Industry Ties and Community-College Faculty

The Importance of Real-World Connections

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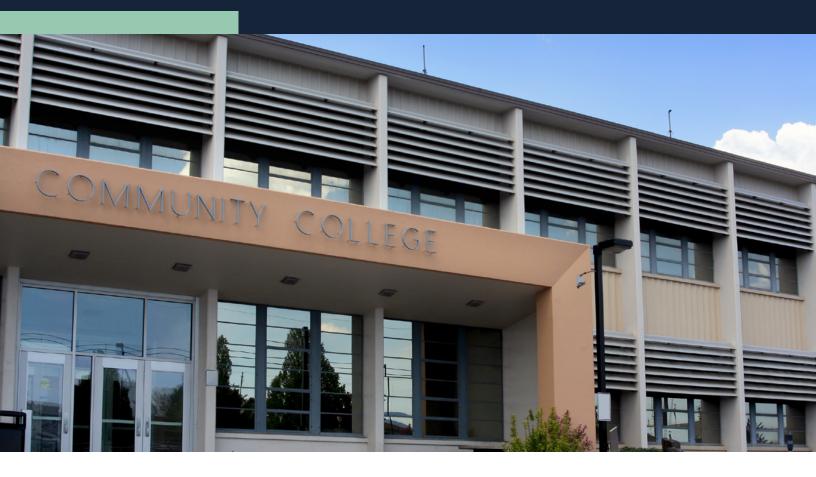## The Importance of Real-World Connections

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Community colleges are at a crossroads.

The Covid-19 pandemic has battered the sector. Enrollment at two-year colleges in the fall of 2021 was nearly 15 percent lower than it had been in 2019, according to National Student Clearinghouse data. California's community colleges — which make up the nation's largest higher-education system — saw enrollment drop by about a fifth in that time frame.

And it doesn't end there. The enrollment drop is a byproduct of a broader crisis in relevancy, says Karen A. Stout, CEO of Achieving the Dream, which supports a network of more than 300 community colleges to close achievement gaps. Stout says that broader skepticism about the value of a postsecondary degree is trickling down to community colleges. Wages right out of high school are "our biggest competitor," she says.

Shrinking numbers of community-college students are a problem. The sector is crucial to filling the nation's skills gap, labor experts and employers agree.

But with pressure comes opportunity. Employers continue to want workers who have tech skills, as well as the ability to communicate, problem solve, and work on teams. And work-force training is central to the mission of community colleges. There are glimmers of hope in this regard: Community-college enrollment is increasing in skilled trades, such as construction management and agriculture. And some states have expanded work-force-training programs at community colleges since the start of the pandemic.

Furthermore, the pandemic has driven unprecedented levels of engagement from faculty members and businesses in creating work-based learning opportunities for students, says Lori Dwyer, vice president for academic affairs at Reynolds Community College, in Virginia. The pandemic accelerated changes across industries — such as culinary, automotive, and technology — and keeping up requires deep engagement and support from faculty members, she says.

It's a shift that higher-education observers and administrators say they have all been feeling. And it's not a bad thing. Community colleges have always been especially attuned to the needs of employers. And faculty members — many of whom are part-time and bring valuable industry experience — are vital to ensuring curricula and courses remain current.

"We're in an era where leaders of our colleges are seeing the centrality of teaching and learning as a lever that they need to invest in," Stout says.

This report will examine why industry-faculty ties matter, how college leaders can foster innovative teaching environments, and what makes faculty-training efforts successful.

Forging Industry Connections

Maintaining close ties to local employers and industry leaders is nothing new for community colleges. It's core to their mission. Ava L. Parker, president of Palm Beach State College, says she sees her constituents as not just the college's students and their families, but also the industries that do the hiring.

Faculty members are often the best positioned within an institution to maintain industry relationships.

Connections to industry help colleges build programs that will provide economic mobility for students. In Florida's Palm Beach County, where the college is located, Parker says that over the course of the pandemic, the average age of residents has declined, more companies have moved in, and the cost of living has risen. That makes a college credential all the more important.

Faculty members are often the best positioned within an institution to maintain industry relationships, and those who come from industry can share their experiences with colleagues. Arizona's Pima Community College, for example, has hired adjunct faculty members from an autonomous trucking company in an effort to respond to a growing industry. And, through industry partnerships and advisory boards, faculty members can learn what employers are looking for, make connections that could lead to work opportunities for their students, and use what they learn to update curricula.

Plus, faculty members often bring connections of their own. At Dallas College, in Texas, many faculty members who leave an industry remain in contact with their former colleagues, says Rod Lamb, chair of the computer-science and cybersecurity department.

Heather Michaels, a physical-sciences instructor at Indian River State College, in Fort Pierce, Fla., completed a postdoctoral fellowship at a biomedical research center in the area. She continued doing research at the center once she took a full-time role at the college, and introduced her students to the center's staff. Plus, she talks to her students about how pursuing careers in health care doesn't have to mean getting a medical degree — they could become organic chemists instead.

"Any faculty member that gives students a different perspective is going to help the students," she says.

Michael A. Baston, president of Cuyahoga Community College, in Ohio, calls on faculty members to help him achieve the goal of making every student "real-world ready." But it's important to remember that faculty members may resist changes that "happen to, rather than through, them."

"The administration is not the holder of every good idea, and neither is the faculty," he says. "There has to be a true and genuine partnership."

> By chopping credentials into smaller, stackable pieces and awarding certificates along the way, community colleges can help students more quickly show employers that they have the necessary skills.

Connections with industry also help colleges deliver the types of courses and credentials students need to succeed.

One area of interest is in short-term, work-force credentials. By chopping credentials into smaller, stackable pieces and awarding certificates along the way, community colleges can help students more quickly show employers that they have the necessary skills, compared to first going through a full degree program.

The spread of certificates helps community colleges demonstrate that they are arming students with marketable skills. And the college's connection to industry makes a difference in the outcome for stu-

dents. A study by the Community College Research Center at Columbia University's Teachers College found "inconsistent positive impacts on earnings" for short-term and long-term certificates. But the study also found that programs that are closely aligned to the labor market "seem to lead to better economic opportunities" than more general programs.

Data on short-term credentials can be hard to come by. The Colorado Community College system, however, hopes to change that. The system will spend $1.3 million in federal funds to create a systemwide non-credit student-information system, *The Chronicle* found.

Paula P. Pando, president of Reynolds Community College, in Virginia, said in a recent *Chronicle* forum that the task for community colleges to consider is how to take those short-term certifications — which may get a student a job but not a career or family-sustaining wage — and show students the value of a full degree.

Ultimately, it's also important that faculty members understand that their role isn't simply to teach — a message deans and associate deans are often best equipped to deliver, says Parker, of Palm Beach State College.

"You can say 'Yeah, but it's my job to just teach, and it's somebody else's job to attract students, and it's somebody else's job to engage with business,'" she says. But it takes an all-hands-on-deck approach — otherwise, too often, program enrollment will decline, and students may struggle to find jobs. Deans can remind faculty that "your decision determines what ultimately happens with the program," she says.

Building an Innovative Culture

t's important that community colleges are places where faculty members feel supported in their pursuits and encouraged to experiment. Some colleges distribute grants to faculty members to further this: In the fall of 2022, Miami Dade College gave grants of $10,000 each to 10 faculty members or faculty teams for projects that will use AI tools in the classroom. In one of the winning projects, students will use AI to explore and design business solutions to environmental, social, and governance issues. Another will combine AI with behavioral science to help students build emotional resilience.

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"If we are driving innovation in our community and work force, we must also propel it within our institution," wrote Madeline Pumariega, president of Miami Dade, in an emailed statement to *The Chronicle*.

Community colleges must appreciate the work of their adjunct faculty members, upon which many institutions rely, higher-education observers and administrators say.

The challenges facing adjunct faculty members across higher education have been well documented: An American Federation of Teachers survey of contingent and adjunct faculty members found that one-quarter of respondents earned less than $25,000 annually, and only 20 percent reported being able to comfortably cover their basic monthly expenses.

Still, the value they bring to community colleges is undeniable. At Reynolds, adjunct faculty bring the most contemporary elements to curricula — and full-time faculty support them in pedagogy, says Dwyer. Another example: At Mesa Community College, in the greater Phoenix area, nine adjunct faculty members are on loan from Boeing to teach a cable-harness-wiring bootcamp. Bootcamp graduates earned a starting salary that is 40 percent higher than the local living wage, with no debt.

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When hiring faculty members with more industry experience than teaching experience, institutions should offer them additional support, says Stout, of Achieving the Dream. (And designing support for faculty success is just as important as programs to ensure student success, she says.)

In an effort to expand its adjunct faculty pool and connect students more closely to industry, New York's Rockland Community College started a program in the spring of 2022 to recruit community members interested in teaching as adjunct faculty members. The college received 70 applicants and accepted 25 people "with a variety of professional and educational experiences, but with similar interests in teaching our students," a spokeswoman said.

Cohort participants completed several training sessions, which included delivering a brief lesson on a concept in the academic discipline they wanted to teach. Participants tied their real-world experience into their mock lessons and received feedback from administrators, according to a spokesperson. Six members of the cohort will teach classes in the fall of 2022, a spokesperson said. The college plans to offer the program again in the spring of 2023.

TRAINING HUBS

Creating centers for teaching and learning is one strategy many community colleges have tried to foster a collaborative, creative environment for faculty members. These hubs are a place for faculty to receive training and have space to connect and share with each other.

The Community College of Baltimore County has dedicated centers for adjunct faculty engagement on its three main campuses — and bills them as "a place for adjunct faculty members to work, network, and prepare for classes."

Erin Thompson is the coordinator of one such center at Leeward Community College — the Innovation Center for Teaching and Learning. Faculty and staff members come to Thompson with ideas for programming, based on what they're hearing from students. It's the "green-light office" at the roughly 6,400-student college in Pearl City, Hawaii, she says. "I will never say no to an idea. It will always be 'Let's explore that.'"

When she plans professional-development workshops and training for faculty and staff, she keeps in mind that what motivates her might not motivate others. She also sends out annual surveys to ask them what training they need and how to best deliver it. (Faculty members usually prefer online events that can be recorded and watched asynchronously if needed, and staff members prefer in-person sessions, she says.)

Susan Bickerstaff, a senior research associate at the Community College Research Center, says institutions often don't invest enough in the centers for them to reach their full potential. It's important that administrators consider what they want teaching to look like more broadly, and then make sustained investment over time to "really penetrate the ranks of the faculty."

Low-touch, online resources are also vital, particularly for part-time faculty members who are on campus briefly — perhaps solely to teach a night or weekend class — and don't have much opportunity at other times to connect with colleagues. Part-time faculty should also be paid to participate in activities to improve instruction, according to findings from a 2020 Community College Research Center report, co-authored by Bickerstaff, on how six community colleges supported adjunct faculty.

LEADING WITH DATA

Administrators play a key role in setting expectations for a campus. They should highlight faculty members who are excelling and share data about program outcomes, student success, and retention.

Faculty members should also be empowered to engage with the data and to "ask the questions that need to be asked about redesigning curricula so that the curriculum is relevant and industry-focused," says Stout, from Achieving the Dream. And data should be seen as a "friend" rather than a punitive measure, she added.

Every employee at Amarillo College, in Texas, has access to data on everything from program outcomes to how students are using support services. As the college shifted the majority of its courses to an eight-week model — an effort that began in 2016 — data on the success was key for faculty buy-in, says Frank Sobey, associate vice president for academic affairs.

Faculty members were a little resistant at first, but "once we started seeing the data, it was just too hard to ignore," Sobey says. A key data point: The eight-week course model has increased the percentage of students considered full time. Half of Amarillo's students were full time in the fall of 2022, compared to

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about 29 percent in the fall of 2014, he says.

"We've found that particularly as you try something new that is a radical departure from what has historically been the case, the employee base really needs to see what progress is being made," Sobey says.

The 16-week model made it difficult for the college's students to meet full-time status, as many of them also juggle multiple jobs and parenting responsibilities. The eight-week model makes it possible. A student could even reach the 30-credit-hour mark — with 12 credit hours each semester and six in the summer — within their first year. Sobey calls 30 credits the "magic number," where a student is very likely to persist on to a credential and either transfer to a four-year institution or enter the work force.

Data show that the full-time threshold matters. Retention and persistence rates for full-time students were each nearly 30 percentage points higher for full-time students versus part-time students in 2020, according to National Student Clearinghouse data representing all institutions. (The retention rate measures the percentage of students who return to the same institution for their second year. The persistence rate is the percentage of students who return to any institution for their second year.)

Completion rates were higher too: 66 percent for full-time students at two-year colleges versus 18.6 percent for part-time students in 2015, the latest data available.

Training Faculty

Training and professional development for faculty members is vital to overcoming what several college presidents say is one of their main challenges: A person may make much more money working for a large company than teaching at a community college. But faculty members with industry experience are a valuable asset for colleges and their students.

"Developing, keeping, and fostering faculty is truly our greatest challenge," says Scott Ralls, president of Wake Technical Community College.

The North Carolina college is creating a yearlong biotech apprenticeship program for early-career faculty members in an effort to turn them into "more experienced faculty who can provide the very technical education that industry demands," he says. The training is funded using $2.6 million from the [Economic Development Administration's Build Back Better Regional Challenge](). A total of 10 North Carolina colleges are participating.

It's part of Wake Tech's broader effort to foster economic mobility in the region. Lots of people with biotech skills flock to the state's Research Triangle, a booming metropolitan area that includes Durham, N.C., and Raleigh. Skilled faculty are key to ensuring that Wake Tech students can compete for those jobs too.

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The college also offers an off-site seminar for faculty members to share ideas and get feedback, and a 30-hour professional-development training certificate in online pedagogy.

"Our faculty have to be totally respected by the workplaces," in what they teach, who they are, and how their students perform, Ralls says.

"Blurring the lines between classroom and industry" was one of the goals of a faculty externship program at Southwest Tennessee Community College, which started in 2020 and pays faculty members to work stints in industry and incorporate what they learned into their courses. In its first year, three faculty members spent a month working at a Memphis-based company that makes life-safety products.

Amarillo College offers a range of training options for faculty members — and pays them for it. Training is done through cohorts — rather than one-off sessions — and many faculty members complete multiple workshops each semester. Faculty members collaborate

with each other, implement what they learn in real time, and assess the results.

"Obviously that requires a great deal of commitment from our faculty, who are carrying a substantial teaching load, and that was really the reason why we incentivize it," Sobey, of Amarillo College, says. (Faculty members earn a stipend for completing a 16-week cohort with six hours of instruction and incorporating something they learned into their courses.)

When the college transitioned many of its courses to eight weeks, faculty members were trained on how to design courses in the accelerated model. Faculty members also receive training on engaging at-risk students and using trauma-informed pedagogy. Many of the college's students deal with challenges outside the classroom, such as food insecurity and barriers to transportation or child care, Sobey says.

So far, training efforts have been focused on full-time faculty members, who teach about 75 percent of the courses at the college, Sobey says. But this year, the college has set aside $100,000 specifically to pay adjunct faculty who complete training sessions, which are available online to accommodate their schedules. Topics include teaching unprepared students and designing courses for face-to-face, hybrid, and/or fully online formats.

An adjunct-training fund also exists at Rockland Community College, according to the 2018-23 collective bargaining agreement between the college and its adjunct faculty association. Up to $25,000 is allocated to the Adjunct Academy fund each year, according to the contract. The college will reimburse adjunct faculty for a portion of tuition paid toward graduate study in the area in which they teach at

the college, as well as for participation in relevant seminars and certificate programs, according to the contract.

Industry partners are also chipping in to train faculty members.

Through its Toyota and Lexus Technician Training and Education Network (T-TEN) partnership, Reynolds Community College is working toward having two fully certified, full-time T-TEN faculty members by the fall of 2023. The certification process for faculty members consists of curriculum-development courses hosted by Toyota, in-person and online technical training, and industry exams. Faculty members are core to the college's relationship with Toyota — and will likely craft many Toyota-specific courses, Dwyer says.

Reynolds is one of about 40 community colleges that are part of the T-TEN network, and the first group of students began in the fall of 2022. Students in the associate-degree program receive a mix of classroom and lab training and ultimately will earn the Automotive Service Excellence certification.

EMPHASIS ON AI, CLOUD COMPUTING

Major tech companies regularly partner with community colleges — and train faculty members — to deliver courses in high-demand skills, like cloud computing and artificial intelligence (AI). It's a special synergy: a connection to a major employer who can offer students mobility, a direct route to filling local work-force needs, and a profile-raising partnership.

For example, Santa Monica College, in California, and Amazon Web Services (AWS) created a cloud-computing curriculum, which has been shared across 19 other institutions. More than 7,800 students have completed the program so far, says Howard Stahl, chair of the computer-science and information-

systems department and faculty lead for the project. Santa Monica College has received $1.3 million in state funds since 2016 for the project, and the other 19 colleges also received funds ranging from $21,000 to $50,000.

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AWS helps to train faculty members and provides credits for the platform so they can experiment, Stahl says. The training is demanding — "like eating an elephant in small bites, on the back of the freight train moving 100 miles" — Stahl says, because of how frequently AWS changes. But it has been easier to train several current faculty members than recruit people with existing AWS skills, he says.

AI is another focus area. Intel has teamed up with more than 70 community colleges and community-college systems to provide AI courses and training for faculty members.

When the company starts working with an institution, they remind faculty members that "this is work your students can do," says Carlos Contreras, Intel's senior director of AI and digital readiness.

The company works with faculty members to help them build AI skills, takes

feedback from colleges on how they want to implement the program, and offers a slew of prepackaged courses, Contreras says. Intel now has hours of educational content — from instructor slides to games and use cases. Courses include an applied AI and math course, machine learning, and introduction to AI.

"We try to put everything in a bundle for the professors so they can have a really nice starting point to teach," Contreras says. "They're busy people. These instructors are overstretched in many cases."

When Intel started its work, it surveyed institutions about how they were responding to the growing need for AI curricula. The survey found that 52 percent of institutions said they struggled to find instructors with the proper expertise to lead AI courses, and 41 percent said they lacked the technology for AI instruction. Survey respondents included nearly 130 community colleges, 32 vocational/technical colleges, and 86 private or public four-year universities.

The benefits of AI training are clear. Nearly 60 percent of hiring managers say that AI will have a "substantial or transformational impact on the types of skills their companies need," according to a Salesforce research report on the future of work-force development.

"The number of industries using AI is expanding to the point where no organization will be untouched by AI technology," states the website for the AI associate-degree program at Wayne Community College, in North Carolina. The college is an Intel partner.

Agriculture, construction, energy, and health care are some of the sectors where AI could be helpful, according to a 2020 report from the Oregon Workforce and Talent Development Board. (In the state, Umpqua Community College and Portland Community College have taken part in the Intel partnership.)

There are also AI-focused collaborations across institutions. The University of Florida is partnering with Palm Beach State College to share course materials on AI in an effort to raise awareness of AI among students, regardless of their major. A program is also in development for faculty members from the university to provide professional-development opportunities in AI to faculty members at the community college, according to a spokeswoman.

The connections that community-college faculty members make with industry leaders and local employers are vital for the success of their students and institutions. Students need to master in-demand skills to compete for jobs and earn higher wages. Curricula must be relevant and responsive to industry shifts.

Community colleges can solve the workforce needs of big tech companies. They must also consider how their program offerings contribute to continuing-education paths, several college presidents told *The Chronicle* in 2021.

Much of that work falls on faculty members' shoulders.

"When you're thinking about mapping out the competencies of the program, and then keeping those competencies up to date, it's really the faculty who do a lot of that work," says Iris Palmer, deputy director for community colleges at New America, a nonprofit that tackles public-policy issues.

Getting it right matters more now than ever, as the sector weathers pandemic-induced enrollment declines and the "demographic cliff" looms. Combating the effects of the cliff, a projected decline in the nation's college-going population pegged to begin in 2025, will likely require four-year colleges and community colleges to work together and support easier processes for students to transfer, Joshua Wyner, founder and executive director of the Aspen Institute College Excellence Program, wrote in *The Hechinger Report.*

Consistent conversations are necessary to stay on top of what employers want now — and what they will want in the future. More than one-third of the top 20 skills needed for the average job in the United States have changed since 2016, according to a May 2022 study on changes to the work force.

For many faculty members, supporting students and seeing them succeed in the work force is why they teach at community colleges in the first place. Many community-college students aren't "powered by a four-year degree" and have overcome obstacles to get in the door. We "feel an obligation to try and help students bridge that gap," says Howard Stahl, of Santa Monica College.

Rod Lamb, of Dallas College, says the goal for faculty members is "what can we be teaching our students so that they are immediately employable after graduation?"

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