INDUSTRY SPEAKS

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5 Ways to Integrate Rapidly Evolving Skills Training
in Traditional Higher Education

As artificial intelligence capabilities become ubiquitous in industry and students' daily lives, higher education is on the hook to ensure students and faculty know how to use them, and think critically.

JUST AS TECHNOLOGY SKILLS became an essential part of traditional learning 20 years ago, rapidly evolving skills in data literacy and artificial intelligence are increasingly essential to student success in the real-world roles students are preparing for.

As institutions grapple with how to effectively incorporate experiential learning with the very latest technology skills in areas like generative AI or the use of large language learning models, understanding just where and how to include those skills in traditional curricula poses new challenges for academic leaders.

Campus Technology Editor in Chief Rhea Kelly recently spoke with Hannah Aldine, senior solutions consultant at Pluralsight, about how institutions are integrating skills-based training, the merits of micro-credentialing, and ensuring faculty considerations are heard.

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>
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> **Senior Solutions Consultant, Pluralsight**

Accept that Skills-Based Mastery Is Essential

As industries adopt more skills-based hiring practices, pressure continues to mount for higher education to help students demonstrate the skills they're acquiring, whether that be hands-on tech skills or softer skills such as adaptability, critical thinking, curiosity, and a life-long learning mindset. "A degree still holds tremendous value," Aldine said. "However, that's not the only path to getting the depth and breadth of experience, and I think we are doing a better job of acknowledging that."

Learning paths today often incorporate labs, to ensure students have ample opportunities to practice and perform what they're learning. Establishing sandbox environments for students to play around with cloud or AI services, for example, enables them to build and test things without having to worry about breaking anything — and brings hands-on training to life.

"It's often hard for students to get access to a cloud environment or have ways to practice security skills otherwise," Aldine said.

Skills training within classroom settings can largely follow the flipped classroom model, where students watch a video for homework and then dive more into applications and case studies during classroom time.
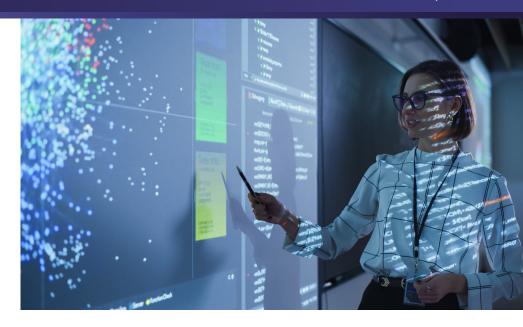
Faculty can assign labs as homework or have students complete projects in a sandbox, from which they submit screenshots showing what they built there. All of these methods help to prepare students for the learning environments they might expect to encounter upon leaving an institution, Aldine noted.

2) Focus on the Skills Students Need

In today's high-demand fields like AI/ML and cybersecurity, ensuring academic textbooks and curriculum changes keep pace with the real world presents a growing problem as change occurs at exponentially faster rates than ever before.

"How it's taught really has to be contextual," Aldine said. "A central part of curriculum development has always been triangulating student needs with objectives and industry needs, and these technologies are no different. Industry can be a voice for what tech skills they're looking for as well as what they anticipate needing soon, and we need to think about how we can teach students

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to use generative AI and technology in authentic ways, and how they're going to use it in their future roles."

3) Overcome Obstacles and Objections to Change

Faculty often struggle to incorporate up-to-date skills training into their curriculum because they simply don't have the time to create high-quality content on those topics, Aldine pointed out. "There are a lot of competing demands for their time. They're juggling daily lesson planning and meeting with students and grading, on top of their own research. When there's a new skill to learn and to then pass on to students, they need a resource that they can use but students can as well."

Industry partners and learning platforms like Pluralsight can provide support, supplementing what's taught in the classroom and freeing up faculty's time to focus on application activities, vetting new content, or developing course requirements around required baseline skills that aren't likely to change as rapidly.

"Every job could now be considered a tech job, because whether it's Excel or web development or AI, technology is always present. As higher education develops AI degrees, they often point out that everyone is going to need those baseline skills," Aldine said. "How can we incorporate some of these complementary tech skills that students need into subjects that are not traditionally technology oriented?"

Part of overcoming faculty reluctance to introducing new tech skills is to ensure they are involved in up-front decision-making and that their voices are heard throughout the curricula update process. Emphasizing communication surfaces any simmering challenges, allowing teams to uncover solutions together, Aldine advised.

Remember that Faculty Require Training, Too

"Everyone needs a foundation in generative AI, and wider tech fluency beyond that, and it's been interesting to read about how education is reacting to how generative AI impacts how we teach and assess students. This is probably the biggest disruption

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we've seen in our lifetime, and it is a lot to grapple with," she acknowledged. "To even dive into these conversations and make decisions, faculty also have to learn the fundamentals of AI, and how people in their industry and fields apply it."

Ongoing professional development should be centered on how technology and generative AI tools are impacting faculty's areas of study, ensuring they understand foundational concepts along with how to use the tools themselves, their limitations and related ethical concerns. In turn, faculty can make more informed decisions about how to incorporate those concepts and skills in their curriculum and more effectively pass that knowledge on to their students.

Facilitate Certifications and Microcredentials

The challenge of creating an entire degree around an evolving field like artificial intelligence is that the technology evolves so quickly, the majority of the curriculum would change every semester. Fundamental, adjacent skills such as Python or data and machine learning most likely won't change as quickly. Institutions can offer more focused, field-based credentials, whether through certification or microcredentialing, which also open up in-demand skills to disciplines outside core technology areas like computer science.

"You reach students in business and engineering, English and chemistry, who can build large language models while applying them to whatever roles they're moving into," Aldine said. "Smaller credentials allow students to customize learning, and institutions can update those more easily because they don't have as much of a domino effect as updates to a whole degree."

Why Pluralsight?
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