The Complex Universe of Alternative Postsecondary Credentials and Pathways
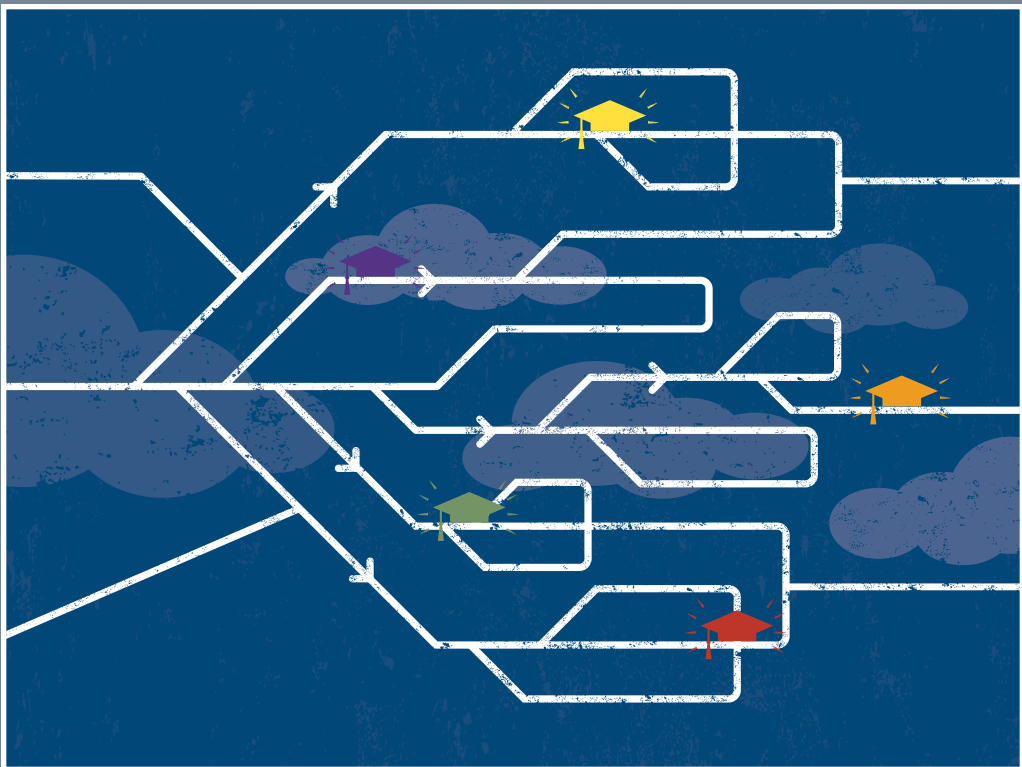

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Defining Alternatives

This occasional paper covers both *credentials* that serve as alternatives to bachelor's and associate's degrees and alternative *pathways* to achieving an academic degree. *Alternative credentials* include certificates, industry-recognized certifications, licenses, badges, and nanodegrees. Many students obtain these alternative credentials through an institution of higher education that also offers associate's degrees and sometimes bachelor's degrees. There are also many organizations that offer these alternative credentials but do not offer academic degrees, including trade schools, coding bootcamps, MOOCs, and employer-provided training opportunities.

Students pursuing *alternative pathways* to academic degrees can earn academic credit for experiences outside an academic environment or for demonstrating competencies. Institutions have awarded credit for nonacademic experiences (such as military service) since World War I, but in the past decade, a growing number of institutions have established their own self-paced or competency-based pathways to a degree. Many more institutions recognize MOOC completion for credit, and a handful have begun to accept completion of a defined sequence of MOOCs in lieu of a portion of the degree program.

MAPPING THE LANDSCAPE

Title IV Eligibility

As with traditional degree programs, federal financial aid is the lifeblood of many alternatives. But because federal financial aid has so deeply internalized the degree and the time-based Carnegie unit upon which it is based, a large share of alternatives operates outside the federal financial aid system. Reliable, systematic information about such programs is difficult to acquire, so for purposes of this occasional paper, financial aid eligibility also means that data about the program are more readily available.

Eligibility to receive federal financial aid, including Pell Grants, Direct Loans, and Perkins Loans, is determined by Title IV of the Higher Education Act and its related regulations. To be eligible, an undergraduate program must meet certain time requirements (600 hours of instructional time over 15 weeks for Pell Grants; 300 hours over 10 weeks for Direct Loans), must be offered by an institution accredited by a recognized accreditor, must be authorized by a state, and must admit only students who have earned at least a high school diploma. Since 2014, when the Department of Education promulgated the "gainful employment" rule, nearly all programs at proprietary

(for-profit) and vocational institutions, as well as nondegree programs at public and not-for-profit institutions, are also required to show that graduates achieve gainful employment in a recognized occupation, or risk temporary restrictions on eligibility to receive aid.[2] Because eligibility is determined at the program level, it is not uncommon for institutions, particularly for-profit institutions and community colleges, to offer some programs that are eligible for aid and others that are not.

Counting Providers, Programs, and Credentials

Although data are more readily available for Title IV–eligible providers, different ways of disaggregating the data and nuances in reporting complicate the picture even for this relatively visible group. In 2013, 7,236 institutions were eligible for aid under Title IV (data by program are not generally available). Just under half of those institutions—3,422—were for-profit. Of those Title IV–eligible for-profit institutions, 1,642 were "less-than-two-year," meaning they offered only certificates, not degrees. By contrast, only 3.6 percent of public Title IV institutions and 1 percent of not-for-profit Title IV institutions were "less-than-two-year."[3]

The majority of institutions offering certificate programs are thus for-profit institutions—including four-year institutions, two-year institutions, and less-than-two-year nondegree-granting institutions (see Figure 1). Yet for-profit institutions, especially less-than-two-year for-profits, award a disproportionately small share of all certificates.[4] Instead, public community colleges award the bulk of certificates: 47 percent of the approximately one million awarded by Title IV institutions in 2013.

2. See "Institutional Eligibility," Federal Student Aid, http://ifap.ed.gov/qahome/qaassessments/ institutionalelig.html, and https://cew.georgetown.edu/wp-content/uploads/2014/11/ Certificates.FullReport.061812.pdf; "Certificates Count: An Analysis of Sub-Baccalaureate Certificates," Complete College America (December 2010), http://www.completecollege.org/docs/ Certificates%20Count%20FINAL%2012-05.pdf. Gainful employment is based on two proxy measures: debt-to-earnings ratio and repayment rate.

3. See U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS) Institutional Characteristics (IC) and Completions Components, 2013, "Table P143. Number and percentage distribution of Title IV postsecondary institutions that offer programs at each undergraduate credential level, overall and in occupational education programs, by level and control of institution: United States, 2013," https://nces .ed.gov/surveys/ctes/tables/P143.asp.

4. Of the 966,084 occupational certificates awarded by Title IV postsecondary institutions in 2013, only 160,028 were from less-than-two-year for-profit institutions. U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS) Institutional Characteristics (IC) and Completions Components, 2013, "Table P152. Total number of credentials awarded by Title IV postsecondary institutions, overall and in occupational education, by credential level, control, and level of institution," https://nces .ed.gov/surveys/ctes/tables/P152.asp.

Figure 1: Share of Institutional Providers of Certificate Programs and Share of Certificates Awarded, by Institution Type, 2013
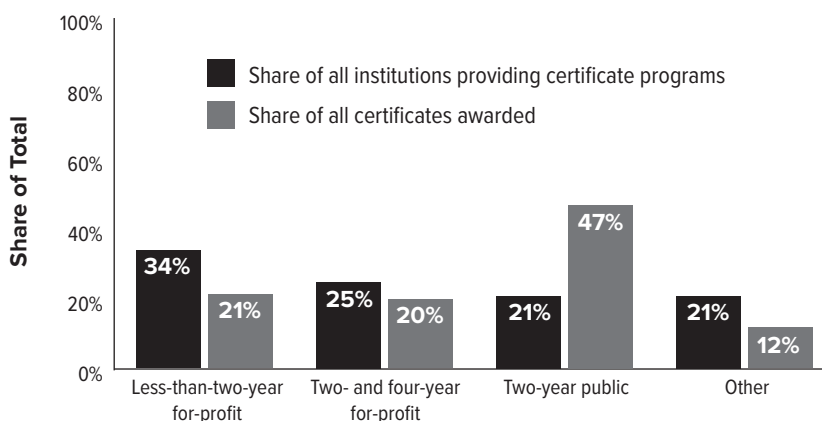
Note: "Other" includes public and private nonprofit four-year schools and public and private nonprofit less-than-two-year schools.

Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS) Institutional Characteristics (IC) and Completions Components, 2013, "Table P143. Number and percentage distribution of Title IV postsecondary institutions that offer programs at each undergraduate credential level, overall and for occupational education programs, by level and control of institution: United States, 2013," https://nces.ed.gov/surveys/ctes/tables/P143.asp; "Table P152. Total number of credentials awarded by Title IV postsecondary institutions, overall and in occupational education, by credential level, control, and level of institution," https://nces.ed.gov/surveys/ctes/tables/P152.asp.

Pinpointing the number and characteristics of non-Title IV providers of alternative credentials is substantially more difficult. The most robust analysis of this sector estimates that more than 3,000 for-profit postsecondary institutions are not eligible to receive federal aid and serve about 670,000 students each year, almost entirely in short-term certificate programs.[5]

This estimate of non-Title IV providers excludes offerings that do not lead to a certificate, such as MOOCs and coding bootcamps. In March 2016, 35 million students were enrolled in more than 4,000 MOOCs, and 18,000 students were projected to graduate from coding bootcamps in 2016. On their own, neither MOOCs nor coding bootcamps serve as true alternatives to undergraduate programs: at least 70 percent of MOOC enrollees have a bachelor's degree

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5. Average program length at non-Title IV–eligible institutions was half a year. Stephanie Reigg Cellini and Claudia Goldin, "Does Federal Student Aid Raise Tuition? New Evidence on For-Profit Colleges," NBER Working Paper No. 17827 (February 2012), http://www.nber.org/papers/w17827.pdf.

or higher and are not seeking a credential, and 79 percent of coding bootcamp participants have a bachelor's degree.[6]

Scoping the landscape of work-based training is also a challenge, as the approach spans the public and private sector, as well as multiple partnerships. In the public sector, at least 30 states have invested in "sectoral" training programs that partner educational organizations, local industry, and other local organizations to train local workers to fill regional skills gaps. Within these states, dozens of cities and regions have also built sectoral programs, supported by public and private funding.[7] For example, the National Fund for Workforce Solutions funds 32 regional collaboratives in 25 states.[8] Additionally, in fiscal year 2015, the Department of Labor counted nearly 500,000 active registered apprenticeships, an increase of roughly 75,000 since 2013.[9]

Data on private sector work-based training is harder to come by—partially because the federal government stopped collecting information from employers on their training activities in the 1990s, and partially because the information available is not often parsed according to entry-level and incumbent employees. While national sample surveys from the 1990s found that the incidence of employer-provided training increased with education, they also revealed that intensity of employer training (the number of hours of participation) was greatest for workers with some college. These results suggest that those with some college were using employer training or assistance to help them finish a degree or certificate.[10]

Finally, because they deviate from minimum-hour and accredited-provider requirements, many alternative pathways to academic degrees are ineligible for financial aid, and getting a sense of their scale is also a challenge. Although the

6. "By the Numbers: MOOCs in 2015," Class Central, https://www.class-central.com/report/moocs-2015-stats/; Jeff Haywood, *Learning from MOOCs: Lessons for the Future* (London: Portland Press Publishing, 2016), 69–79, http://www.portlandpresspublishing.com/sites/default/files/Editorial/Wenner/PPL_Wenner_Ch06.pdf; A. D. Ho, I. Chuang, J. Reich, C. Coleman, J. Whitehill, C. Northcutt, J. Williams, J. Hansen, G. Lopez, and R. Petersen, "HarvardX and MITx: Two Years of Open Online Courses," HarvardX Working Paper No. 10 (2015), http://dspace.mit.edu/bitstream/handle/1721.1/96825/SSRN-id2586847.pdf?sequence=1.

7. Harry J. Holzer, "Going, Going . . . Gone? The Evolution of Workforce Development Programs for the Poor since the War on Poverty," Georgetown and AIR (June 2012), http://npc.umich.edu/news/events/war-on-poverty-june-conference/holzer.pdf.

8. "Regional Collaboratives," National Fund for Workforce Solutions, http://www.nfwsolutions.org/regional-collaboratives.

9. "Data and Statistics," Apprenticeship USA, United States Department of Labor Employment and Training Administration, https://www.doleta.gov/oa/data_statistics.cfm.

10. Workers with a high school diploma or less were least likely to receive formal training, with only 14.5–22 percent take-up. Workers with a bachelor's degree or higher were most likely to receive formal training, with 33.9–50 percent take-up. Based on analyses of the 1997 National Employer Survey, the 1995 Survey of Employer-Provided Training, and the 1995 National Household Education Survey. See Robert I. Lerman, Signe-Mary McKernan, and Stephanie Riegg, "The Scope of Employer-Provided Training in the United States: Who, What, Where, and How Much?" W.E. Upjohn Institute for Employment Research (2004), http://research.upjohn.org/cgi/viewcontent.cgi?article=1175&context=up_bookchapters.

category is still flexible, some estimate that as of 2016, 150 programs offered competency-based pathways to academic degrees, serving about 200,000 students.[11]

An Expanding Sector

Despite difficulties in quantifying the scope of offerings, there is evidence that alternatives are growing in popularity. For example, the number of certificates awarded by Title IV institutions increased by 73 percent from 2000 to 2013 (with the highest rate of growth after 2008), while the number of bachelor's degrees awarded increased by 49 percent during that period. (The number of associate's degrees awarded increased at a slightly faster rate than the number of certificates awarded; see Figure 2.) Similarly, the number of individuals entering apprenticeship programs increased by 50 percent from 2008 to 2015.[12] MOOCs and coding bootcamps emerged within the past decade and have grown rapidly and, by some estimates, the number of competency-based programs increased from 50 programs serving approximately 50,000 students in 1990 to 150 programs serving about 200,000 students in 2016.[13]

Perhaps in recognition of this expansion, the boundaries of financial aid eligibility for alternatives are also slowly shifting. For example, in 2011, the U.S. Department of Education piloted a program enabling students in short-term vocational programs to receive Pell Grants.[14] A 2005 amendment to the Higher Education Act made programs that used direct assessment eligible for student financial aid, but only if learning was translated into credit hours on a student's transcript; and in 2014 the Department of Education began piloting federal financial aid disbursement to competency-based providers.[15] In 2016, the Department of Education selected eight partnerships between alternative providers and traditional postsecondary institutions to participate in the Educational Quality through Innovative Partnerships (EQUIP) program. Among the eight selected alternative providers were four coding bootcamps, two competency-based online course providers, a workforce development provider, and General Electric. EQUIP both allows students of the providers to use financial aid for the programs and subjects the providers to additional oversight by their partner institutions and third-party quality assurance entities.[16]

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11. Bryan Fleming, "Mapping the Competency-Based Education Universe," Eduventures (February 17, 2015), http://www.eduventures.com/2015/02/mapping-the-competency-based -education-universe/.

12. "Data and Statistics," Apprenticeship USA.

13. Fleming, "Mapping the Competency-Based Education Universe."

14. "Experimental Sites," Federal Student Aid, https://experimentalsites.ed.gov/exp/approved .html.

15. Ibid.

16. See "FACT SHEET: ED Launches Initiative for Low-Income Students to Access New Generation of Higher Education Providers," U.S. Department of Education (August 16, 2016), http://www.ed.gov/news/press-releases/fact-sheet-ed-launches-initiative-low-income -students-access-new-generation-higher-education-providers.

Figure 2: Credentials Awarded by Title IV Postsecondary Institutions, 2000–2013
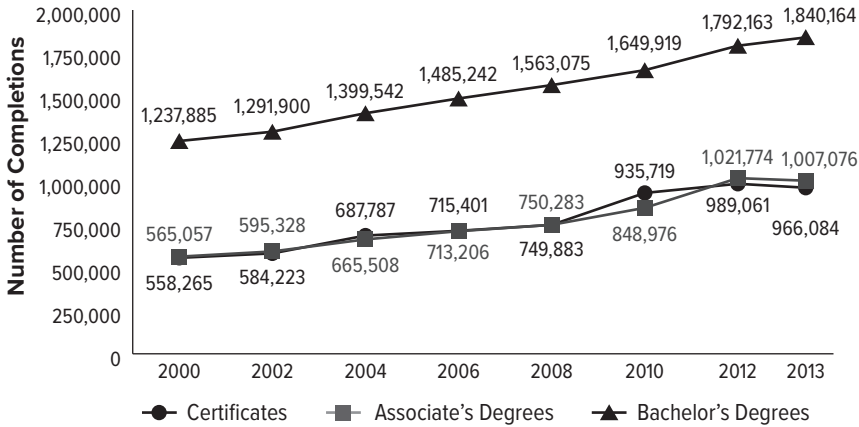
Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS) Institutional Characteristics (IC) and Completions Components, "Table P160: Number of undergraduate credentials awarded by Title IV postsecondary institutions, by control and level of institution and credential level," https://nces.ed.gov/surveys/ctes/tables/P160.asp; "Table 152. Total Number of credentials awarded by Title IV postsecondary institutions, overall and in occupational education, by credential level, control, and level of institution, United States, 2013," https://nces.ed.gov/surveys/ctes/tables/P152.asp.

HISTORICAL ANTECEDENTS

Each of the alternatives we discuss have existed, in some form, for decades if not longer. In the second half of the nineteenth century, as the industrial revolution created the need for practical, technical skills and the apprenticeship system declined, independent trade schools and company-operated factory schools emerged as vocational alternatives to academic postsecondary institutions.[17] Companies also created their own materials to train employees and offer direction to others in the field, and the federal government began offering funding for schools to provide vocational and agricultural programs. Correspondence courses, from which MOOCs draw many features, emerged in the nineteenth century as well, and became more ubiquitous and accessible with the development of radio, television, and video cassettes in the middle of the

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17. Ernest W. Brewer, "The History of Career and Technical Education," in *Definitive Readings in the History, Philosophy, Practice, and Theories of Career and Technical Education*, ed. Victor C. X. Wang (Hangzhou, China: Zhejiang University Press, 2009), 6–10.

twentieth century.[18] MOOCs are also an extension of a long-standing tradition of continuing education in the United States, expressed in undertakings like the lyceum system and the Chautauqua movement and institutionalized at colleges and universities around the turn of the twentieth century.[19]

Finally, competency-based education programs emerged out of "nontraditional" and external degree programs that became popular at traditional institutions in the 1970s. A response to the increasing share of adult students pursuing postsecondary degrees, these programs delivered instruction remotely, emphasized personalization, and "de-emphasized time, space, and even course requirements in favor of competence and, where applicable, performance."[20] They also magnified the need, first surfaced among returning World War I veterans, for institutions to recognize and award credit for academic experiences accumulated outside postsecondary academic institutions, and established multiple coordinating systems for doing so.[21]

These historical alternatives emerged from and have been sustained by the same factors that shape the sector today. Technological change and shifting employer needs have long created demand for vocational training options, and traditional postsecondary institutions and the infrastructure in which they operate have struggled to keep pace. Technological developments have also enabled new forms of instructional delivery, which have increased access and flexibility as postsecondary demographics and ideas about who should have access have expanded. Concerns about costs and the value of a bachelor's degree have also been a crucial factor, especially since the 1970s, when tuition began to increase at a rate much faster than other goods and services. And, since the late nineteenth century, government policy-makers have responded pointedly to workforce, technological, demographic, and financial changes, shaping both the traditional and nontraditional landscape of providers in the process.

As these changes have taken place, the line between what are considered "traditional" and "nontraditional" students and programs has continually shifted. Traditional institutions, funding structures, and accreditation requirements have expanded, under constraints, to accommodate an increasingly diverse set of students, new delivery methods, and changing employer needs.

18. See K. Patricia Cross, "The External Degree: Introduction," *Journal of Higher Education* 44 (1973): 6, http://www.jstor.org/stable/1980906; Cyril Houle, *The External Degree* (San Francisco: Jossey-Bass, 1973).

19. Daniel W. Shannon, "A Selective Look at the History and Practice of Continuing Education," in *Centennial Conversations: Essential Essays in Professional, Continuing, and Online Education*, ed. Daniel W. Shannon and Robert Wiltenburg (Washington, D.C.: University Professional and Continuing Education Association, 2015).

20. Patricia Cross, "An Introduction to Non-Traditional Education in the United States" (October 1976), https://diva.sfsu.edu/collections/kpcross/bundles/210857.

21. This included the National College Credit Recommendation Service, the College Level Examination Program, and the American Council on Education's Office of Educational Credit, which established standardized ways of awarding credit for postsecondary learning that took place outside of degree-granting institutions. See Patricia Cross and Ethan Hutt, "The Least They Can Do: A History of Minimum Standards in American Education," book manuscript, 62–106.

Our current moment—characterized in part by decreased state funding, mounting college costs, and rapid technological changes in instructional delivery and employer needs—presents challenges that may be unique in magnitude but not necessarily type. A review of the landscape suggests that, as they have in the past, postsecondary alternatives and the factors that sustain them are exerting increasing pressure on traditional degree programs, funding policies, and accreditation structures to innovate and expand. Our discussion of the intersections between alternative and traditional options emphasizes this point and illustrates that traditional providers and degrees have already begun to accommodate a shifting landscape of students and credentialing needs.[22]

22. For a more sustained conversation about these changes, see Goldie Blumenstyk, *American Higher Education in Crisis? What Everyone Needs to Know* (New York: Oxford University Press, 2014); Jeff Selingo, *College (Un)bound: The Future of Higher Education and What It Means for Students* (New York: Houghton Mifflin, 2013).