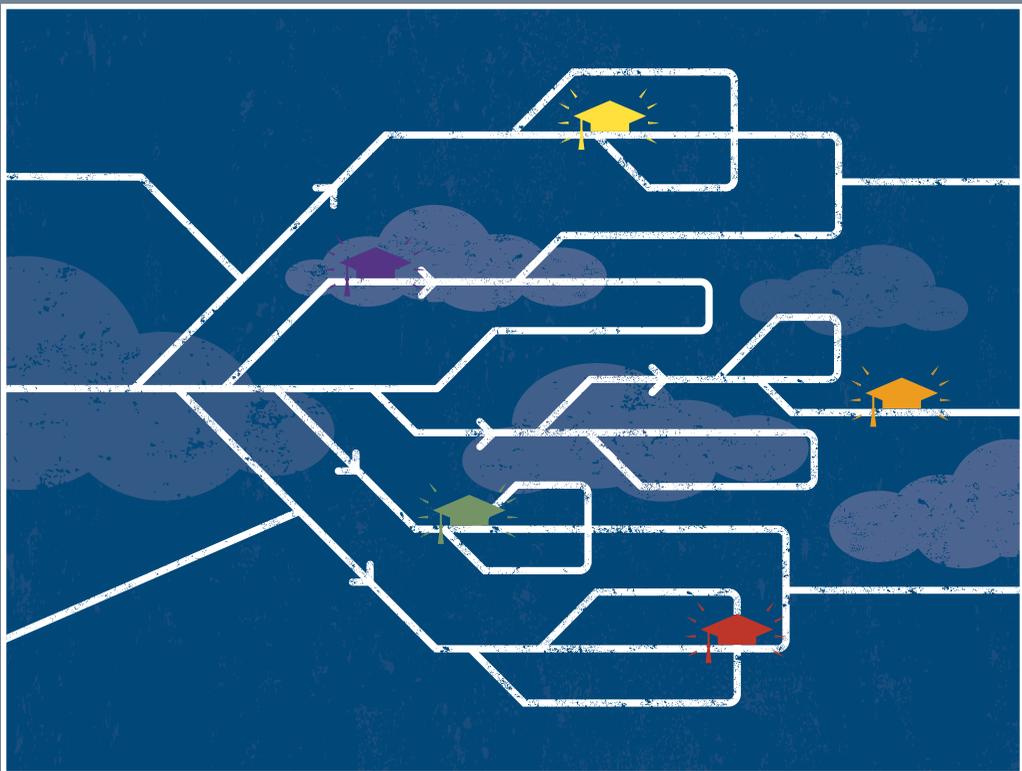# The Complex Universe of Alternative Postsecondary Credentials and Pathways

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Executive Summary

A program at a college leading to an academic degree is the archetype of post-secondary, undergraduate education in the United States. Yet a large and growing segment of the population engages in postsecondary learning outside these programs, seeking credentials other than a degree, and the number and types of alternatives have grown over the past decade.

This occasional paper provides an overview and analysis of *credentials* that serve as alternatives to bachelor's and associate's degrees and alternative *pathways* to achieving an academic degree. The paper groups these alternatives in five categories:

- Labor market training and credentialing, including:
    - certificate programs;
    - work-based training;
    - skills-based short courses;
- massive open online courses (MOOCs) and online micro-credentials; and
- competency-based education programs.

After defining and mapping the landscape of these alternatives and providing some historical context, the paper offers more detailed descriptions, illustrations, and analyses of typical programs in each category. For each category, it also reviews the growing number of intersections between alternatives and traditional degree-granting institutions, as well as potential future directions. The paper concludes with some overarching observations and recommendations.

Certificate Programs

Certificate programs typically last for less than two years and are primarily offered at for-profit two-year trade schools, for-profit degree-granting institutions, and community colleges. Popular programs include those in the health sciences and consumer services. Most individuals who participate do not hold an undergraduate degree and are from the lower end of the income distribution. The labor market returns for certificate programs vary: certificate holders in fields such as information technology and electronics can earn as much as the average bachelor's degree holder, while those who earn certificates in health care and cosmetology typically earn no more than the average high school graduate. The number of certificates awarded has grown rapidly over the past decade and, in 2013, nearly 1 million certificates were awarded by Title IV institutions. Most of this growth has occurred within the for-profit sector.

Work-Based Training

Work-based training includes apprenticeships, other forms of on-the-job training, or vestibule training. Participants are usually connected with these opportunities as employees at companies, through local community development initiatives, or through academic programs. Entry-level corporate training and workforce development programs usually lead to an industry-recognized certification, either associated with a specific employer or awarded by an industry association. Like certificate programs, these entry-level programs typically lead to careers in trades, and participants are often lower-income adults who do not have access to traditional degree programs.

Skills-Based Short Courses

Skills-based short courses can be part of short-term certificate programs or stand on their own as just-in-time opportunities for gaining skills for employment. These offerings have gained renewed attention with the emergence of coding bootcamps in 2012, which offer short-term, intensive opportunities for students to gain skills needed for high-demand jobs as developers, designers, or data scientists in the emerging technology world. Despite massive growth and the substantial hype surrounding these providers, bootcamps do not currently constitute a true alternative to a traditional undergraduate program for most students: in 2016, only about 18,000 students graduated from coding bootcamps, and nearly 80 percent had already earned a bachelor's degree or higher. However, because of their apparent cost-effectiveness, the relative diversity of their student bodies, and emerging partnerships with traditional institutions, bootcamps are worth monitoring as they continue to evolve.

MOOCs and Online Micro-Credentials

MOOCs, first offered in 2008, are free or low-cost online courses that accommodate high or unlimited enrollment. In March 2016, 35 million students were enrolled in MOOCs offered by at least 80 providers, in courses broadly distributed across disciplines. Though enrollments and offerings have expanded significantly, MOOCs have not, as some had predicted, revolutionized undergraduate education: about three out of every four MOOC enrollees already has a bachelor's degree, and only about 6 percent of those who start a course complete it. Some MOOC providers have diversified their offerings in ways that might increase their utility as alternatives to traditional undergraduate pathways and credentials. For example, some providers have bundled courses into specializations that lead to credentials and "nanodegrees"; others have partnered with colleges and universities to offer components of traditional academic degrees.

Competency-Based Education Programs

Competency-based programs provide alternative pathways to a degree or credential that are more personalized, flexible, and aligned with in-demand skills. To varying degrees, these programs recognize prior and extra-institutional learning and allow students to progress at a pace determined by the rate at which they demonstrate learning outcomes. Competency-based programs are offered by for-profit, not-for-profit, and public institutions, and by both two-year and four-year institutions. Participants tend to be older and have accumulated some educational credit or work experiences, and the pathway is most popular in business, health care, and engineering. Because of the centrality of the credit hour to federal financial aid eligibility, many self-paced competency-based programs are not eligible for federal financial aid. However, some recent federal rule changes and experiments have extended eligibility.

Common Themes

Our analysis surfaces several key findings that cut across all categories of providers:

- **Alternative credentials and pathways have proliferated over the past fifteen years, but many have deep historical roots.** Since 2000, participation in certificate programs, apprenticeships, and competency-based education programs has increased rapidly, and MOOCs and bootcamps have emerged and grown quickly in a short time. As one example, the number of certificates awarded by Title IV–eligible postsecondary institutions increased by 73 percent from 2000 to 2013, a period during which the number of bachelor's degrees awarded increased by 49 percent. While alternatives have grown in recent years, options like trade schools, distance education, work-based training, and assessment of prior learning have been around for decades or centuries, and their popularity has ebbed and flowed with contextual forces.

- **While there is a great deal of variation, alternative credentials and pathways typically take less time, have more flexible formats, and are more directly aligned with employer-defined skills than traditional degree programs.** Alternative programs can last from a few months to four years, can take place within or outside traditional academic institutions, and can deliver training via in-person instruction, online instruction, hands-on work, or a mixture of modalities. They typically focus more directly than bachelor's degrees do on skills for employment in specific fields. While alternatives have the potential to cost less than traditional degree programs, eligibility for financial aid varies: some certificate programs at Title IV institutions are eligible, but bootcamps, MOOCs, and competency-based degree programs have received federal financial aid only as part of Department of Education experiments. With increased regulation of for-profit schools and increased federal experimentation with alternative providers, the boundaries of aid eligibility are dynamic.

- **Although alternative pathways and credentials have conceptual and practical appeal, evidence of their efficacy is thin and quality assurance is weak.** For many programs, robust data on features, costs, enrollment, and outcomes are not available. Few programs for which there are data have been rigorously assessed, and some of the evidence that does exist is not promising. Furthermore, many alternatives function outside any system of quality assurance, and even some of those that are subject to oversight—particularly for-profit institutions—have a history of taking advantage of students. Without better quality assurance and more comprehensive, nuanced, longitudinal data on these programs, questions about their returns to students and taxpayers will remain unanswered.

- **Degrees and degree programs are likely to retain their value, but are already evolving to incorporate features of alternatives and integrate academic with nonacademic experiences.** Specific vocational skills have a shelf life, and employers routinely report that advancement in management, creative, and professional roles requires not only ongoing skill development but also critical thinking, communication, and adaptability. These more general competencies are the domain of degree programs, and we anticipate a future in which traditional institutions and degree programs take a substantial role in validating varied learning experiences and linking them with academic coursework and degree pathways. There is already evidence of this in many of the partnerships, programs, and federal initiatives reviewed throughout the paper.

Policy Recommendations

In light of these themes, the paper offers three, high-level policy recommendations for policy-makers, funders, and the higher education community:

- Adjust quality assurance processes to allow for accurate and comparable evaluation of alternative programs, robustly enforce quality standards for all providers, and accelerate the process of integrating quality alternative pathways and credentials into the federal financial aid system.

- Invest in a more comprehensive data system that captures longitudinal, student-record data on students' experiences across the full array of postsecondary pathways, as well as information about providers and their programs and credentials.

- Support rigorous research on the efficacy and return on investment of existing and emerging alternative pathways and the value of alternative credentials.