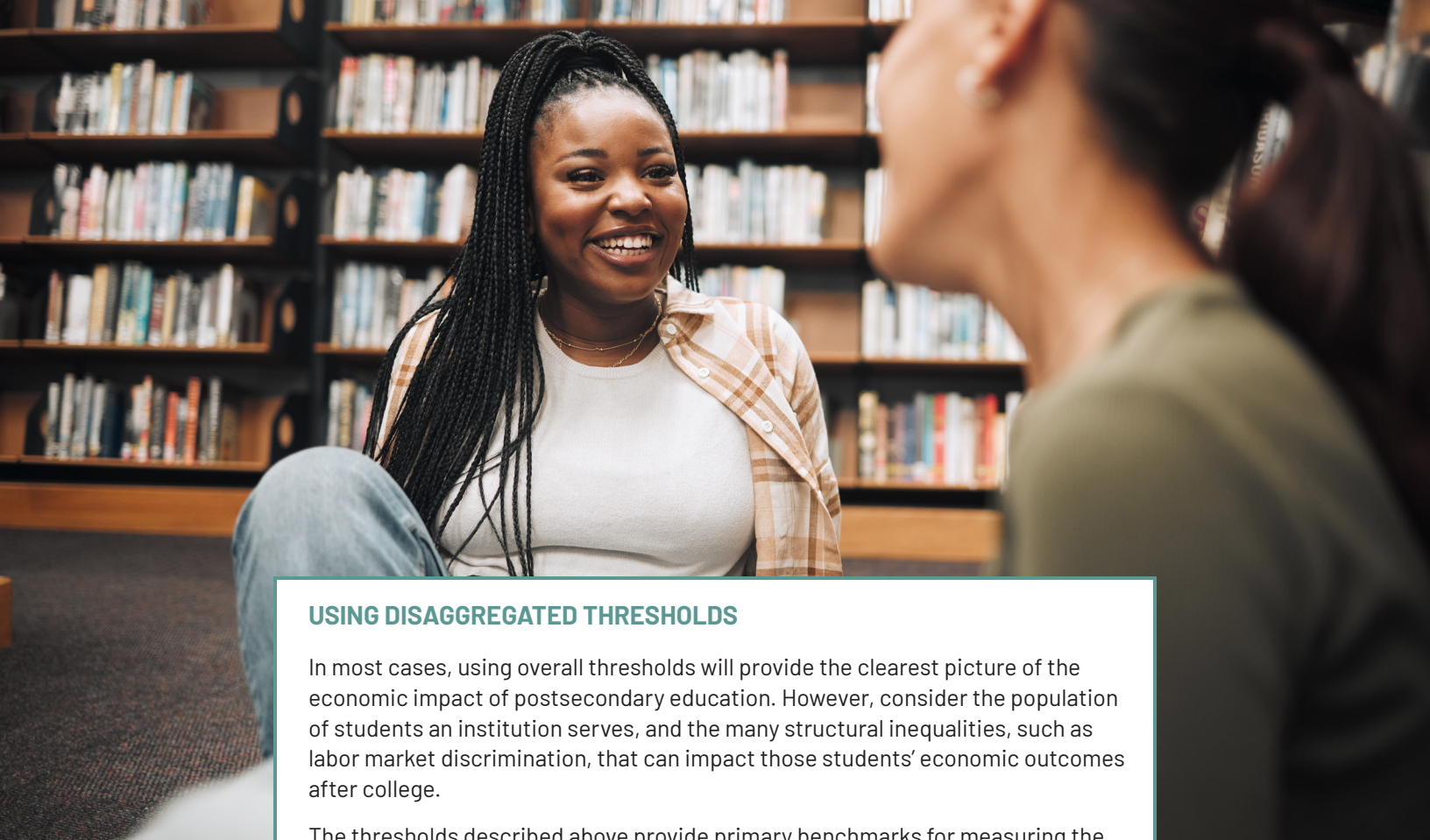
- Limit data to individuals in your state or geographic area.
- Restrict the age range to reflect prime age workers (for example, those who are between 25 and 40 years old).
- Remove individuals currently enrolled in school, including those enrolled in high school or a postsecondary institution.
- Keep individuals with at least a high school degree, including regular and alternative credentials, associate's degrees, and bachelor's degrees or higher.
- Retain only individuals with positive earnings (excluding those with zero or negative earnings).
- Adjust earnings for inflation, if necessary, using the annual average Consumer Price Index for All Urban Consumers.

Calculate the relevant value thresholds

The resulting data file can be used to complete the calculations for each threshold value shown in Table 5.

TABLE 5:
Calculating the economic value thresholds

Threshold	Description	Calculation Needed
T0: Minimum Economic Return	A student earns at least as much as a high school graduate plus their total net price with interest amortized over 10 years.	Median earnings of individuals in the same state with a high school diploma or equivalent. Annualized cumulative net price (see details below for how this is calculated).
T1: Earnings Premium	A student earns at least the median earnings in their field of study and credential level; if earnings for field of study are not available, a student earns at least the median earnings for the institution's predominant degree type.	Median earnings of individuals in the same state, with the same credential level, and if possible, field of study. Field of study is only available in the ACS for bachelor's degree recipients. For certificate and associate's degree thresholds, using the median earnings by credential level to calculate T1 is sufficient.
T2: Earnings Parity	A student from a traditionally underserved background earns at least the median earnings of their systemically more advantaged peers with the same educational attainment; for example, a female student earns at least the median earnings of male workers.	Median earnings by race or ethnicity, gender, and degree level. Post-college earnings for women will be compared to ACS earnings for men with the same level of education. Post college earnings for students of color will be compared to ACS earnings for White individuals with the same level of education.
T3: Economic Mobility	A student earns enough to enter the 4th income quintile (i.e. at least the 60th percentile), regardless of field or level of educational attainment.	Sixtieth percentile earnings for all workers with a high school diploma or equivalent or higher.



USING DISAGGREGATED THRESHOLDS

In most cases, using overall thresholds will provide the clearest picture of the economic impact of postsecondary education. However, consider the population of students an institution serves, and the many structural inequalities, such as labor market discrimination, that can impact those students' economic outcomes after college.

The thresholds described above provide primary benchmarks for measuring the economic value that institutions provide to students relative to earnings among their state population. These thresholds provide a target for institutions to help ensure that all students receive the same economic returns, regardless of race or ethnicity, family income, or gender.

Disaggregated thresholds measure the economic value institutions provide to students relative to individuals from similar backgrounds, such as those of the same race or ethnicity, family income, or gender. Measuring within-group differences demonstrates the postsecondary value for historically marginalized students, even if they do not yet meet the overall thresholds. These thresholds recognize that inequalities in the labor market can negatively impact earnings for women and Black, Hispanic, and Indigenous students. The objective of disaggregated thresholds is not to lower the bar for the value higher education should deliver and the responsibility institutions have to deliver it, but to provide a nuanced perspective that acknowledges the inequities in the current labor market. These disaggregated thresholds apply to a single subgroup of students.

To construct disaggregated thresholds, repeat the calculation shown in Table 5 for the subpopulations of interest. For example, using ACS data to calculate the 60th percentile earnings for Black individuals in the same state would result in a disaggregated T3 value for Black students. Calculating the median earnings by degree level and field for women will give you the disaggregated T1 value for women.



CALCULATING THRESHOLD 0 STEP BY STEP

After using ACS data to calculate the median earnings of those with only a high school diploma, use student-level data on cost of attendance and financial aid to finalize the Threshold 0 values for each student. Calculating cumulative net price paid for education is best done by summing the actual net price paid across enrollment years.

1. Calculate cost of attendance (COA) for each year a student is enrolled

COA reflects the sum of tuition and fees, housing and food, books and supplies, and other expenses. In most cases, institutions do not have the actual expenses students incurred for off-campus housing and other expenses, so using institutional estimates is sufficient.

Annual COA = Annual tuition and fees + annual housing and food + annual books and supplies + other annual expenses

2. Calculate net price for each year or term a student is enrolled

Subtract the annual amount of grants, scholarships, and gift aid each student received from their COA to reach net price for each term or aid year. This should include all aid a student received that does not need to be repaid or is not earned through work-study arrangements, regardless of the source of the grants or scholarships. Grants and scholarships may be reported at the term level, but COA is most often estimated for each academic year, so adding up the grants and scholarships received is usually the easiest way to arrive at an annual net price number.

Annual net price = COA – sum of all grants and scholarships received in a given year

3. Calculate cumulative net price by summing annual net price across all enrollment years

Cumulative net price = sum of all annual net price figures

A photograph showing three people in a professional setting. A man with dark hair, wearing a grey blazer over a light green sweater, is looking at a document he is holding. A woman with glasses and a dark blazer is looking at the same document. Another woman is partially visible on the right side of the frame. In the background, there are some charts and a wooden shelf.

4. Annualize cumulative net price paid

Because higher education is a long-term investment, it is often unreasonable to expect students to fully recoup their costs within a single year. The PVC spreads student costs over ten years, consistent with the standard loan repayment term for federal student loans.

The exact approach for annualizing the cumulative net price over a ten-year period varies, so decide how you want to treat student borrowing and interest accumulation. As you calculate Threshold 0, consider the following options:

- Option 1: Assume students borrow the full cumulative net price, using standard repayment terms and current interest rates to determine an annual loan payment amount. This option is preferred in cases where students borrow at high rates and/or high levels, but you lack data on the exact borrowing behavior.
- Option 2: Use data on actual borrowing to determine the share of the cumulative net price that should accumulate interest and determine an annual loan payment amount, in addition to dividing the rest of the student costs over the ten-year period. This option is ideal if you can access sufficient data on student borrowing—including borrowing from private or other sources—over the enrollment period.
- Option 3: Divide the total cumulative net price by ten to spread the costs over a ten-year period, while ignoring interest costs entirely. This option is suitable in cases where borrowing is uncommon.

5. Add annual cumulative net price to median earnings of high school graduates

This last step will give you the Threshold 0 amount for each student:

Threshold 0 = Median high school graduate earnings in state + total student investment in college, annualized over 10 years

In cases where the data necessary for part or all of these calculations are unavailable, publicly available data from IPEDS on COA, the average grant and scholarship aid students received, or both, can be used to estimate the annual net price at the institution level. This annual amount can then be multiplied by the typical time it takes students to complete.

Compare student earnings to thresholds

Do this:

After calculating student earnings and the relevant threshold values, you are finally ready to pull everything together. At this point, run descriptive analyses of student demographics, enrollment and completion patterns, and overall earnings outcomes in order to better understand each cohort's composition.

Evaluate student aggregate post-college earnings

Your analysis should focus on comparisons between student earning outcomes and your selected value thresholds. Here are four ways to compare those earnings to the relevant threshold values:

- **The percentage of students in each cohort whose annual earnings exceed each threshold value.** Compare annual earnings for each student to the threshold value and determine if a student meets or exceeds the threshold, then divide by the total number in the cohort. This continuous measure shows what share of students meet a given threshold, providing nuance into whether students are experiencing strong postsecondary value.
- **Indicator showing whether students' aggregate earnings meet or exceed the threshold value.** Calculate average or median earnings across the full cohort (or subgroups of the cohort) and compare that output to the relevant threshold value. If the median earnings exceed the threshold for a given population, the cohort is considered to meet the threshold. This approach can be helpful if working with aggregate earnings data from PSEO or the College Scorecard, or to simplify results for analysis or display. However, this approach loses some of the nuances of the percentage calculation, since it presents a binary measure and does not reflect the full distribution of students' post-college earnings.



Run descriptive analyses of student demographics, enrollment and completion patterns, and overall earnings outcomes in order to better understand each cohort's composition.

- **The amount by which students' earnings are above or below each threshold value.** Calculate the difference between annual earnings for each student and the threshold value, and summarize those differences with descriptive statistics, such as the average amount by which student earnings exceed a given threshold. This can be done separately for students above and below the threshold and adds nuance to whether a group meets each threshold by showing the amount by which typical earnings exceed or fall short of the benchmark.
- **How long it takes students to meet each threshold.** Calculate how long after leaving school a student's earnings meet or exceed a given threshold and calculate the average or median value across student cohorts or subgroups. This acknowledges that student earnings change over time after leaving school and simplifies researcher decisions about when earnings should be measured by providing additional flexibility. However, in cases where student earnings have not yet met a given threshold in the observed data, it is unclear how to estimate if or when they might meet the threshold.



ECONOMIC VALUE INDEX AND ECONOMIC VALUE CONTRIBUTION

Other comparisons of student earnings to Threshold 0 can be used to understand broader dimensions of value.

First, the Economic Value Index is designed to measure the fraction of a school's students that attains at least a minimum economic return *and* those who come from a specific subgroup, reflecting the extent to which institutions provide access to historically underserved students *and* serve them well.

Second, by aggregating the individual economic returns, the Economic Value Contribution (EVC) provides insights into how individual benefits add up, either overall or for specific groups of students. The EVC is designed to measure the economic activity generated by postsecondary institutions whose students' earnings exceed the minimum return. The EVC can be presented as a dollar amount, or as a percentage of the total economic returns generated by a certain subgroup within an institution.

06

Interpret data and share findings

Do this:

Once your analysis is done, assess what the numbers mean, how they relate to campus and state-level strategic initiatives, and how they might inform decisions about policy or practice. Discuss with the research team and build strategies—including how you will develop data visualizations and identify key findings—to share the outcomes with key decision-makers.

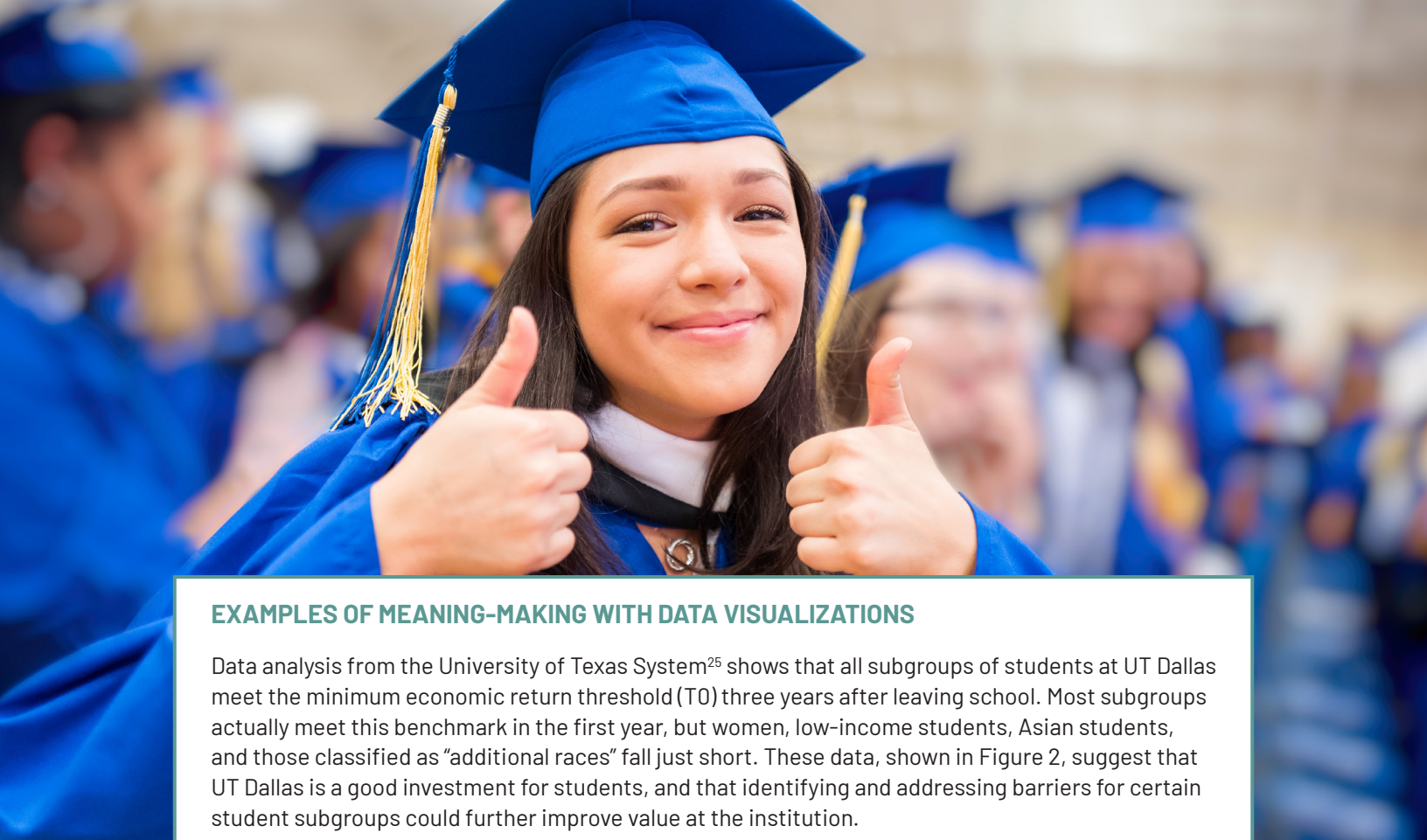
Communicate your results to key stakeholders. Make plans to present results and recommendations to those in a position to make decisions related to programming, institutional practice, policy initiatives, or funding allocations and levels. Ongoing dialogue can help identify potential follow-up research that may generate further insights. Test potential solutions and further evaluate postsecondary value.

Create data visualizations

Charts and figures can help make data output more easily digestible, facilitating comparisons and insights that are difficult to glean from tables and numbers alone. Think about the most useful chart formats for your audience and the message you are trying to convey.



Communicate your results to key stakeholders. Make plans to present results and recommendations to those in a position to make decisions related to programming, institutional practice, policy initiatives, or funding allocations and levels.



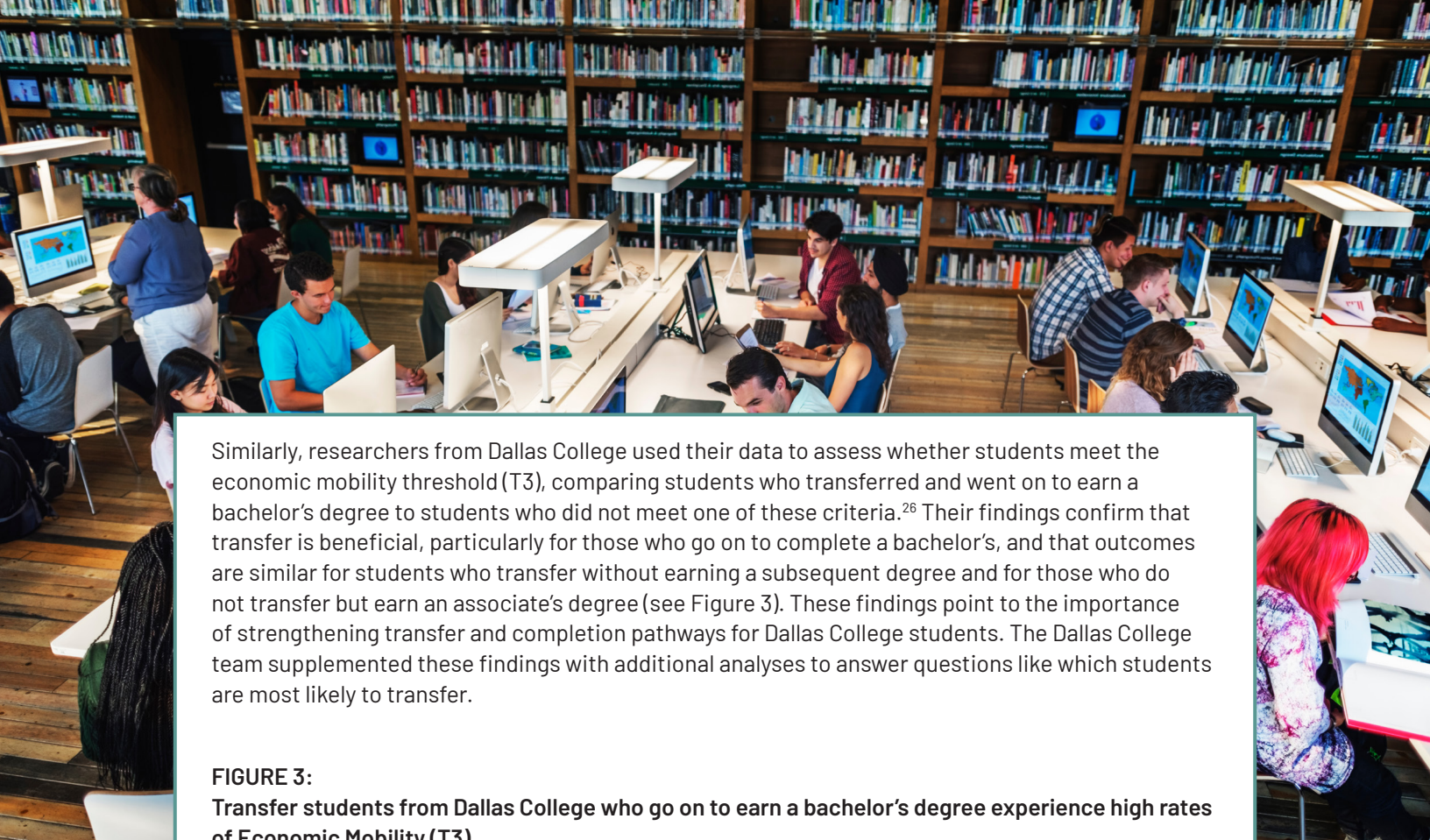
EXAMPLES OF MEANING-MAKING WITH DATA VISUALIZATIONS

Data analysis from the University of Texas System²⁵ shows that all subgroups of students at UT Dallas meet the minimum economic return threshold (T0) three years after leaving school. Most subgroups actually meet this benchmark in the first year, but women, low-income students, Asian students, and those classified as “additional races” fall just short. These data, shown in Figure 2, suggest that UT Dallas is a good investment for students, and that identifying and addressing barriers for certain student subgroups could further improve value at the institution.

FIGURE 2:
Median earnings at the University of Texas Dallas
relative to Threshold 0 (T0)

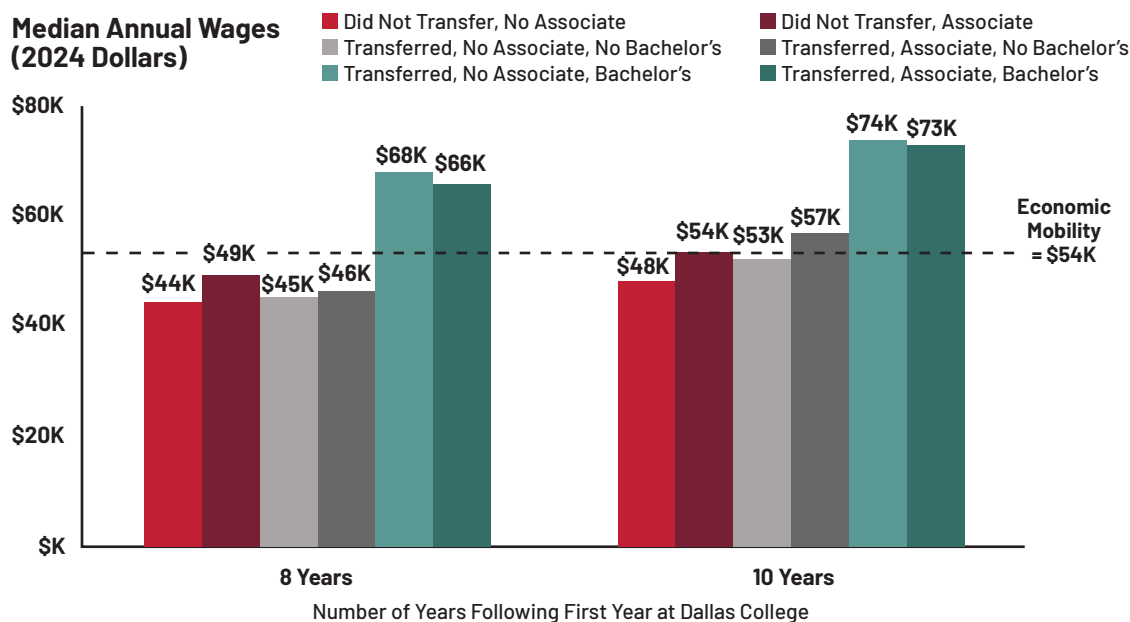


Source: Postsecondary Value Commission (website), “University of Texas: Median Earnings Compared to Value Thresholds,” <https://equity.postsecondaryvalue.org/ut-system/UTD#top>.



Similarly, researchers from Dallas College used their data to assess whether students meet the economic mobility threshold (T3), comparing students who transferred and went on to earn a bachelor's degree to students who did not meet one of these criteria.²⁶ Their findings confirm that transfer is beneficial, particularly for those who go on to complete a bachelor's, and that outcomes are similar for students who transfer without earning a subsequent degree and for those who do not transfer but earn an associate's degree (see Figure 3). These findings point to the importance of strengthening transfer and completion pathways for Dallas College students. The Dallas College team supplemented these findings with additional analyses to answer questions like which students are most likely to transfer.

FIGURE 3:
Transfer students from Dallas College who go on to earn a bachelor's degree experience high rates of Economic Mobility (T3)



Notes: Data reflect the 2014 Dallas College FTIC (first time in college) cohort. Vertical transfer is measured as any enrollment at a public university, independent college or university, or health-related institution within 4 years of that student's FTIC year at Dallas College; associate completion is considered within 4 years of the FTIC year and before transfer when applicable; on-time bachelor's completion is measured as earning a bachelor's degree within 6 years.

Source: McKenna Griffin, Dillon Lu, Navi Dhaliwal, and Lanita Etea, *Transfer Pathways and Economic Mobility: Evidence from Dallas College and North Texas* (Research Institute Dallas College, December 22, 2025), 2, https://www.dallascollege.edu/media/dallas-college/content-assets/images/about-dallas-college/research-institute/RI_Brief_Transfer_Dec_2025.pdf

Identify and discuss key findings

Identify key insights from the data to share with stakeholders. In reviewing the results of your analysis, you might use the following questions to develop findings that can inform decision-making:

- Are students experiencing value? At which institutions, and in which programs?
- What changes can be made to increase the rate at which students are experiencing value? What lessons can be learned from especially high-value programs or institutions?
- Are there populations of students who are less likely to see value from their postsecondary education? What barriers might be addressed to improve outcomes for this group?
- How might different policy and practice proposals impact or shift the value of higher education?



Conclusion

Measuring the value students experience from their postsecondary education is crucially important, particularly in an environment where students invest substantial resources to pursue a degree.

Using data to explore postsecondary value can demonstrate that higher education pays off, help identify areas for improvement, and make outcomes clearer to students and the public. Developing focused research questions, accessing the necessary data, conducting thorough analysis, and engaging meaningfully with leadership about the results ensure that data are used to inform policy and practice, which ultimately improves outcomes and experiences for students.

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