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Why higher education must evolve to help fill the jobs gap

Industry and academia are exploring skill acquisition and certificate programs to better prepare the workforce for a new economy



BY FASTCO WORKS

Students enrolling in Miami Dade College's (MDC) "[Advanced Automotive Service Technology](#)" course won't learn to change a sparkplug or replace a fuel injector. Instead, they'll train to swap lithium-ion batteries, fix touchscreens, and learn the basics of debugging advanced driver-assistance systems. That's because the course is offered in partnership with the [Tesla START program](#). After 16 weeks of coursework, shop craft, and learning the soft skills of teamwork, graduates earn a Tesla Technician Career Technical Certificate along with a commitment to hire them at one of its dozens of service centers across the country.

The course and its curriculum underscore the central dilemma of U.S. post-pandemic economic recovery: How do you "build back better" without a workforce to match? For example, President Biden's original [American Jobs Plan](#) earmarked \$174 billion to "create good jobs electrifying vehicles." But MDC's Tesla program is one of only a handful nationwide, each producing just a few dozen graduates at

a time. While “the Great Resignation” [keeps accelerating](#), more than [10 million jobs](#) remain unfilled — the result of a widening skills gap between the workers quitting at record rates and the beckoning green new economy.

“That divergence has happened at an exponential pace,” explains Roy Mathew, national practice leader of Deloitte Consulting’s higher education practice. “The need for these skills appeared so quickly — in a matter of a decade — and our education system still hasn’t learned how to train for them.” Narrowing this gap will require rethinking higher education along multiple dimensions. How should institutions such as MDC retool themselves to instill more of the skills employers are seeking? How do they start preparing students for employment at enrollment rather than graduation? And how can they partner with companies such as Tesla to create programs and apprenticeships for learners at any age?

A NEW CURRICULUM FOR A NEW AGE

“I think the future of work relies on three sets of skills,” says Madeline Pumariega, president of Miami Dade College. The first she calls “applied knowledge” that is learned in the class. Second are “future-proof skills” such as teamwork, communication, and critical thinking. Finally, there are the “digital skills” — disciplines such as artificial intelligence, data analytics, and the clean electrification of everything — that are arriving at light speed. Traditional degree programs are hard-pressed to keep pace with these rapidly evolving skill sets. “The future is less about credit accumulation and much more about skill acquisition,” Pumariega says. “Which puts us in a good place to marry career technical education with new pathways to careers.”

Over the past few decades, however, those pathways have narrowed to four-year degrees, which are typically accompanied by astronomical costs and the unspoken assumption that graduates understand how to navigate the job market. This arrangement is especially punishing to low-income, first-generation, and minority students, notes Dr. Adrianna Kezar, director of the Pullias Center for Higher Education at the University of Southern California, where she leads the Promoting At-Promise Student Success (PASS) Project.

“Rather than telling students, ‘Go to the career center if you don’t understand the direction or potential of a major,’ faculty members need to speak directly about what students can do with a specific major, what it will mean for their job potential, and where they can find internships and apprenticeships,” Kezar says. Creating new pathways means replacing one-off events such as job fairs with start-to-finish programming designed to teach students how to apply their skills.

In practice, this often means inviting the companies themselves to help create such programs, with the implicit, or even explicit, promise of jobs in exchange for shaping the curriculum in some cases. “Are universities keeping up with what the market demands of their students?” Mathew asks. “Do employers expect to win the war for talent on their own? We see educators and employers asking, ‘How can we solve these problems together?’”

For its part, Deloitte’s Future of Work Institute has teamed up with a number of universities to help shape academic curricula and share industry insights about workforce innovations to equip students with the skills and tools they need to thrive in the post-pandemic hybrid world.

In addition to Tesla, for instance, MDC has [partnered with Amazon Web Services](#) to award scholarships and train students in cloud computing, while [enlisting IBM](#) to commit more than \$10 million in-kind to teaching the fundamentals of AI and cybersecurity. Pumariega highlights the “seamless” transfer of skills, credits, and degrees from the program to a two-year associate degree, and onward to MDC’s Bachelor of Applied Science and Data Analytics.

BRIDGING ACADEMIA AND INDUSTRY

So-called “stackable” credentials combining professional badges and certificates will only grow in importance given the need to reskill millions of adults without necessarily sending them back to school. “Certifications are probably the bridge between industry and academia,” Pumariega says, “noting that her school awarded 1,500 accreditations alone last year in addition to degrees.

And just as the pandemic propelled remote and hybrid work from the fringes to the mainstream, it may also breathe a second wind into the online education platforms that only a decade ago were being hailed as the future. Rather than replace universities — as their evangelists once touted — online programs may provide the kind of “lifelong learning” that can help plug the skills gap.

“Once again, the key will be building relationships with employers and making content affordable and accessible so the path to employment or a career shift is seamless and easy,” Mathew says. “That’s a trend that’s only going to multiply in the coming years—and it’s already off to a great start.”

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