‹   Education Policy

How to Use Data to Improve Non-Degree Workforce Programs at Community Colleges

The third in a three-part series from New America's New Models for Career Preparation Project.

BRIEF

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By **Shalin Jyotishi** and **Iris Palmer**

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affordable pathway to a good job, and, more importantly, a career that offers economic security—they represent the future of education. But for others, non-degree programs are a hyped-up distraction from degree attainment that leads to unemployment, underemployment, or employment in poverty-wage jobs with limited advancement opportunities—particularly for Black and brown learners.

This project aims to help unlock the full potential of non-degree workforce training, especially at public community colleges where these programs are commonly found. In 2019, the Center on Education & Labor at New America (CELNA) launched the **New Models for Career Preparation Project**, a research and storytelling initiative to build a better understanding of non-degree workforce education and identify common characteristics of high-performing programs, including the design, financing, and strategy principles that go into creating high-quality non-degree workforce programs at community colleges. Many of these principles will also be relevant to universities, nonprofits, and even companies offering such programs.

Over the past three years, we studied literature in the field to synthesize, develop, and validate a concise **quality framework** for non-degree programs at colleges. Then, we partnered with 12 colleges in two rounds of research to study what goes into quality program design.

six high-quality, non-degree programs at Brazosport College, Dallas College, Miami Dade College, Monroe Community College, Mesa Community College, and Bates Technical Colleges.

- In **cohort two**, we zoomed out to study the institutional structures that enable a community college to excel at non-degree workforce education. We chose six colleges committed to prioritizing workforce development: County College of Morris, Tidewater Community College, Des Moines Area Community College, Mott Community College, Lone Star Community College, and Sacramento City College.

We conducted site visits at each college to understand what works—and what doesn't—when creating non-degree programs. We collected data on colleges' best-performing programs and conducted extensive research on the work of dozens of peer organizations, academics, and researchers to ensure that we were adding to the field's understanding and, more importantly, the adoption of quality non-degree program development principles.

With both program and institutional levels in mind, we wrote this three-part series to help community college leaders—mainly presidents, provosts, and workforce leaders—better *plan*, *deliver*, and *improve* high-quality non-degree workforce programs.

We hope these briefs serve as valuable resources for the field—and we know that our work

How Colleges Should Use the New Models Brief Series to Enact Change

This brief is the third in a three-part series that focuses on creating non-degree workforce programs:

1. **How to Plan for High-Quality, Non-Degree Workforce Programs:** This brief describes approaches and strategies that colleges should use in deciding whether and how to offer a workforce program.

2. **How to Deliver High-Quality, Non-Degree Workforce Programs:** This brief describes approaches and strategies colleges should use in administering a successful program.

3. **How to Use Data to Improve Non-Degree Workforce Programs:** This brief describes data collection and data-driven continuous improvement strategies colleges should use regularly.

Community college leaders bring decades of expertise to their work, drawing from their own experiences and national best practices. We hope that this collection of briefs will help these leaders with practical examples that will inspire both institutional and program-level changes necessary to maximize the impact of non-degree workforce training.

to help colleges maximize the benefits of non-degree workforce programs while mitigating the risks to students, institutions, employers, and the economy as a whole.

Adequate financing is critical to these programs, so together with our partners, we also recommended **innovative strategies for financing non-degree programs** to help colleges plan for and fund these programs.

Five Criteria for Building Quality Non-Degree Workforce Programs

We reviewed the literature on program quality and met with hundreds of colleges, employers, policy leaders, workforce and economic development professionals, philanthropy officers, and academics to help us synthesize five criteria for identifying quality non-degree workforce programs:

1. **The program leads to quality jobs with strong labor market outcomes.** The program, or ideally the college, must have a way of showing that it leads directly to in-demand jobs that provide at least the local living wage (typically defined by using the **United Way's ALICE** or **MIT's Local Living Wage tool**) with a baseline of **quality attributes** such as paid leave, health insurance, retirement options, lower automation susceptibility, a safe

2. **The program advances equity and diversity in occupationally segregated jobs.** The program should have concrete goals and indicators of success for diversifying occupations of focus by race, gender, and other attributes.

3. **The program opens doors to advanced credentials or degrees.** The program lends itself to lifelong learning by providing graduates with credit that can count towards future advanced credentials or a process to articulate non-credit programs for college credit.

4. **The program is affordable.** The program should result in no more than a reasonable average student debt load and/or be accompanied by financial aid eligibility: Pell or other federal aid, state aid, employer financial aid, and learn-and-earn opportunities.

5. **The program has strong completion rates.** The program has a respectable completion rate and a strong pass rate for occupational licensure or industry certification exams, if applicable.

Overview

equitable. Unfortunately, community colleges, especially their workforce development units, face significant barriers to using data to evaluate success.

The federal government and most states do not systematically collect outcomes data for non-degree workforce programs at community colleges, especially not for programs offered in the non-credit format.[1] Colleges operate in an increasingly resource-constrained environment with growing expectations and limited staff bandwidth, expertise, and technology to collect and use outcomes data appropriately.

In recent years, as the student success narrative in higher education policy has evolved from an emphasis on program completion to employment outcomes, many organizations and academics have dedicated substantial resources to study, develop, improve, or advocate for federal, state, and college-level solutions to collecting and using program-level outcomes data.

Community college associations such as **Achieving the Dream** have built a robust set of activities to help college administrators strengthen data, technology, and analytics capabilities. Policy and research organizations like **New America**, the **National Association of College and Employers**, the **Institute for Higher Education Policy**, and **many others** have studied and argued for systemic fixes to help all higher education institutions better use program-level outcomes data.

and Education Survey (ATES) and the upcoming National Adult Training and Education Survey (NATES) survey. Debate among lawmakers around performance-based funding and the federal gainful employment rule have drawn attention to program-level outcomes data.

Formal federal initiatives, such as the **U.S. Census Bureau's Post-Secondary Educational Outcomes Project (PSEO)**, have matured, providing many stakeholders earnings and employment outcomes for college graduates by degree level, degree major, and postsecondary institution. As of July 2022, 23 states have signed data-sharing partnerships with the U.S. Census Bureau to track employment outcomes for degree programs and seven of those states include outcomes data for certificate programs. At the state level, higher education systems in Texas, Pennsylvania, Minnesota, and beyond have sought to link student record data to **Unemployment Insurance (UI) Wage Records**, which consists of employer information alongside an individual's identifying information and wages.

While many of these efforts have focused either on four-year institutions or on generating outcomes data for degree programs and credit-bearing academic certificates, there has been steady progress in helping community colleges use data to drive decision-making for workforce programs as well.

help improve outcomes for their students, and that is the topic of this final publication in New America's New Models for Career Preparation brief series.

Collecting the Right Data to Ensure Quality Outcomes

In the planning and delivery of quality non-degree programs, as discussed in New Models **brief 1** and **brief 2**, colleges should have defined success and identified specific goals for their programs that align with the five quality criteria summarized above. **Figure 1**, below, juxtaposes outcomes data with the quality criteria.

Data are especially critical to ensure equitable program outcomes. Outcomes data should be broken out by factors like age, race, gender, socioeconomic status, and parameters such as veteran status or whether the student is returning to higher education or is a first-time credential earner.

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Figure 1. Program Quality Criteria and Corresponding Outcomes Data

Non-Degree Program Quality Criteria	Outcomes Data Needed
Program must lead to quality jobs with strong labor market outcomes.	Track graduate: • Employment rate (e.g., three months; second quarter). • Occupation and industry. • Starting wages. • Job quality/benefits (e.g., paid leave, health insurance, retirement plans, stable/adequate work hours, chance for promotion).
Program must improve equity and diversity in occupationally segregated jobs.	Track how graduates compare with those employed in the occupation in the region—more diverse or less? How do labor market outcomes compare by race and gender (e.g., placement rates, starting salary, and benefits packages).
The program must open doors to advanced credentials and degrees through stackability.	Track interest from graduates and from employers in terms of future training needs that builds on the program. This outcome is the most difficult to gauge, especially in the short term. Stackability may exist in principle but not in practice. Graduates may not want an additional credential for years after finishing a given program. Some will not need or want further education. However, if program leaders design for stackability, as we recommend, then they should try

strong completion rates.   for any applicable licenses or certifications.

Program Improvement Process

For a systemic approach to program improvement, colleges need a process to collect, organize, and use data from faculty and staff working in institutional research, workforce development, academic programs, communications, student affairs, and beyond.

In his book *Getting Things Done*, productivity author David Allen outlines a framework for moving from strategy to execution. **Figure 2**, below, is based on that framework and outlines three steps for using data to drive program improvement.

The first step is to understand what outcomes data need to be collected, how, by whom. The second step is to clarify who will sort, analyze, and organize the data. The final step focuses on the use of the data for the purposes of program improvement.

Figure 2. Program Improvement Process

Steps	Guiding Questions	Considerations
Collect: Someone at the college must be explicitly responsible for collecting outcomes data by surveying, interviewing, or using state/federal sources for data collection.	• What outcomes data are needed? • How will that data be collected? • Which staff members are responsible for collecting non-degree program outcomes data?	Once a collection protocol has been designed with institutional research, typically, the workforce units closest to students and employers will be best positioned to gather outcomes data, especially if the college is relying on surveys or interviews.
Organize: Once data have been collected, someone at the college must be responsible for organization, cleaning, and translating it into actionable data tools, dashboards, or reports.	• Who will sort and organize outcomes data? • Are data visualization tools needed, to create charts, graphics, videos, or interactive media? • How should dedicated staff organize outcomes data so it is useful to the rest of the college? Charts? Spreadsheets? Short reports?	Typically, institutional research will have the right skill set for organizing data. Data visualization can be a useful tool. Tableau has a free public offering, and Microsoft Power BI, DataWrapper, and Google Data Studio are other popular and low-cost data visualization tools.
		In contrast with program launches, which usually come with press

Staffing Data-Driven Program Improvement

Colleges should know how decisions about program improvement are currently made and identify how outcomes data can be used to support each part of the decision-making process.

staff, leadership, and external stakeholders including lawmakers, funders, college systems and districts, and employers.

- How will responsible staff be held accountable? How will they be rewarded for improvement?

are in place to recognize the value of program improvement, particularly for non-credit, non-degree programs that may fall outside existing accountability and incentive frameworks.

Our research has suggested that colleges should avoid siloing all the steps described above within institutional research because most research offices are already fully occupied with compliance issues. A cross-functional staffing approach helps ensure that all senior leaders and relevant decision-makers are complementing their personal experiences with data.

To accomplish this goal, most colleges will require staff to upskill. For example, **Lorain County Community College** is **offering "Local Econ 101"** to advising and career services staff to help them become conversant in regional economics, including the labor market. At **Montgomery Community College** in Maryland, various employees are **required to take data ethics training** to think about how student data should be handled.

Staff adjacent to the program improvement process can also make use of outcomes data when writing grant proposals, advocating with state lawmakers, and building marketing campaigns and social media content.

State-Level Data Collection

Ideally, states and community college systems will systematize the collection and use of program-level outcomes data. States and state systems should also support colleges in organizing and using data, as we will describe below through two examples from California and Wisconsin.

The **California Community College system** built a **database called LaunchBoard** to track employment and earnings outcomes for the state's 115 community colleges and it followed up that investment with capacity-building grants and technical assistance to help college personnel learn how to effectively use outcomes data. LaunchBoard links **UI wage records to student-level data**, allowing every college in the system to match qualitative data and anecdotes with quantitative outcomes data. In 2016, when California created the Strong Workforce Program, a multi-million dollar investment in workforce education, the **San Diego Imperial Counties Community College Regional Consortium** used LaunchBoard to **track and report outcomes metrics** and drive improvement for programs supported by Strong Workforce dollars. Colleges like **Miracosta College** also used the data to better direct money from federal Perkins grants towards the best performing programs.[2]

Colleges have the incentive to call, text, and email students to obtain responses to the survey due to the **state's outcome-based funding incentive** structure, a strong alignment of state policy and action at the system level.

GRADUATE OUTCOMES SURVEY

Please check one answer.

1. How do you feel about the training you received at our school?
   o Very Satisfied
   o Satisfied
   o Unsatisfied
   o Very Unsatisfied

2. What was your primary reason for attending our school?
   o Preparation for getting a job
   o Career change
   o Improvement of existing job skills
   o Preparation for further education
   o Personal interest
   o Other: _____

3. Which **one** of the below best describes you?
   o **I am employed** (I may also be taking courses, but my job is my main focus).
   o **I am a student** (I may also have one or more jobs but attending school/college is my main focus).
   o **I am not employed** but am looking for a job.
   o **I am not employed** and not looking for a job.
   o **I am on active duty in the military.**

   NOTE: If you are currently employed or in the military, please continue with Question 4. If not, please stop here.

4. When did you start working in your present occupation?
   o Before enrolling at our college

6. Please list the following job information:
   A. Job Title:

   _____

   B. Name of employer:

   _____
   Company or Firm

   Work address:

   _____
   Street

   _____
   City, State, Zip

   Name of immediate supervisor:

   _____
   First name   Last name

   C. What is your present wage, BEFORE DEDUCTIONS? DO NOT INCLUDE OVERTIME. Please give one:

   $_____ Hr $_____ Wk

   $_____ Mo $_____ Yr

   D. How many hours do you work during an average work week?

   _____ Hours per week

Source: Wisconsin Technical College System's 2021 Graduate Outcomes Survey,
https://www.wtcsystem.edu/impact/publications/graduate-outcomes-report/.

The survey is administered at colleges or contracted out to collection centers. Data are collected six months after graduation. Institutional research staff members often visit classrooms to tell students about the importance of completing the survey, and colleges use the outcomes data to inform program improvement, marketing, advocacy, and any other need in which outcomes data are useful.

The survey also asks students to voluntarily offer supervisors' mailing addresses and contact information, so that the college can also survey employers. In addition to the six-month surveys, the system also conducts **five-year follow-up surveys** and even an **outcomes survey** specific to apprenticeships.

Community colleges can also rely on state workforce agencies for information about non-degree program outcomes. Many state and local workforce boards collect data on program-level outcomes of providers on the eligible training provider list (ETPL). In our research, many colleges report challenges in obtaining this information from workforce boards, but it can be done. A good example is Washington State's CareerBridge website, which New America has used to **analyze short-term programs in the state**.

System example described above, that means surveying students or collecting outcomes data from employers.

There are obvious limitations to surveying students about their workforce outcomes, but some data are better than none and the data can improve with time. Many specialized accreditors and the federal Perkins program already require it, so colleges likely have a baseline from which to build out data collecting for non-degree programs.

Colleges could require exit surveys, for example, as the final task in the final course of a program. This approach would also allow colleges to ask students for program feedback and how the college could support them after graduation, including interest in stackability.

Mott Community College uses a software system to track data related to employment for all non-credit workforce programs. Mott's efforts-to-outcomes system allows the college to send a monthly follow-up to graduates for up to one year after employment. Information about program graduates' employers and graduates' job titles, start dates, pay rates, and benefits is collected.

A less targeted but worthwhile approach would be to ask marketing and communications offices to share outcomes surveys via social media and outreach channels to solicit feedback from graduates. Most colleges have social media platforms, newsletters, alumni

Colleges could also obtain student outcomes data directly from employer partners. As described in New Models **brief 1** and **brief 2**, programs should be created with substantial co-creation with local hiring managers. While many employers will be reluctant to share data about starting salaries, placement rates, and benefits packages, it is worth asking for the information in the spirit of continuous improvement.

Colleges that partner with single employers for a customized training program are especially well positioned to include a data-sharing element in their contracts with these employers. **Mesa Community College** and Boeing, for example, partnered for a **credit-bearing, week-long manufacturing boot camp** to address a concrete labor market need. Even for such a short program, Mesa was able to collect critical outcomes data that informed program improvement.

Additionally, tools from private companies such as Lightcast's **Alumni Pathways Program** and **partnership with the National Student Clearing House** have also helped community colleges **derive insights** to inform program improvement, fundraising, marketing, and other efforts.

Employer Outcomes Data

Colleges should ensure that student outcomes are aligned with the stated program goals,

outcomes data described above. The survey is conducted every four years and collects high-level information such as employers' views of the "importance of local technical college" and whether they would "hire graduate again" or "recommend graduate to another employer." The survey obtains an impressive 40 percent response rate. Regularly scheduled employer surveys complement ongoing discussions between college personnel and employers. A copy of the survey instrument can be found on the **Wisconsin Technical College System website**.

Labor Market Information (LMI)

In addition to outcomes data and employer feedback, LMI is a second layer of quality assurance in case there have been shifts from program conception. LMI is an umbrella term to describe all the data a college can learn about its local job market. LMI can be granular (e.g., real-time data about the demand for manufacturing technicians in three zip codes) or general (e.g., projected demand for nurses in a state or region). Not all non-degree programs are short-term, and even if they are, the job market can rapidly change. Checking both outcome data and LMI when improving programs is prudent.

LMI should augment, not replace, insights gleaned from industry advisory committees and other structures to collect feedback directly from employer partners. LMI data points include:

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- Which jobs are growing or declining in demand?

- What is the job's automation susceptibility?

- What specific knowledge, skills, and abilities are in demand; what credentials are preferred; how many years of work experience are required; what will the day-to-day work look like?

- What are the job's expected starting salaries and expected benefits?

Data USA by Deloitte is a collection of publicly available **LMI data** at the federal level. State workforce agencies are **another source of LMI reports**. Popular private LMI vendors include **Lightcast** (formerly Emsi Burning Glass), **Chmura**, and **LinkedIn Insights**. These vendors use methods like scraping real-time job postings or salary data to derive insights about what employers seek, including in-demand skills, industry certifications, and years of experience, among other data.

Some colleges have reported that LMI is less relevant to jobs related to non-degree workforce training because those jobs may not be posted on public job boards. However, we believe that keeping the limitations of LMI in mind, it is worth investing in.

Economic development organizations, chambers of commerce, industry trade

Program Improvement

Feedback from Graduates

The final data point for a strong improvement process is learning from the experiences of alumni. Beyond outcomes surveys, colleges can make use of virtual or in-person town halls, focus groups, alumni advisory committees, or even conversations with graduates led by faculty and staff.

These relationships can help schools understand future education needs and alumni aspirations, which can help them understand how to make stackability a reality, which is another component of our quality framework. Colleges could include alumni on industry advisory committees or other standardized protocols used to hear feedback on workforce programs.

Some colleges may have informal or formal alumni associations, but alumni associations are rarely used strategically for program improvement, especially for non-degree programs. Embedding feedback loops within any college-wide alumni association is another way workforce leaders can gain insights on how to improve their non-degree programs.

equity goals and supporting job quality.

Meeting Equity Goals

Colleges should use student outcomes data to gauge how they are progressing towards their stated equity goals, designed in the planning and delivery stages described in briefs 1 and 2. Colleges should have a sense of the current demographics of the sector they are training for from their LMI. For example, perhaps manufacturing technicians in a college's region are mostly white males, and the college wants to recruit more women of color into those roles. Using enrollment and outcomes data, the college can track if it is making progress toward that goal.

Research from the Joint Center for Economic and Political Studies about the state of Black students at community colleges found that **Black students earn certificates at a higher rate than other groups**. Colleges serious about advancing equity must invest in a way to know what happens to all of their non-degree program graduates. Outcomes data will tell colleges whether or not they are on track.

Advocating for Better Job Quality

Research from New America has highlighted that many short-term, non-degree

race. The relationship between non-degree programs and job quality was addressed in detail in brief 1 but also comes into play during program improvement.

Outcomes and LMI data can be used to advocate for better job quality. If the data suggest graduates are landing jobs with employers that don't offer a livable wage, basic benefits, or a career ladder, colleges will be able to raise the issue with employers, who complain about filling vacancies, or with policymakers, who place too much attention on **the number of jobs in a region, rather than the quality of those jobs**. **Hawkeye Community College**, for example, leveraged **data to push back on employers** who demanded more training programs for prospective workers when, in reality, it was the employers that needed to focus on job quality and retention. Data can help colleges **advance job quality** improvements with employer partners.

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Footnotes

[1] As discussed in **our first brief**, it is a common misconception that all non-degree workforce programs are also non-credit.

[2] Priority-based funding is a good tactic to ensure resources are dedicated to the best performing non-degree workforce programs: **https://www.newamerica.org/education-policy/edcentral/three-innovative-ways-community-colleges-can-fund-non-degree-workforce-programs/**.

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