

▶ MICRO-CREDENTIALS ARE NO PANACEA: UNIVERSITIES NEED TO ALSO FOCUS ON MORE FUNDAMENTAL INNOVATION

The rapid shift to remote learning as a response to COVID-19 has activated a longstanding discussion on the need for more innovation in university education and adapting to changing workforce demands. Students want skills that lead them to meaningful careers. Employers want to hire students that can adjust to the new needs of the workplace. However, some have been questioning the value proposition of the university degree. Notable critiques include PayPal founder and venture capitalist Peter Thiel, who has received much fanfare for his \$100,000 fellowships for students who drop out of top universities to attend his two-year program. According to the program's website tagline, it is for "young people who want to build new things instead of sitting in the classroom."¹ He is not alone in his concern for the value of the university degree. A growing list of prominent corporations like Google, IBM, Bank of America, Starbucks, and Penguin-Random House are no longer requiring a degree to be hired². This tension between university education and workplace readiness has created a desire to find innovative approaches to close the skills gap.

In response, universities have been increasingly moving towards offering employer-focused credentialing, emphasizing micro-credentials, certificates, badges, nanodegrees, stackable credits, and the like. The idea is that they send clear signals of attainment of a particular skill or package of skills. In this scenario, employers would have confidence that a threshold level of competence is attained. According to a study by Northeastern University, employers are increasingly looking to micro-credentials, and 55% of those surveyed believed that micro-credentials would negatively impact

the focus on degree-based hiring³. But these are only tweaks to a system that requires much more fundamental change. We need a bolder vision.

To help us understand where we can go, we need to know how we got here. Many of the ways we teach in university are outdated and don't reflect what we know about how learning works. These outdated approaches can be traced back to the education reformer and former Harvard president Charles Elliot in the late 1800's, who was responsible for many of the standards that now make up most university programs (such as credit hours, certification, class rankings, electives, the bell curve, professionalization, and graduate schools). The way we teach at university still primarily reflects the approaches from 150 years ago. To Elliot's credit, he responded to the demands of the industrial revolution and recognized that more fundamental changes were needed at universities—simple adjustments weren't enough. The world was changing through urbanization, agricultural innovations, mechanization, and the professionalization and managerial expertise needed in many new and growing sectors. Universities needed to adapt.

Similarly, the challenges we face are as significant as Elliot's time. The knowledge economy has been reshaping the nature of work in powerful ways—and our universities must, again, adapt. The way we work, solve problems, and add value to the economy is fundamentally different. More challenging innovations are needed.

To begin, we need to incorporate the best evidence on teaching and learning into our programs. The research on learning tells us

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a sobering story of how we learn. Effective learning is effortful and uncomfortable. There are no easy pathways. It involves viewing topics from various perspectives (called interleaving), revisiting ideas and material to enhance retrieval (called spacing), applying theories to real problems (called generation) and leverage existing experiences and expertise (called elaboration)⁴. All these approaches take time, effort and involve thinking of skills acquisition as something much broader than what can be covered through a short course.

To add to the challenge, the skills of today won't be the skills of tomorrow. Students will enter careers where they will likely have to learn new skills that are unknown to us today. What's more, the problems facing businesses, governments, and the public are much more interwoven and complex. Navigating this



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context means having the ability to quickly adopt new skills and see the broader picture of how all the pieces are connected—the landscape view is just as important as subject matter expertise. Whereas Elliot faced the challenge of needing more specialists to manage the burgeoning industrial economy, we face the challenge of not knowing what skills and specialties are needed. Digitization, globalization, and the networking of knowledge is changing the nature of work. The likely most profound impact is artificial intelligence. We have come a long way since IBM's Watson famously beat Jeopardy champions Brad Rutter and Ken Jennings in 2011⁵. Artificial intelligence has found its way in the workplace (from managing project workflows, editing your writing, and human resources). To create adaptable meaning-focused students, we need programs that foster deep learning that allow students to apply emerging skills in unpredictable contexts.

Instead of thinking smaller, programs might do well to consider cohesion across courses. We can envision a learning experience that focuses on cultivating the habits of mind to work effectively with people, craft clear prose, learn how to learn effectively, and create a spirit of openness that animates the best of our creative impulses. Innovative pathways forward must include high-impact learning activities that foster deep learning. These include approaches like internships, apprenticeships, applied research, mentorships, experiential learning, and peer assessment. Peter Theil is correct that “building things” is a powerful learning tool. But university programs can also be places where things get built. This approach could be used alongside some of the traditional strengths of university education: theory building, ethics, and philosophy. We know that we learn as much—or more—from reflection on an experience than the experience itself⁶. In this vision, we wouldn't just build things, but we would build things with purpose.

Universities are not nimble institutions. Entrenched norms and practices, often spanning over a hundred years, are embedded throughout our processes and decision-making. Turning to micro-credentials is an opportunity to bypass some of this complexity. Micro-credentials have their place and can play an important role, but we should not see them as a substitute for the necessary—and more fundamental—innovation.

The good news is that students themselves are recognizing this need and demanding more of their educational institutions. Millennials (Disclaimer: I am one) are increasingly telling us that they want careers that aren't just an aggregation of their skills but want to pursue meaningful work and deep learning experiences. Students recognize that *work* readiness isn't enough anymore—*world* readiness is just as important. Universities can be powerful places to pursue these goals.

References

¹ Source: <https://www.thielfellowship.org/>

² Source: <https://www.glassdoor.com/blog/no-degree-required/>

³ Source: <https://news.northeastern.edu/2018/12/13/heres-why-certificates-and-microcredentials-will-help-you-get-your-next-job/>

⁴ Adapted by author from Brown, P., Roediger III, H., & McDaniel, M. (2014). *Make it Stick: The Science of Successful Learning*. London and Cambridge: The Belknap Press of Harvard University Press.

⁵ Source: <https://www.washingtonpost.com/arts-entertainment/2020/01/16/we-talked-brad-rutter-about-that-jeopardy-tournament-ask-what-happened-brad/>

⁶ Source; Moon, J. (2013). *Reflection in Learning and Professional Development: Theory and Practice*. Routledge.