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Teachers College, Columbia University

Classifying Community College Programs by Post-Completion Success in Transfer and Workforce

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UNLOCKING OPPORTUNITY COLLEGES:

- Alamo Colleges District | San Antonio College (pilot institution)
- Laramie County Community College
- Lorain County Community College
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- Odessa College
- Sinclair Community College
- Southwest Wisconsin Technical College
- St. Petersburg College
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The Community College Research Center (CCRC), Teachers College, Columbia University, has been a leader in the field of community college research and reform for more than 25 years. CCRC's work provides a foundation for innovations in policy and practice that help give every community college student the best chance of success.

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1. Introduction

If community college leaders nationwide want to ensure their students are set up for success, they must ensure their programs enable students from all backgrounds to achieve their goals for employment and/or further education. While substantial efforts have been made to increase graduation rates nationally, less attention has been paid to strengthening programs of study. Few student success reforms promise to be as effective or enduring as maximizing the likelihood that most or all programs lead to outcomes that make investing in college worth it for students and their families.

Evidence shows that programs need to be strengthened in both baccalaureate transfer and workforce fields. In the former category, nearly four out of every 10 associate degrees awarded nationally by community colleges in the 2021-2022 academic year were in "general studies."[1] Research suggests that few of the nearly 325,000 community college graduates with such generalized degrees would have secured a well-paying job immediately after community college. Furthermore, analysis of National Student Clearinghouse data shows very low bachelor's completion rates among these graduates, suggesting that many of their credits did not transfer into a bachelor's degree program. Students who graduated with associate degrees in a pre-major field attained bachelor's degrees at much higher rates.

While there are no comparable national data on workforce programs, the Aspen Institute College Excellence Program (Aspen) and the Community College Research Center (CCRC) have been working closely with 10 Unlocking Opportunity colleges and have collected data on 1,081 workforce programs. We found that 521 (48 percent) of workforce credentials were in fields that, on average, lead directly to jobs that pay at least a regionally adjusted living wage. That means many workforce programs at these colleges are not enabling graduates to secure well-paying jobs. In short, regional labor markets value some credentials more than others, and not everyone has an equal opportunity to complete a high-value workforce credential. For example, women, Black, and Hispanic students are underrepresented among graduates in high-value fields like engineering technology, computer and information technology, and industrial technology and trades.

Among students in workforce and transfer programs (and those who are undecided), six out of 10 report that advancing their careers to support themselves and their families was the primary motivation for enrolling in community college. Yet, these same students are less likely to believe their education helped them achieve their desired outcomes compared to students who enrolled for other reasons. Confidence in the value of attending college is likely even lower for those who do not complete a credential. For community colleges, strengthening the value of the education they offer will allow them to demonstrate to current and prospective students that higher education is worth the time and money. Doing so could help bring back community college enrollments, which declined substantially between 2010 and 2020 (even before COVID-era losses).

[1] In this guide, "general studies" refers to catch-all programs for students who do not have clear transfer or career goals. At some colleges, this is also called "liberal studies," which should not be confused with distinct liberal arts tracks connected to specific majors that are part of strong transfer pathways.

To begin maximizing the post-completion value of their offerings, community colleges need to first analyze data on the status quo. At a high level, this means examining program outcomes related to the two destinations most community college students aim toward: a good job in their service area labor market and a bachelor's degree after transferring to a four-year college or university. Community colleges should ask six fundamental questions:

1) What programs are our students enrolled in?
2) What programs are our students completing?
3) Among programs aligned directly to the workforce, what jobs do they lead to? Which pay a living wage, and which do not?
4) Among programs intended to lead students into a bachelor's program, which enable students to transfer in their major field of interest with no excess credits? Which lead to higher (and lower) levels of bachelor's attainment?
5) Based on post-completion outcomes, how many students are in high-value workforce or transfer pathways, and how many are in lower-value pathways?
6) Are specific groups of students (by gender, race/ethnicity, income, geography, age, or other factors) underrepresented in high-value programs or overrepresented in low-value programs relative to the college's student body and the community it serves?

To answer these questions, colleges must set standards for wage outcomes and measure workforce programs against those standards. Colleges also must classify transfer programs by the likelihood they will lead to bachelor's degrees and assess enrollments and awards according to that likelihood. This document provides guidance for community colleges on how to do the following:

1. Establish living-wage, middle-wage, and low-wage standards to use when classifying workforce programs.
2. Establish standards for classifying transfer programs into one of two categories—high value or low value—based on a) whether four-year program maps (and individualized education plans) exist and are aligned with the upper-division requirements of the bachelor's program majors students transfer into; and b) the likelihood that completing the programs result in relatively high rates of bachelor's attainment as well as efficient credit transfer and time to degree.
3. Classify student enrollments and awards into one of eight categories based on post-completion value for employment or further education (see chart at the beginning of section 2.1).

The criteria and classifications established in this guide were developed by Aspen and CCRC with input from college leaders.[2] The 10 colleges participating in Aspen and CCRC's Unlocking Opportunity network, as well as leaders in Aspen's Presidential Fellowship program, have tested this classification schema and reported its substantial value in their reform efforts.

[2] The taxonomy for classifying program enrollments and awards by post-completion value was adapted from one developed by John Fink and Davis Jenkins in their 2020 CCRC data analytics publication, Unpacking Program Enrollments and Completions With Equity in Mind.

2. Taxonomy and methods for measuring program post-completion value

2.1. Taxonomy for classifying programs by post-completion value for employment or further education

The table below describes the taxonomy colleges can use to classify programs by their post-completion (employment or transfer) value. Each category includes a definition and example of programs that might fall into the category.

Post-Completion Program Value Category	Definition*
Workforce high value	Programs leading to credentials that enable completers to secure jobs paying, on average, a living wage as defined by a college for its service area using methods and data outlined in section 2.2. *Common examples: Associate Degree in Nursing, AAS-Industrial Mechanics/Maintenance Technology, Long Certificate-Line Worker, most community college bachelor's degrees in career fields*
Workforce medium value	Programs leading to credentials that (1) enable completers to secure jobs that, on average, pay more than the prevailing wage for low-skill work but less than living wages and (2) provide opportunities for learning and advancement on the job that, together with further education/training, can serve as stepping stones to living-wage jobs in the same field. *Common examples: Long Certificate-Licensed Practical Nurse, Long Certificate-Welding, Long Certificate-Emergency Medical Technician, "fast-start" short-term, career-ladder training programs in high-demand, high-paying fields like construction, energy technology, advanced manufacturing*
Workforce low value	Programs leading to credentials from which completers are generally only able to secure jobs that, on average, pay the prevailing wage for low-skill work and that do not provide opportunities for advancement in the same occupational field without extensive further education or training. *Common examples: Certified Nurse Assistant, AAS/Certificate-Culinary, AAS/Certificate-Cosmetology, AAS Veterinary Tech*
Workforce upskilling	Programs that help completers develop and document skills of value in the labor market (such as through industry certification) but may not by themselves (i.e., absent degrees or job experience) enable students to secure or advance to better-paying jobs.

	Common examples: Short Certificates-MS Office, Short Certificate-Project Management, micro-credentials or badges
Competitive admission pre-selection (for enrollment analysis only)	Program tracks in which students seek to satisfy special requirements and compete for admission into selective, limited-access programs, such as nursing, respiratory therapy, and surgical tech. Typically, most students on these tracks will not be admitted into their program of choice and are not guided into alternate program paths that lead to living wage jobs or transfer in a major and bachelor's attainment. *Common examples: pre-nursing, pre-respiratory therapy*
Transfer high value	Associate degree programs that enable students to transfer all or most of their credits toward a bachelor's degree in a specific major field. Students are in such a program if they have an individualized plan based on maps created in consultation with four-year institutions (or community college bachelor's programs) that enable them to transfer and apply their community college credits toward a bachelor's in their major field of interest at the receiving institution without retaking courses for the given major. *Common examples: Associate Degree in Nursing; AS-Biology; statewide pre-major transfer associate degrees, such as California's Associate Degrees for Transfer, Ohio's Guaranteed Transfer Pathways, and Washington's Associate in Science-Transfer; and field-specific Direct Transfer Agreements (but not the general studies DTA)*
Transfer low value	Associate degree programs whose completers are often not able to transfer all or most of their credits to their specific major fields (as opposed to elective credits), resulting in students who transfer having to take or retake more courses or credit hours than required for a bachelor's in their major field of interest. These programs typically do not have program maps enabling efficient transfer in a specific program of study. *Common examples: AA-general studies, AA-general business*
Other low value	Programs leading to credentials that do not clearly enable completers to advance to better jobs, build workforce or academic skills, or advance efficiently (or at all) to a bachelor's degree program. *Common examples: certificates in general studies, GED*
Unclassified (for enrollment analysis only)	Programs whose value for employment or further education is not clear or (for program enrollment analysis) students who are not currently in a program. *Common examples: Transient students who enroll just to take individual courses, degree-seeking students who have not yet decided on a program or major, and high school dual enrollment students.*

***Note:** The post-completion labor market value of selected credentials will vary based on the labor markets and cost of living in a college's services area. The program examples used above were based on*

a tool CCRC developed using IPEDS data to monitor awards given annually by public 2- and 4-year institutions along with their associated earnings (to reference, see Tab 2: "Awards and Earnings by Program").

A final consideration for the taxonomy above: While we recommend that colleges not deviate from the *definitions* provided for each category, they may want to alter the *names* of categories. In testing, some college leaders found that renaming categories with words such as "opportunity" (e.g., workforce high-opportunity) or "outcomes" (e.g., transfer low-outcomes) rather than "value" (e.g., workforce low-value) reduced concerns among staff, faculty, and administrators that their programs were being harshly judged. In other colleges, leaders addressed these concerns by carefully explaining the goals of program classification, highlighting its economic focus, and emphasizing the student-centered objective. In short, college leaders should carefully consider how communications around each category—including the name—may be viewed by college faculty and staff.

2.2. Classifying workforce programs by setting wage standards

As indicated in Table 2.1, colleges can classify workforce programs into high-, medium-, and low-value categories based on the earnings and advancement opportunities of jobs graduates typically secure upon completion.

To do this, colleges need to conduct localized labor market research to establish several values:

1. A living-wage standard, above which average earnings among graduates signify high-value programs;
2. A low-wage standard, typically defined as the earnings of regional low-skill, low-mobility jobs, or the typical earnings for high-school graduates;
3. A middle-wage range, typically defined as the earnings of middle-skill jobs that pay substantially more than typical low-skill, low-mobility jobs but do not reach a living wage. *NOTE: See Table 2.1 for examples of programs in each category. Table 2.1 also includes workforce upskilling programs, which are designed for incumbent workers seeking to improve or document skills in their field, and generally do not lead to a new job or improved earnings.*

Establishing these thresholds will require college leaders to exercise judgment that accounts for factors in their service area such as available jobs and wages in the local labor market, the cost of living for individuals and families, and the demographic makeup of the population. Regarding the cost of living, college leaders should consider how local costs of housing, food, transportation, health care, child care, and taxes (among other factors) may impact the living wage standard in their region. Colleges may choose to estimate these costs for an individual (one adult). If a college enrolls a sufficiently high proportion of parents (as many do), it may consider setting higher wage thresholds based on their typical students' family size (e.g., one adult and one child).

To inform their cost of living estimates, colleges may want to consider several sources:

1. Massachusetts Institute of Technology, Living Wage Calculator—This living wage model uses a market-based approach that draws upon geographically specific expenditure data related to a family's likely minimum costs for food, child care, health insurance, housing, transportation, and other necessities (e.g., clothing, personal care items, etc.).
2. The Economic Policy Institute, Family Budget Calculator—The EPI family budgets consist of seven components: housing, food, transportation, child care, health care, taxes, and other necessities.
3. Georgetown Center for Education and the Workforce "Good Jobs" standard.
4. U. S. Department of Housing and Human Services, Federal Poverty Guidelines (Typical benchmarks include 100%, 150%, and 200% of the Federal Poverty Guidelines)—DHHS' estimate of the minimum earnings required for families to not live in poverty in the United States.

While a living wage provides a reasonable starting point to assess high-value, medium-value, and low-value workforce credentials, colleges may also consider other information about regional wages and employment opportunities. Common thresholds for low-value programs may be the regional minimum wage or a regionally adjusted poverty threshold.

For all jobs that offer less than a living wage in their region, colleges should assess whether they have the potential to enable mobility with more training (but without extensive further education). For these assessments, Lightcast offers estimates of the minimum education required for entry-level positions, as well as the number of jobs available in select regions.

Common data sources that colleges can use to establish middle- and low-income thresholds are:

1. Lightcast (paid service/requires subscription)
2. The U. S. Census Bureau (Current Population Survey, American Community Survey, LEHD, QCEW, etc.)
3. The U.S. Department of Labor's O-NET
4. Postsecondary Employment Outcomes (PSEO) (state sites vary)
5. State or regional analyses of labor market demand for jobs, with associated earnings
6. Unemployment insurance wage records

To measure earnings among those who have completed a college credential, colleges will need to consider several factors. Earnings will vary based on local economic conditions and the characteristics of the employer and individual. Additionally, employment and earning averages may mask variations among graduates. Many colleges have found that one or more employers are paying some graduates from low-value programs substantially higher wages than the average for all graduates. As a result, colleges should try to develop methods for measuring the typical earnings of graduates, including surveying students to assess variations among graduates.

2.3. Methods for identifying high- and low-value transfer-oriented college programs

Classifying transfer programs requires several layers of evaluation. Colleges should consider transfer programs to be high-value if they enable students to apply all or most of their community college credits toward a bachelor's degree in their major field of interest (see Table 2.1). Research indicates students are more likely to transfer and earn a bachelor's degree with fewer excess credits if they follow a structured, pre-major curriculum that includes the right lower-division courses for their intended major. Studies also indicate that associate of arts degrees in general studies (the most common associate degrees community colleges award nationally) frequently do not enable students to apply many of their community college credits toward bachelor's degrees in particular major fields of study. Graduates of these and other transfer programs not aligned with specific major fields often take many more credits than they need for a bachelor's degree. Unless students get help developing a plan that shows them which courses will apply toward their major field of interest, these transfer programs should be considered "low value."

Accordingly, to assess transfer programs, community colleges should follow the steps below:

> **Step 1:** Assess which transfer programs have maps that align curricula from entry at the community college to completion of a specific major at a four-year college or university where students most often transfer. These maps should be developed in collaboration with four-year bachelor's programs and institutions.
>
> **Step 2:** Conduct one or both of the following analyses: a) Use National Student Clearinghouse data to examine what percentage of students who finish each associate degree transfer program complete their bachelor's degrees within two, three, and four years after transfer and what percentage subsequently attain a bachelor's degree; and/or b) work with major transfer partners to examine bachelor's completion rates as well as time and credits to bachelor's degree completion for students who transfer from the community college.

If a college already works with transfer partners and program leaders to develop and regularly update clear program maps aligned to bachelor's degrees in specific majors, it has taken an essential step toward ensuring its programs are "transfer high-value programs." However, community colleges should not assume that developing clear program maps aligned to specific majors and four-year destinations will necessarily result in strong transfer and bachelor's attainment outcomes. A good way to ensure students' credits will apply to bachelor's programs in their field of interest is to help all students who intend to transfer develop an individualized plan based on maps for their intended transfer program at their destination university—and to monitor students' progress on these plans. If a college *has not* mapped its programs to specific transfer universities and majors, this should be a priority.

Even community colleges that have developed clear four-year program maps often still find weaknesses in both transfer and bachelor's attainment rates. To verify whether programs that have clear maps are

effectively serving students, colleges should regularly examine transfer outcomes through the analyses described in Step 2 above.

TOOL:	Here is a data analytics guide to using National Student Clearinghouse data to assess transfer outcomes.

Finally, colleges should aim to measure whether students can successfully apply credits toward bachelor's degrees, ideally in their desired program of study. One approach is to ask primary university transfer partners to compare and report back each year (1) the total number of credits earned (including those at the community college and four-year institution) by students who transferred from the college and went on to earn a bachelor's degree with (2) the total credits earned by those who started at the four-year partner as freshmen and earned a bachelor's degree.

3. Mapping student enrollment by post-completion value

Once colleges have determined each program's classification, the next step is to apply them to data on the students enrolled in those programs, as well as to the awards granted the previous year. These analyses can enable colleges to understand how many students are enrolled in, and graduate from, high-value versus low-value programs and whether enrollment and graduation in high-value programs represent the student body and communities the college serves.

Aspen and CCRC, in partnership with ASA Research, developed an Excel-based tool to help colleges we work with do these analyses. That tool is linked below so other colleges can use it or develop their own dashboards using the analyses reflected in this tool as templates. Below, we demonstrate how colleges can use this tool by presenting example data visualizations and illustrating key patterns Aspen and CCRC have identified in national and anonymized data submitted by colleges we have worked with on program-value reform. While the patterns cited will not be present at all community colleges, our experience suggests that some will be present at most colleges engaging in this analysis.

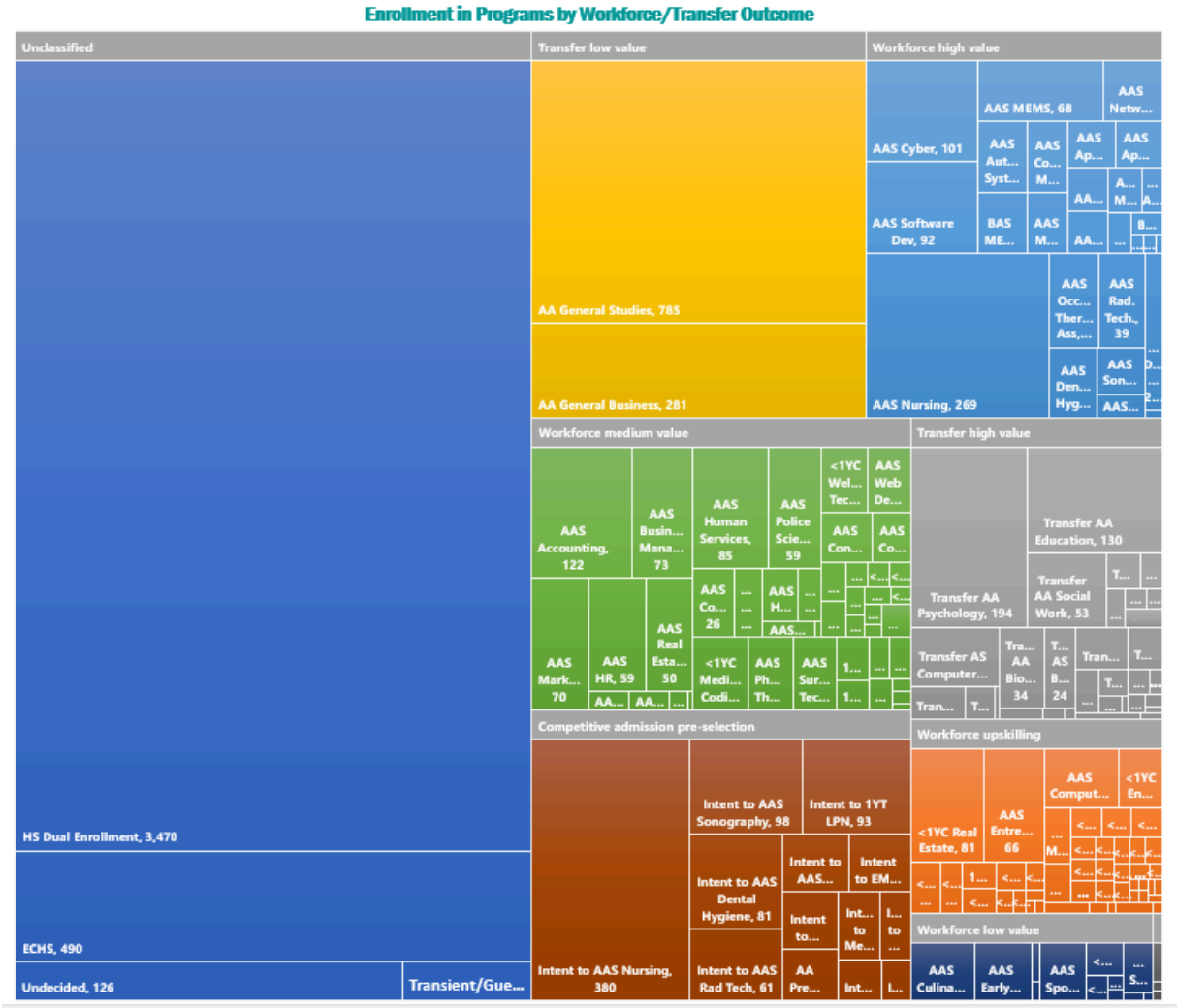
TOOL:	To analyze and visualize college enrollment classified by post-college outcomes, use this tool and related inquiry guide.

First, college leaders should view the big picture. Treemaps, such as the one in Figure 3.1 below, provide a snapshot of the proportion of a college's students enrolled in higher- versus lower-value programs. Each rectangle is proportional to the share of enrollees in the given program and program value category. Similar visualizations can be made using program award data.

In this example, several common data patterns stand out. First, nearly 1-in-10 of this sample college's 9,400 credit program students are enrolled in associate of arts in general studies, visible on the chart in the yellow rectangles on the top middle area of the treemap. This program track tends to be a catch-all into which many colleges place students who do not have clear transfer or career goals. General studies

programs are classified as "transfer low-value" (yellow rectangles) because they do not prepare students to transfer into a specific bachelor's major program, which means students are likely to spend time and money on credits that do not apply to their degree. These programs also do not typically confer strong earnings potential in the labor market. The sample college also has a substantial number of students in an associate of arts in general business track. These also are indicated as transfer low-value because they often do not prepare students to transfer to specific business majors and have relatively weak labor market value because they are not aligned to specific jobs (in contrast to, for example, an AAS in accounting technology program). These transfer low-value programs are distinguished from transfer high-value programs (gray rectangles), which the college has worked with university partners to map to specific bachelor's degree majors.

Figure 3.1 Enrollment in programs by post-completion value



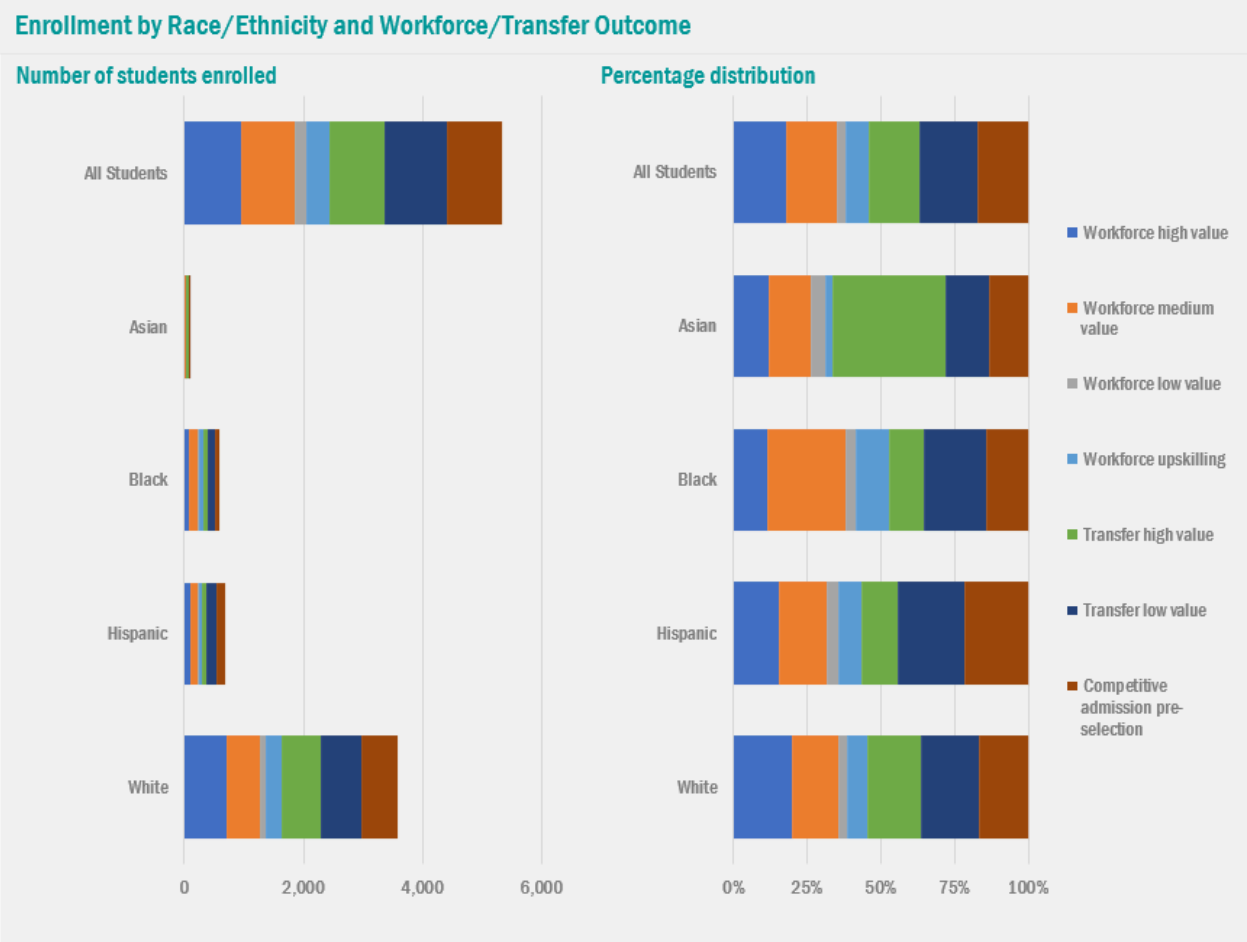
Most students enrolled in this college's workforce or career-technical programs are in high-value programs (lighter blue rectangles), which are associated with average earnings above a living wage, or medium-value programs (green rectangles), which, on average, enable graduates to secure jobs that pay near a living wage and, with further training, can serve as stepping stones to even better-paying jobs with strong career advancement potential. However, some students are enrolled in low-value programs (dark blue rectangles), including culinary arts, early childhood education, cosmetology, and other fields where graduates in this region earn, on average, below a living wage.

Another area that deserves special attention is pre-selective admission program tracks (maroon rectangles). Like many others, the sample college has large numbers of students seeking admission to selective health programs such as associates in nursing, radiologic technology, and dental hygiene. Most of these students will not be accepted into these programs, which are limited in size at most community colleges due to limited clinical slots, difficulty finding qualified instructors, and other factors. Unfortunately, many colleges do not help students who are not accepted or are not on a path to be accepted find other paths to living-wage jobs and college degrees. As a result, most students in pre-health pathways will, in fact, be enrolled in relatively low-value pathways because most are typically denied admission to a selective program.

Finally, like most community colleges nationally, this college enrolls many high school students in dual enrollment courses. Because dual enrollment students are generally not formally enrolled in a college (students in early college high schools are a possible exception), we identify them as "unclassified" (bright blue rectangles on the left side of the treemap). However, colleges can encourage more dual enrollment students to pursue postsecondary education after high school by helping them explore career and college interests and develop at least a preliminary career and college program plan.

Reviewing overall enrollment patterns by post-completion value is an essential first step, but colleges should also investigate differences in enrollment by student characteristics. Research indicates wide disparities in enrollment in high-value programs by gender, race and ethnicity, and family income. As a next step, college leaders can develop and review charts like the examples shown below to assess whether such patterns exist at their institution (Figure 3.2). (Note that in this figure, students enrolled in "unclassified" tracks have been removed to facilitate comparison among the higher- and lower-value workforce and transfer categories.) The left panel shows the number of students overall and by subgroup (race/ethnicity is illustrated in this version) enrolled in programs organized by post-completion value. The right panel shows the percentage distribution of enrollments across the program value categories for students overall and by subgroup.

Figure 3.2: Summary of program enrollment by post-completion value and race/ethnicity

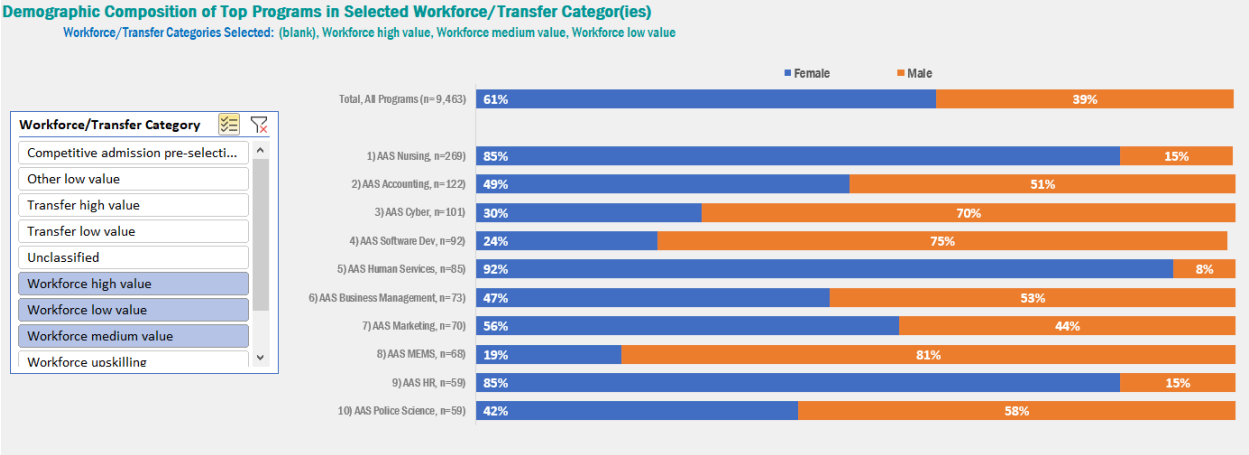


The sample college whose enrollments are reflected in the chart above shows disparities in enrollment by racial groups in higher- versus lower-value programs. Black and Hispanic students are underrepresented in high-value workforce programs and in high-value transfer programs. White students are overrepresented in both high-value workforce and transfer programs, and Asian students are overrepresented in high-value transfer programs. Similar disparities across colleges generally are well documented in research showing that white and Asian students are more likely to enroll and stay in high-value STEM programs than their Black and Hispanic peers, with Black and Hispanic students overrepresented in programs such as social work and early childhood education with high social value but low wages.

To better understand these demographic disparities, colleges can conduct a more granular analysis of enrollment by student subgroups in specific programs. The data visualization and table below (Figure 3.3) show the breakdown of students by gender enrolled in the sample college's 10 largest workforce programs compared to the overall enrollment at the college. The table at the bottom of Figure 3.3 provides details on the number and gender breakdown of students enrolled in each workforce program

and shows the percentage point difference for specific groups (in this example, female students) between those enrolled in the program and enrolled at the college overall.

Figure 3.3 Enrollment in top 10 workforce programs by post-completion value and student gender



Data Notes

- Percentage Point (pp) Over-/Underrepresented: Larger, positive (pp) values indicate students are overrepresented in this program compared to all programs. Similarly, larger negative values indicate students are underrepresented in this program.
- Representation in This Program Compared to Overall: Ratio of student representation in this program compared to all programs (e.g., student group represents 40% of students in this program compared to 20% of students overall = ratio of 2, or 2x representation).

Examine Over-/Underrepresentation Select Student Group:				Demographic composition (% of program enrollments from a certain group)		
Female			Enrollment Count	Female	Male	Other
Percentage Point (pp) Over-/Under-represented	Representation in this program compared to overall	Total, All Programs	9,463	61%	39%	0%
		Enrollments by Program				
24.1pp	1.4x	AAS Nursing	269	85%	15%	0%
-11.4pp	0.8x	AAS Accounting	122	49%	51%	0%
-30.9pp	0.5x	AAS Cyber	101	30%	70%	0%
-36.7pp	0.4x	AAS Software Dev	92	24%	75%	1%
31.1pp	1.5x	AAS Human Services	85	92%	8%	0%
-14.1pp	0.8x	AAS Business Management	73	47%	53%	0%
-4.9pp	0.9x	AAS Marketing	70	56%	44%	0%
-41.5pp	0.3x	AAS MEMS	68	19%	81%	0%
24.1pp	1.4x	AAS HR	59	85%	15%	0%
-18.3pp	0.7x	AAS Police Science	59	42%	58%	0%
3.4pp	1.1x	AAS Real Estate	50	64%	36%	0%
-8.5pp	0.9x	AAS Culinary Arts	46	52%	48%	0%
32.2pp	1.5x	AAS Occupational Therapy Ass	42	93%	7%	0%
39.4pp	1.6x	AAS Early Childhood	41	100%	0%	0%

These sample analyses show enrollment patterns common at community colleges. Women often are underrepresented in high-value workforce and transfer programs in information technology and engineering and overrepresented in most medium- and low-value workforce programs, such as those preparing graduates to be human resources staff, health care aides, or child care workers. In contrast, men are overrepresented in high-value workforce and transfer programs other than in health care. As noted above, colleges often see substantial discrepancies by race and ethnicity as well.

Taken together, these analyses can provide college leaders with clear information about how many—and which—students are enrolled in high- versus low-value pathways. After conducting these analyses and reviewing them carefully, college and program leaders can set goals for improving the mix

of program enrollments and develop targeted strategies for increasing enrollment in high-value programs while reducing enrollment in programs with low post-completion value overall and for specific student groups.

4. Conclusion

By completing the steps outlined in this guide, colleges should be able to meet the following objectives:

1. Establish living-wage, middle-wage, and low-wage standards to use when classifying workforce programs.
2. Establish standards for categorizing transfer programs into one of two categories—high value or low value—based on whether students get help developing individualized education plans aligned with the upper-division requirements of the bachelor's major program they intend to transfer into and data on the rates at which students in those programs transfer to four-year destinations, transfer credits efficiently, and complete bachelor's degrees in a timely manner.
3. Classify all college programs and program tracks into one of the categories (described in Section 2.1) based on post-completion value for employment or transfer and bachelor's attainment.
4. Classify program enrollments by post-completion value. (Colleges can use a similar approach to classify program awards.)
5. Identify where particular groups of students are underrepresented (relative to the college's service area population or the overall student body) in higher-value workforce or transfer programs, or overrepresented in lower-value programs.

The analytic work described in this guide is a foundational step that can help colleges strengthen programs so more students experience post-completion success and, ultimately, strong value from their community college education. From this foundation, colleges will be able to incorporate into their strategic deliberations 1) an understanding of which programs are expanding economic and education opportunities for students (and which are not); 2) a set of targeted, high-value workforce and transfer programs in which they aim to increase enrollments and graduates, including for student groups underrepresented in those programs; 3) a selection of lower-value programs they aim to strengthen over a set period of time or reduce/eliminate enrollments in; and 4) the identification and scope of new programs needed to provide students new opportunities that lead to living-wage jobs in their communities.

By conducting these analyses annually, colleges can assess whether efforts to strengthen programs and shift enrollments have the intended effect: increasing enrollment and completion (both for the overall population and for underserved students) in higher-value programs college-wide while decreasing enrollments in lower-value programs. Finally, it is important to recognize that colleges conducting these annual analyses should regularly revisit regional conditions to ensure wages and jobs accurately reflect the economic opportunities various programs offer their students.