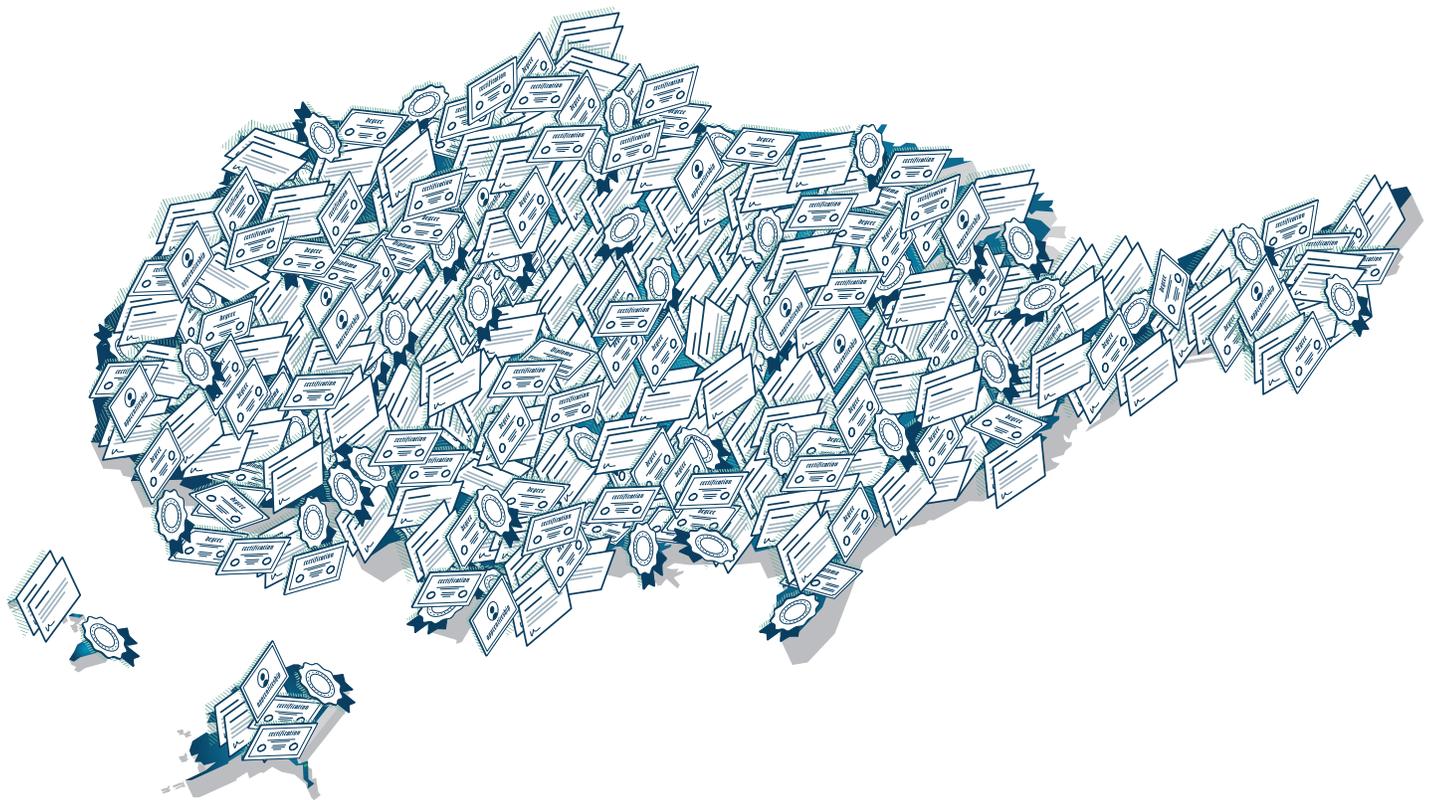


Counting U.S. Postsecondary and Secondary Credentials



September 2019

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ABOUT CREDENTIAL ENGINE

Credential Engine is a non-profit whose mission is to create credential transparency, reveal the credential marketplace, increase credential literacy, and empower everyone to make more informed decisions about credentials and their value.

Acknowledgments

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We want to recognize and thank the following individuals at each institution:

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Foreword

We are ten years into the country's longest economic expansion, but many Americans are still not sharing in our prosperity. Most of the jobs lost in the last recession were held by workers with a high school education or less, while most of the new jobs created went to workers with at least some college education. With only about a third of young people earning a four-year college degree, we must do a better job helping the other two-thirds acquire marketable skills and credentials—whether those come in the form of traditional degrees, licenses, certificates, micro-credentials, or something in between.

Unfortunately, we still know very little about the full range of credentials offered across the country and their current—and potential—impact on economic mobility. Thankfully, Credential Engine has now developed the most robust count of secondary and post-secondary credentials to date, and among the more than 730,000 found there are an estimated 475,000 non-degree credentials that range from digital badges to fully-accredited certificate programs. Every bit of education and training counts. We know from research that Americans with non-degree credentials have improved odds of economic mobility, financial stability, and higher satisfaction with their education and career pathways over those with only a high school diploma.

What we still don't know is whether we have enough—or too many—credentials for a country of our size or if we have the right mix of programs to meet employer needs across the country. This report is a first step in answering those questions and provides a rich database for policymakers, employers, educators, and workers to advance our collective goal of a thriving economy that works for everyone. We don't have a minute to waste.

Arne Duncan, Former U.S. Secretary of Education (2009–2015)

Governor Jeb Bush, Former Governor of Florida (1999–2007)



Letter of Introduction

Credential Engine was founded on the belief that a wide range of credentials, from a high school diploma to a Ph.D., or a badge to a license, have value in the market and in individuals' lives—but that we understand far too little about the value and impact of various credentials, and are even worse at effectively sharing that information with the public. Without a better understanding of the credential marketplace, we cannot craft the most effective education policies or make wise decisions about how to invest in and expand education. More importantly, we cannot effectively guide individuals in choosing the educational path best suited to their needs and goals.

Therefore, Credential Engine's mission is to map the full marketplace of credentials, better understand the nuances of various credentials, and increase literacy about different paths—ultimately allowing students, workers, employers, educators, and policymakers to make more informed decisions about credentials and their value.

To help achieve this mission, we must first understand the actual landscape of credentials available. To this end, we aim to produce a comprehensive, reliable count of every unique credential in the United States and help create more uniform descriptions for all credentials so that they can be more readily discovered, compared, and evaluated. This new report advances that work by providing an updated estimate of the number of postsecondary and secondary credentials in the United States across 17 distinct categories. It extends our credential count effort, which was outlined in an initial report released in 2018.¹ Most notably, this latest accounting more than doubles our preliminary estimate of the number of credentials in the United States by being able to include for the first time sizable portions of the credential ecosystem—badges and certificates—that were not able to be counted in our first report.

This vastly increases our understanding of the market—and it highlights how critical it is that we continue to work to better understand not only the landscape of credentials, but also their current impact and potential. We are still not at a point where we can answer important questions about whether the education and workforce systems provide enough credential options or the right ones for today's economy. We are just beginning to be able to provide individual learners with better guidance about what credentials are available and the pathways that each opens up.

This is critical and inspiring work. Our understanding of the credential marketplace has dramatically improved in just the past year, and the listing of credentials in the Credential Registry is growing rapidly. With collective support and strong leadership, imagine where we can be with true credential transparency next year, in five years, and in 10 years.

Eleni Papadakis



Executive Director

Washington State Workforce Training
and Education Coordinating Board

Scott Cheney



Executive Director

Credential Engine

Board Chair

Credential Engine

1. Credential Engine, "Counting U.S. Secondary and Postsecondary Credentials," April 2018. <https://credentialengine.org/2018/04/05/counting-u-s-secondary-and-postsecondary-credentials-april-2018-report/>.



Executive Summary

Recent years have seen policymakers, educators, and learners themselves increasingly interested and invested in credentials other than the standard degree. By 2020, 65% of all jobs in the United States will require at least some postsecondary training, but not necessarily a degree. And Americans are getting the message that education beyond high school is increasingly important if they are to thrive in today's workforce. At the same time, educators, philanthropists, and researchers are working to understand how we might enhance high school education so that the diploma is again a highly meaningful workforce credential.

Despite all this activity, however, the country has never had a good estimate of the number of credential programs, much less a strong accounting of their various characteristics and potential returns. This new report from Credential Engine moves us forward—performing an extensive count and using computational models, when necessary, to estimate that the United States has at least **738,428 unique credentials**. This estimate, which is the result of a much broader and deeper analysis than the preliminary one we published in April 2018, more than doubles that early estimate of 334,114.² This larger number is primarily the result of being able to include for the first time sizable portions of the credential ecosystem—badges and certificates—that were not able to be counted in our first report.

This report looks at 17 credential categories that fall into four types of education: postsecondary educational institutions, massive open online course (MOOC) providers, non-academic organizations, and secondary schools. It finds that postsecondary institutions are the largest type of credentialing organization, but they are closely rivaled by non-academic organizations.

In fact, our estimate of the number of credentials from non-academic organizations—notably, including badges—grew substantially from our preliminary accounting to the current accounting. Specific findings include:

- **370,020** credentials issued by postsecondary educational institutions, including both those that participate in Title IV and those that do not;
- **7,132** credentials from MOOC providers, the vast majority of them being course completion certificates;
- **315,067** credentials from non-academic organizations, with the largest categories being digital badges and online course completion certificates; and
- **46,209** credentials from public and private secondary schools.

The report discusses each credential category in more detail, including the nature of the credential and the sources and methods for developing the credential count. It also describes the advances in the credential count effort since Credential Engine's first report on the subject in 2018.

While we have made significant advances in counting credentials, we need far more information about what various credentials entail—from the competencies they aim to convey to their relative value in the marketplace. This further demonstrates the need to dramatically improve transparency in the credential marketplace in order to promote economic growth and individual mobility.

2. Credential Engine, "Counting U.S. Secondary and Postsecondary Credentials," April 2018. <https://credentialengine.org/2018/04/05/counting-u-s-secondary-and-postsecondary-credentials-april-2018-report/>.



FINDINGS

The Number of Postsecondary and Secondary Credentials in the U.S., by Category

Credential Engine estimates that the U.S. has **738,428 unique credential programs**. Going broader and deeper than before, researchers retained by Credential Engine confirm a credential landscape that is more than twice the size of the preliminary estimate published in April 2018, which was 334,114.

The table below provides a count for each of 17 credential categories and a comparison with the previous number (if any). The 17 categories are organized by four types of education and training providers—postsecondary educational institutions, MOOC providers, non-academic organizations, and secondary schools.

A brief discussion of the nature of the differences between the current and preliminary estimates follows the table. Subsequent sections discuss the nature and method for counting each credential type. The analyses for this report and the previous one were prepared for Credential Engine by the Center for Regional Economic Competitiveness in Arlington, Virginia.

<p>Programs Legend</p> <p>CCD Common Core of Data, U.S. Department of Education</p> <p>COOL Credentialing Opportunities Online, U.S. Department of Defense</p> <p>ETA Employment and Training Administration, U.S. Department of Labor</p> <p>IPEDS Integrated Postsecondary Education Data System 2016-17, U.S. Department of Education</p> <p>PSS Private School Universe Survey 2015-16, U.S. Department of Education</p>	<p>Programs Notes</p> <p>Enumeration = Count based on register of all known programs in category (complete, certain)</p> <p>Partial Enumeration = Count based on program register that does not fully cover category <u>or</u> sum across known providers (incomplete, certain)</p> <p>Estimate = Count from partial enumeration plus estimate of additional programs per extrapolation from sample of state <u>or</u> industry lists (complete, somewhat uncertain) or count of credential-granting institutions multiplied by number of credentials offered by each institution</p> <p>Rough Estimate = Based primarily on extrapolation from sample of state lists (complete, a modeled guess)</p> <p>Extrapolation = Count of programs not elsewhere identified, then calculation of state or industry share of nation, then division of count by share</p>
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Count of U.S. Postsecondary and Secondary Credential Programs			
Credential Type	Program Count	Nature of Current Count	Method and Sources
Total	738,428		
Postsecondary Educational Institutions	370,020		
Title IV Schools – Degrees	212,802	Enumeration	Count – IPEDS
Title IV Schools – Certificates	111,941	Estimate	Count – IPEDS <u>plus</u> Extrapolation from 8 states' lists
Non-Title IV Orgs. – Degrees	3,188	Rough Estimate	Count – IPEDS <u>plus</u> Extrapolation from 8 states' lists
Non-Title IV Orgs. – Certificates	42,089	Rough Estimate	Count – IPEDS <u>plus</u> Extrapolation from 8 states' lists
MOOC Providers	7,132		
Microcredentials	629	Enumeration	Count – Class Central
Degrees from Foreign Universities	28	Enumeration	Count – Class Central
Course Completion Certificates	6,475	Enumeration	Count – edX, Coursera, FutureLearn, Kadenze
Non-academic Organizations	315,067		
Occupational Licenses	11,837	Estimate	Count – ETA License Finder <u>plus</u> Extrapolation from 10 states' lists
Industry-recognized Certifications	6,724	Estimate	Count – ETA Certification Finder and program accreditors <u>plus</u> Extrapolation from 3 industry lists
Military Certifications	1,378	Partial Enumeration	Count – COOL (accredited certificates not in Certification Finder)
Registered Apprenticeships	22,488	Enumeration	Count – ETA Apprenticeship Registry
Unregistered Apprenticeships	50	Partial Enumeration	Count – German- and Swiss-American company programs (less Registered Apprenticeships)
Coding Bootcamp Course Completion Certificates	1,014	Estimate	Count – CourseReport.com (less programs not available in U.S.)
Online Course Completion Certificates	80,117	Estimate	Sums provided by Udemy, Lynda, SkillSuccess
Digital Badges	191,459	Enumeration	Count – badge vendors (Badgr, Credly, Acclaim, LRNG, MyMantle, Participate)
Secondary Schools	46,209		
Public School Districts – Diplomas	33,540	Estimate	Count of number of public school districts, by state – CCD Count of number of diploma options, by state – Achieve
Private Schools – Diplomas	12,669	Estimate	Count of number of private secondary schools – PSS (Assume one diploma option per school)



The count for each credential type in the table is characterized in one of four ways—enumeration, partial enumeration, estimate, or rough estimate. These differ in terms of the *completeness* and the *certainty* of a count:

- Some databases (enumerations) are both complete and certain; that is, they include all the programs in the category.
- Some databases are certain, but not complete (partial enumerations).
- For some incomplete databases, researchers made an estimate of the missing part (estimates).
- Some credential types have no meaningful national database, so an estimate was mathematically modeled using program lists from a sample of states (rough estimates).

Enumerations were provided for six categories: partial enumerations for two; estimates for seven; and rough estimates for two. Observations about the solidity of the latter two types of counts are provided in the corresponding sections that follow.



Advances Since First Credential Count Estimate

In April 2018, Credential Engine produced the first iteration of this count—334,114 credentials across eight categories. The calculation was based on existing federal government and industry tallies for each type of credential. In this first analysis, researchers deemed:

- Counts in four categories to be *complete*—Title IV degrees, Title IV academic certificates, registered apprenticeships, and online alternative degrees.
- Counts in four categories to be *partial*—high school diplomas, industry-recognized certifications, occupational licenses, and bootcamp certificates.

The first report laid out a research agenda for preparing a more comprehensive count. The results of implementing that agenda are presented in this second credential count effort. Key differences from the first report include:

- **Estimates for eight additional credential categories**—non-Title IV degrees, certificates from non-Title IV schools, online degrees from foreign universities, MOOC course completion certificates, military certifications, unregistered apprenticeships, online course completion certificates, and digital badges.
- **Expanded counts for six categories**—certificates from Title IV schools, MOOC microcredentials (formerly online alternative degrees), occupational licenses, industry-recognized certifications, public school district high school diplomas, and private secondary school diplomas.
- **Updated, improved counts for three categories**—Title IV degrees, registered apprenticeships, and bootcamps.



CREDENTIAL CATEGORIES: DEFINITIONS AND METHODOLOGIES

This section discusses each of 17 credential categories in detail. The categories are organized into four groupings by type of institution—postsecondary educational institutions (four credential categories), MOOC providers (three), non-academic organizations (eight), and secondary schools (two). Each credential is defined, and the sources and methods of the count are explained and discussed.

Postsecondary Educational Institutions

Count of U.S. Postsecondary and Secondary Credential Programs				
Credential Type	Program Count	Change from Previous Estimate	Nature of Current Count	Method and Sources
Postsecondary Educational Institutions	370,020	89,110		
Title IV Schools – Degrees	212,802	(1,111)	Enumeration	Count – IPEDS
Title IV Schools – Certificates	111,941	44,944	Estimate	Count – IPEDS <u>plus</u> Extrapolation from 8 states' lists
Non-Title IV Orgs. – Degrees	3,188	3,188	Rough Estimate	Count – IPEDS <u>plus</u> Extrapolation from 8 states' lists
Non-Title IV Orgs. – Certificates	42,089	42,089	Rough Estimate	Count – IPEDS <u>plus</u> Extrapolation from 8 states' lists

Degrees in Title IV Institutions (Enumeration)

Nature of Credential

A degree is a type of award conferred by a college, university, or other postsecondary educational institution as official recognition for the successful completion of a program of study. Primary degree levels include associate's, bachelor's, master's, doctoral, and specific professional degrees (such as M.D. [doctor of medicine] and J.D. [Juris doctor of law]).

A Title IV postsecondary education institution is one that has a written agreement with the U.S. Secretary of Education that allows the institution to participate in Title IV federal student financial assistance programs.

Credential Count—Source and Method

For a count of Title IV degrees, researchers relied on the most recent data from the Integrated Postsecondary Education Data System (IPEDS) maintained by the National



Center for Education Statistics (NCES) in the U.S. Department of Education.³ IPEDS covers the universe of nearly 7,000 schools categorized as Title IV institutions. Under Title IV, these schools are required to submit program and student data to NCES for all for-credit programs for which students may receive Title IV funds.

Notes on Data

In light of the requirement of Title IV institutions to submit program-specific data for all Title IV-eligible degree programs, the researchers view the count provided through IPEDS as a complete enumeration.

Certificates in Title IV Institutions (Estimate)

Nature of Credential

A certificate is a type of award conferred by a college, university, or other postsecondary educational institution certifying the satisfactory completion of a non-degree program of study. Typically, the course requirements for earning a certificate are less than those for earning a degree. Most certificates can be completed with one year of full-time academic effort.

A certificate may be for-credit (academic certificate) or non-credit (continuing education certificate). This credential category counts both academic and continuing education certificates in Title IV institutions. Students taking continuing education programs at Title IV institutions are not eligible to receive federal financial aid to pay for program tuition.

Credential Count—Source and Method

Researchers recognized that, unlike Title IV degrees, the count of certificates in IPEDS is somewhat problematic, according to recent studies.⁴ While IPEDS intends to include academic certificate programs and exclude continuing education certificate programs, numerous schools upload data for the latter into IPEDS. IPEDS does not distinguish between the two types of certificates. Further, IPEDS has difficulty accurately counting stacked credentials (as when the completion of three certificates leads to the award of a fourth that subsumes the first three).

The number of non-credit programs in IPEDS seems significant. Researchers found that among certificate programs that are both in IPEDS and a state list, 18% were listed by the state as a non-credit program. Quite often, universities report to IPEDS non-credit programs offered through an extension school.

In light of these issues, researchers estimated the number of certificate programs (credit and non-credit) in Title IV schools by taking the following steps:

3. See <https://nces.ed.gov/ipeds>.

4. See two reports of the National Postsecondary Education Cooperative: "Defining and Reporting Subbaccalaureate Certificates in IPEDS," 2012, at <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=NPEC2012835>, and "Collecting and Disseminating Data on Certificate Awards," 2016, at <https://eric.ed.gov/?id=ED589579>. Also see RTI International, "Report and Suggestions from IPEDS Technical Review Panel #52: 2017 Subbaccalaureate Certificates," 2017, at https://edsurveys.rti.org/IPEDS_TRP_DOCS/prod/documents/TRP52_Summary.pdf.



1. Prepared a count of certificate programs in IPEDS (66,819).
2. Gathered lists of education and training programs approved by education and workforce agencies in eight states.⁵
 - Each state higher education agency has a list of approved postsecondary programs, including academic certificates in Title IV institutions.⁶
 - Each state workforce agency has a list of training programs eligible for tuition reimbursement under the Workforce Innovation and Opportunity Act (WIOA). Eligible training provider lists can include both credit and non-credit certificate programs.
3. Compared individual certificate programs on state lists with those in IPEDS; identified Title IV school programs in the former and not in the latter.
4. Talled the number of Title IV school certificate programs on state lists and not in IPEDS.
5. Calculated the percent of the U.S. population residing in the eight sample states (29.2%).
6. To estimate the total number of Title IV school certificate programs omitted from IPEDS, divided the number produced in Step 4 by the number produced in Step 5.
7. Added the numbers produced in Steps 1 and 6.

Notes on Data

This count (111,941) is an estimate based on a partial enumeration (IPEDS) plus an extrapolation from a count in eight states of non-IPEDS certificates. In light of issues with the IPEDS database regarding the number and credit status of certificate programs, identifying and extrapolating from additional programs in states with almost a third of the nation's population seems an appropriate alternative approach, given research resource limits and the fact that some states do not provide web access to usable program lists.

That said, as states may vary from one another in terms of completeness of IPEDS certificates coverage (adjusted for population size), the actual count may be higher or lower than the estimate provided here.

Degrees in Non-Title IV Organizations (Rough Estimate)

Nature of Credential

This category includes academic degrees offered by postsecondary institutions without a Title IV designation. Typically, such institutions are proprietary.

5. The eight states are Connecticut, Florida, Illinois, Maryland, Missouri, New Jersey, Texas, and Virginia. Researchers obtained 19 education and workforce development program lists from among these states.

6. Proprietary schools can be Title IV institutions.



Credential Count—Source and Method

As some non-Title IV institutions voluntarily submit their degree program data to IPEDS, researchers followed an approach similar to that for certificates in Title IV institutions:

1. Prepared a count of degree programs in IPEDS sponsored by non-Title IV organizations (663).
2. Gathered lists of approved education and training programs prepared by education and workforce agencies in eight states.
3. Compared the degree programs in non-Title IV organizations on the state lists with those in the IPEDS database, identifying any programs in the former but not in the latter.
4. Talled the number of non-Title IV school degree programs on state lists and not in IPEDS.
5. Calculated the percent of the U.S. population residing in these eight states (29.2%).
6. Estimated the total number of non-Title IV school degree programs omitted from IPEDS by dividing the number produced in Step 4 by the number produced in Step 5.
7. Added the numbers produced in Steps 1 and 6.

Notes on Data

The count (3,188) is a rough estimate. As no comprehensive national registry of non-Title IV degree programs currently exists, identifying additional programs in states covering almost a third of the nation's population seems an appropriate alternative approach, given resource limits that precluded examining all states and territories.

As states may vary from one another in terms of the number of non-Title IV degree offerings (adjusted for population size), the actual count may be higher or lower than the estimate provided here.

Certificates in Non-Title IV Organizations (Rough Estimate)

Nature of Credential

This category includes certificates offered by postsecondary institutions without a Title IV designation.

Credential Count—Source and Method

As some non-Title IV institutions voluntarily submit their school certificate program data to IPEDS, researchers followed an approach similar to that for certificates in Title IV institutions:

1. Prepared a count of certificate programs in IPEDS sponsored by non-Title IV organizations (571).



2. Gathered lists of approved education and training programs prepared by education and workforce agencies in eight states.
3. Compared the certificate programs in non-Title IV organizations on the state lists with those in the IPEDS database, identifying any programs in the former but not in the latter.
4. Talled the number of non-Title IV school certificate programs on state lists and not in IPEDS.
5. Calculated the percent of the U.S. population residing in these eight states (29.2%).
6. Estimated the total number of non-Title IV school certificate programs omitted from IPEDS by dividing the number produced in Step 4 by the number produced in Step 5.
7. Added the numbers produced in Steps 1 and 6.

Notes on Data

This count (42,089) is a rough estimate. As no comprehensive national registry of certificate programs in non-Title IV organizations currently exists, identifying additional programs in states covering almost a third of the nation's population seems an appropriate second-best solution, given resource limits that precluded examining all states and territories.

As states may vary from one another in terms of the number of non-Title IV certificate offerings (adjusted for population size), the actual count may be higher or lower than the estimate provided here.



MOOC Providers

Massive open online course (MOOC) providers offer students electronic platforms for taking courses at a distance. Through MOOC providers (such as Coursera, edX, Udacity, and FutureLearn), diverse education and training organizations offer academic degrees and “microcredentials.” Some MOOC providers also offer course completion certificates.

Organizations offering academic degrees and microcredentials through MOOCs include U.S. and foreign universities and colleges, large U.S.-based businesses (such as IBM, Autodesk, Cisco, Google, SAS, and Microsoft), smaller U.S.-based businesses (such as deeplearning.ai and Unity), nonprofits (such as Linux Foundation), non-U.S.-based businesses (such as Yandex), and non-academic training organizations (such as HubSpot Academy and Palo Alto Networks).

Count of U.S. Postsecondary and Secondary Credential Programs				
Credential Type	Program Count	Change from Previous Estimate	Nature of Current Count	Method and Sources
MOOC Providers	7,132	7,085		
Microcredentials	629	582	Enumeration	Count—Class Central
Degrees from Foreign Universities	28	28	Enumeration	Count—Class Central
Course Completion Certificates	6,475	6,475	Enumeration	Count—edX, Coursera, FutureLearn, Kadenze

Microcredentials (Enumeration)

Nature of Credential

A microcredential is defined as an online educational credential that *covers more than a single course but is less than a full degree*.⁷ Each MOOC platform uses unique labels for the microcredentials it offers:

- Coursera—Specializations, MasterTrack Certificates
- edX—Professional Certificates, Professional Education, MicroMasters, XSeries
- FutureLearn—Programs, Graduate Certificates, Graduate Diplomas
- Udacity—Nanodegrees
- Kadenze—Programs
- XuetangX—Micro-degrees⁸

7. Dhawal Shah, “By The Numbers: MOOCs in 2018,” MOOC Report, December 11, 2018, at <https://www.classcentral.com/report/mooc-stats-2018/>.

8. Dhawal Shah and Laurie Pickard, “Analysis of 450 MOOC-based Microcredentials Reveals Many Options but Little Consistency,” MOOCReport, July 18, 2018, at <https://www.class-central.com/report/moocs-microcredentials-analysis-2018/>.



Credential Count—Method and Source

The count for MOOC microcredentials (629) is taken from a table in Class Central's annual report on MOOCs, produced in December 2018.⁹

Notes on Data

This count is an enumeration. In last year's report, researchers were aware of two types of microcredentials (MicroMasters and Nanodegrees). Identification of the annual Class Central census of microcredential programs, by type, allows a more complete count.

Degrees from Foreign Universities (Enumeration)

Nature of Credential

According to Class Central, MOOC providers offer opportunities to earn an academic degree (primarily bachelor's or master's) online from a university. The majority of these degree programs are sponsored by universities in Australia, the United Kingdom, and France, and so are not included in IPEDS. The remaining programs are offered by large, well-known American universities. A review of several U.S. online programs indicates that each offers students access to federal financial aid. The researchers assume, then, that each U.S.-based program is listed in IPEDS and so included in the Title IV degrees count presented earlier.

Credential Count—Source and Method

The count for foreign academic degree programs through MOOC providers (28) is taken from a program list in Class Central's annual report on MOOCs, produced in December 2018.¹⁰

Notes on Data

This count is an enumeration. The category was not included in the previous report.

Course Completion Certificates (Enumeration)

Nature of Credential

A course completion certificate from a MOOC provider indicates that the holder has completed a specific course.

Credential Count—Source and Method

Four MOOC providers (Coursera, edX, FutureLearn, and Kadenze) offer students the option of obtaining a certificate of course completion. Each MOOC provider's website indicates the number of courses it offers. Researchers summed the number of courses across the four websites.

Notes on Data

This count is the enumeration. Udacity does not offer course completion certificates.

⁹ Shah, *op.cit.*

¹⁰ *Ibid.*



Non-academic Organizations

Count of U.S. Postsecondary and Secondary Credential Programs				
Credential Type	Program Count	Change from Previous Estimate	Nature of Current Count	Method and Sources
Non-academic Organizations	315,067	285,364		
Occupational Licenses	11,837	2,973	Estimate	Count – ETA License Finder <u>plus</u> Extrapolation from 10 states' lists
Industry-recognized Certifications	6,724	1,259	Estimate	Count – ETA Certification Finder and program accreditors <u>plus</u> Extrapolation from 3 industry lists
Military Certifications	1,378	1,378	Partial Enumeration	Count – COOL (accredited certificates not in Certification Finder)
Registered Apprenticeships	22,488	8,832	Enumeration	Count – ETA Apprenticeship Registry
Unregistered Apprenticeships	50	50	Partial Enumeration	Count – German- and Swiss-American company programs (less Registered Apprenticeships)
Coding Bootcamp Course Completion Certificates	1,014	(704)	Estimate	Count – Courserreport.com (less programs not available in U.S.)
Online Course Completion Certificates	80,117	80,117	Estimate	Sums provided by Udemy, Lynda, SkillSuccess
Digital Badges	191,459	191,459	Enumeration	Count – badge vendors (Badgr, Credly, Acclaim, LRNG, MyMantle, Participate)

Occupational Licenses (Estimate)

Nature of Credential

Each state requires persons practicing specific professions and vocations to first obtain an occupational license from a state licensing board. According to the National Conference of State Legislatures (NCSL), “When implemented properly, occupational licensing can help protect the health and safety of consumers by requiring practitioners to undergo a designated amount of training and education in their field.”¹¹

Credential Count—Source and Method

The count in this report (11,837) was determined by calculating the number of state-specific occupation-specific licenses in the U.S. Department of Labor (DOL) License Finder, estimating the number of such licenses not included in License Finder, and adding these two numbers.

License Finder is a database and search tool maintained on the DOL CareerOneStop website.¹² At last count, License Finder contained 8,860 unique licenses. Information on the site is gathered by each state’s Labor Market Information agency under a DOL grant. Licenses

11. See NCSL Occupational Licensing Project at <http://www.ncsl.org/research/labor-and-employment/occupational-licensing.aspx>.

12. See <https://www.careeronestop.org/toolkit/Training/find-licenses.aspx>.



reported by the states to the DOL are included in License Finder if they have sufficient descriptive information.¹³

To ascertain the completeness of License Finder, researchers obtained a list of occupational licenses from each of 10 states and determined if each listing was present in or absent from License Finder.¹⁴ (These states account for 39.2% of the U.S. population.) In the comparison effort, researchers sought to address differences in nomenclature, variation in the specificity of licenses included, and the presence of business licenses on some state lists.

Across the 10 states, the percent of occupational licenses not included in License Finder ranged from a low of 13.3% (New York) to a high of 57.5% (Texas). The median state figure was 37.6%; the average state figure was 35.3%; and the percent of licenses across all 10 states not in License Finder (i.e., treating it as one large sample) was 33.6%.

The number of unique occupational licenses varies greatly by state and is not correlated by state population size. For instance, while Texas has 176 licenses and New York has 166, Oklahoma has 461 licenses and Oregon has 458.

In light of the great variations by state in terms of number of licenses and the percent not in License Finder, and the fact that the 10 states comprise well over a third of the U.S. population, researchers decided to treat the 10 states as one collective sample and increase the License Finder count by 33.6% (2,977), bringing the nationwide estimate to 11,837. Based on the evidence, the researchers believe that the true number of unique licenses is between 11,000 and 14,000.

Notes on Data

This count (11,837) is an estimate based on a partial enumeration (License Finder) plus an extrapolation from a count in 10 states of licenses not included in License Finder. In light of the demonstrated incompleteness of License Finder, identifying and extrapolating from additional licenses in states with over a third of the nation's population seems an appropriate alternative approach, given research resource limits and the fact that some states do not provide web access to license lists.

That said, as states may vary from one another in terms of completeness of coverage in License Finder (adjusted for population size), the actual count may be higher or lower than the estimate provided here.

The count differs from that of the prior report (8,864) because the latter counted only the licenses in License Finder.

Additional resources examined, but not relied on, include the NCSL Occupational Licensing Project and the Center for the Study of Occupational Regulation (CSOR) at St. Francis University in Loretto, Pennsylvania.¹⁵

13. The necessary information includes license title, state, licensing authority, occupation, issuing agency contact information, and description of requirements. License Finder does not include business licenses (i.e., license to operate a business) or certain city-issued licenses (e.g., a taxi license).

14. The 10 states include California, Colorado, Michigan, New York, Oklahoma, Oregon, Texas, Utah, Washington, and Wisconsin. A list of occupational licenses was found on each state government's website.

15. See footnote 11 for NCSL project web address. For CSOR, see <https://csorsfu.com/>.



Industry-recognized Certifications (Estimate)

Nature of Credential

An industry-recognized certification is a time-limited, renewable credential awarded by an authoritative body—such as an industry or professional association—to an individual who demonstrates designated knowledge, skills, and abilities in a particular occupation. An individual takes courses to prepare for a competency examination. The organizations providing the courses, administering the tests, and designing the courses and tests are not always the same organizations sponsoring the certification.

Two major certification test administrators are Prometric and Pearson VUE.¹⁶

Credential Count—Method and Source

The count in this report (6,724) was determined by calculating the number of unique industry-recognized certifications in the Department of Labor (DOL) Certification Finder, estimating the number of such certifications not included in Certification Finder, and adding these two numbers.

Certification Finder is a database and search tool maintained on the DOL CareerOneStop website.¹⁷ At last count, Certification Finder contained 5,515 unique industry-recognized certifications.

Information on the site is gathered by the Minnesota Department of Employment and Economic Development on behalf of the DOL. A certification is included in Certification Finder if it can be applied to an identifiable profession; is not a state license; offers a final test of the skills or experience a person has gained and determines that the progress is acceptable; provides a certificate or document award at completion; is nationally recognized; and clearly communicates its credibility and value (e.g., member services or accreditation listed on a website).

National recognition can be achieved in two ways. One is through accreditation by an outside, independent accreditation agency. The primary ones are the American National Standards Institute (ANSI) and the National Commission for Certifying Agencies (NCCA).¹⁸ The second is for the certification sponsor to meet the criteria of a nationally recognized organization.¹⁹

Using a variety of additional resources, researchers then compiled a list of industry-recognized certification programs in three industries (manufacturing, health care/medical, and information technology) and related occupational groups (production and repair, health care practitioners and health care support, and computer and mathematical

16. See <https://www.prometric.com/en-us/Pages/home.aspx> and <https://home.pearsonvue.com/>. These organizations develop and administer tests for other purposes, such as academic admissions. At the same time, several other smaller organizations also administer certification tests.

17. See <https://www.careeronestop.org/Toolkit/Training/find-certifications.aspx>.

18. See <https://www.ansi.org/accreditation/default> and <http://www.credentialingexcellence.org/ncca>.

19. Nationally recognized organizations provide membership benefits, such as, but not limited to the following: being involved in developing skill standards for certification; having a training or certification committee; maintaining a registry of certificants; publishing a newsletter; maintaining a job bank; holding professional development conferences; and having either online testing or a nationwide system of testing centers. (Source: email communication with CareerOneStop consultant, December 1, 2017).



occupations). These additional resources include an ANSI accredited program list, the NCCA accredited program list, members of the National Network of Business and Industry Associations, an ANSI/WorkCred report on credentials, and several industry-specific lists. It was determined that the industries and occupations represented on the research list provided 44% of the certifications listed in Certification Finder.

Researchers identified 532 certification programs on their list and not on Certification Finder. It did not determine the extent to which these additional programs did not meet the criteria for inclusion in Certification Finder.

The number of additional certification programs in the three sample industries was added to the number in Certification Finder in those industries (2,427), yielding a count of 2,959, an increase of 21.9%. Researchers then inflated the remaining number of programs in Certification Finder by the same amount to get a total estimate of 6,724.

Notes on Data

This count (6,724) is an estimate based on a partial enumeration (Certification Finder) plus an extrapolation from three industries of certifications not included in Certification Finder. In light of the demonstrated incompleteness of Certification Finder, identifying and extrapolating from additional certifications in industries representing nearly half of the listings in Certification Finder seems an appropriate alternative approach, given research resource limits and the fact that many industries do not compile certification lists.

As industries may vary from one another in terms of completeness of coverage in Certification Finder, the actual count may be higher or lower than the estimate provided here.

The count in this category is greater than that in the previous report (5,465), as the latter counted only those certification programs listed in Certification Finder.

Military Certifications (Partial Enumeration)

Nature of Credential

Each branch of the U.S. Military (Air Force, Army, Marine Corps, Navy, and Coast Guard) offers service personnel opportunities to obtain certifications of achievement of specific competencies.

Credential Count—Source and Method

Each service branch provides a listing of available credentials (certifications, licenses, apprenticeships) on its own Credentialing Opportunities On-Line (COOL) website.²⁰ Researchers identified the number of certifications offered through each site. However, they found it difficult to determine if some military certification programs connote the same type of achievement as industry-recognized certifications. Consequently, this report counts only military certifications accredited by a national organization. It also does not count 80 accredited military certifications that are in COOL and Certification Finder, leaving a total of 1,378.

20. All military branch COOL websites are accessible through Military One Source at <https://www.militaryonesource.mil/military-life-cycle/separation-transition/employment-education/credentialing-yourmilitary-experience>.



Notes on Data

This count is a partial enumeration, as it does not include unaccredited military certifications.

Registered Apprenticeships (Enumeration)

Nature of Credential

An apprenticeship is a program for training practitioners of a trade or profession with a combination of on-the-job training and classroom instruction.

The Office of Apprenticeship (OA) in the U.S. Department of Labor (DOL) manages a registered apprenticeship system, as authorized by the National Apprenticeship Act.²¹ An individual employer, labor organization, educational institution or an industry association can sponsor a registered apprenticeship program. Sponsors can register their program standards and apprentices with OA or a state apprenticeship agency (SAA) recognized by the DOL. SAAs oversee registered apprenticeship programs in 25 states and the District of Columbia. OA performs that role in the remaining 25 states.²²

Each registered apprenticeship program must meet standards and regulations established under the National Apprenticeship Act. At the successful completion of on-the-job and instructional learning with an employer, apprentices in a registered apprenticeship program receive an employer-approved, nationally recognized Certificate of Completion from the SAA or OA, as appropriate.

The registered apprenticeship system also includes the United Services Military Apprenticeship Program (USMAP), which provides active duty Navy, Coast Guard, and Marine Corps service members the opportunity to improve their job skills and complete civilian apprenticeship requirements while on active duty. For USMAP graduates, OA provides the nationally recognized Certificate of Completion upon program completion.²³

Credential Count—Source and Method

The count of active registered apprenticeship programs is provided annually by OA on its website.²⁴ USMAP is included in this count; pre-apprenticeship programs are not.

Notes on Data

This count (22,488) is an enumeration and substantially higher than the count previously reported (13,656). The prior tally was taken from a public data portal that lists programs only in the states that report directly to OA. This count was incomplete, as it excluded states that do not share their program data directly with OA. In this updated count, estimates include all states (both OA-linked and state-administered). The OA receives data from all states quarterly and reports a national count annually; data from SAA-managed states are not otherwise aggregated.

21. See <https://www.doleta.gov/oa/apprenticeship.cfm>.

22. See <https://www.doleta.gov/oa/stateagencies.cfm> for a list of SAAs.

23. See <https://doleta.gov/OA/usmap.cfm>.

24. See "National Registered Apprenticeship Results" at https://doleta.gov/oa/data_statistics.cfm. The latest count available in time for this research was for Fiscal Year 2017.



Unregistered Apprenticeships (Partial Enumeration)

Nature of Credential

While the registered apprenticeship system operated by the U.S. Department of Labor (DOL) is the primary mechanism for organizing the nation's apprenticeship programs, a number of organizations sponsor apprenticeship programs outside that system. In particular, a number of firms headquartered in Germany and Switzerland (nations with strong apprenticeship systems) offer unregistered apprenticeship programs in the U.S.

Credential Count—Source and Method

One hundred employer-based apprenticeship programs in the U.S. are certified and listed by the German-American Chambers of Commerce or endorsed by the Swiss-American Chamber of Commerce.²⁵ Of these, 50 are registered with the registered apprenticeship system. The researchers consider the remaining 50 to be unregistered apprenticeships.

Notes on Data

The prior report did not contain any count of unregistered apprenticeships.

The number in the current report is a partial enumeration. While it is expected that additional employers offer unregistered apprenticeship-type programs, it currently is not possible to obtain an accurate, meaningful tally beyond that calculated here, as such programs are not currently regulated by federal or state governments and there is no central registry.

Researchers did contact a number of organizations that offer customized apprenticeship development services to businesses and was told that many of the apprenticeship programs created are registered.

In 1993, the DOL carried out a Survey of Employer-Provided Training (SEPT) that estimated 18.9% of non-farm private establishments offered apprenticeship training (defined as "a structured process by which individuals become skilled workers through a combination of classroom instruction and on-the-job training").²⁶ In that year, there were roughly 7 million non-farm private establishments. If the SEPT was accurate, then, about 1.3 million establishments had an apprenticeship program. Unfortunately, the survey results provided no more information and the survey was not repeated. And as the survey did not gauge the nature and quality of each apprenticeship program, it is not possible to know whether and how the survey results have any meaning for Credential Engine's purposes today.

That said, the DOL is launching a new system of industry-recognized apprenticeship programs (IRAPs) that would operate alongside the registered apprenticeship system.²⁷ Essentially, the DOL would designate certain organizations as IRAP accrediting organizations, with the authority to provide accreditation to organizations that certify

25. See <http://www.gaccny.com/en/> and <https://www.amcham.ch/>.

26. Harley J. Frazis, Diane E. Herz, and Michael W. Horrigan, "Employer-provided training: results from a new survey," *Monthly Labor Review*, May 1995. Available at <https://www.bls.gov/opub/mlr/1995/05/art1full.pdf>.

27. See <https://www.apprenticeship.gov/industry-recognized-apprenticeship-program>.



apprenticeship programs that meet certain criteria. Each IRAP accrediting organization would need to prove to the DOL that it has the capability to perform this function and meet DOL standards. Once the IRAP system is created, the DOL could provide a regularly updated count of IRAPs.

Coding Bootcamp Course Completion Certificates (Estimate)

Nature of Credential

Coding bootcamps are a new type of training organization. The first coding bootcamp was founded in 2012, according to Course Report, the primary information source for the industry. Their intent is to improve markets for coders by reducing the length and cost of training compared to universities, to agilely adjust curricula in light of constant technical changes and employer demand, and to better meet employer needs for skilled coders.²⁸

Coding bootcamps provide instruction in-person, online, or both. While most have locations in one country, several offer courses in multiple nations. This analysis counts only bootcamps with a U.S. presence, either on location or online.

Coding bootcamps issue certificates of course completion. A review of Course Report and individual bootcamp websites indicates that trainers emphasize course content and outcomes over the nature of the credential provided (which often is not mentioned).²⁹

Credential Count—Source and Method

The Course Report directory of bootcamps is the primary source for a count of bootcamp course completion certificates.³⁰ The directory indicates that there are 562 schools. The directory provides a profile for 433 of these, of which 331 have a U.S. and/or online presence.³¹ Collectively, the latter offer 988 courses, almost three per school.

As the directory does not provide information on 129 schools, it was assumed that they have characteristics similar to those in the directory; that is, about three-quarters are accessible in the U.S., and offer three courses each, resulting in an additional 294 courses, for a total of 1,282 coding bootcamp courses.

Researchers then sought to estimate the extent to which coding bootcamps in the Course Report directory also are on state-eligible training provider lists (and so included in the counts of certificates from non-Title IV institutions). As noted earlier, in order to estimate the number of certificate programs in Title IV and non-Title IV institutions, researchers obtained

28. Lauren Stewart, "Changing the Face of the Tech Industry," Course Report, January 19, 2019, at <https://www.coursereport.com/blog/diversity-in-tech-why-tech-is-poised-to-see-a-change-in-2018>.

29. Course Report tells prospective bootcamp students that: "[T]he bootcamp you attend should be licensed by a state regulatory agency. Licensing often means that the school has to submit their curricula (and any major curricula changes) for approval, invest in liability insurance in case of closure, and publicize their course catalog. It does not mean that the code school is able to grant degrees." However, it does not provide any information regarding how the percentage of bootcamps are state-licensed. See "Find the Best Bootcamp for You," Course Report, at <https://www.coursereport.com/>.

30. See <https://www.coursereport.com/schools>.

31. As the Course Report website asserts in several places that there are "over 500 code schools worldwide," researchers assumed that the directory is underreporting.



approved provider lists from eight states.³² Researchers identified 90 bootcamps in the Course Report with a physical presence in those eight states and then determined that 20 of those bootcamps (22.2%) were on the approved provider lists. So as not to double-count, the nationwide estimate of 1,282 was reduced by the same percentage, yielding 997.

The Course Report also lists 17 bootcamp prep program courses (that are excluded from the directory), resulting in a total count for this report of 1,014.³³

Notes on Data

This count (1,014) is an estimate based on a partial enumeration (Course Report directory listings with a profile), plus an estimate of the number of credentials from non-profiled bootcamps in the directory, minus an estimate for bootcamps on state-eligible training provider lists. In light of the demonstrated incompleteness of Course Report directory profiles, estimating the number of credentials offered by non-profiled camps seems an appropriate alternative approach. And in light of an incomplete accounting of bootcamps also on eligible training provider lists, an additional estimate was required. The actual count may be higher or lower than the one provided here.

The first credential counts estimate included a count of all bootcamp courses (1,718), regardless of location.

Online Course Completion Certificates (Estimate)

Nature of Credential

In addition to MOOC providers, a number of other web-based organizations offered a wide array of online courses. Courses vary greatly in length and depth, with many able to be completed in a few hours. The largest of these include Udemy, Lynda.com, SkillSuccess, and Skillshare.

While MOOC providers are intermediaries that offer a web platform for course delivery and multi-course credential programs by academic institutions and businesses, online course providers do not serve large education and training organizations, and do not offer microcredentials or degrees.

Certificates in this category indicate a student has completed an online course.

Credential Count—Source and Method

Three of the four major online course providers (Udemy, Lynda.com, SkillSuccess) offer students the option of obtaining a certificate of course completion.

Each course provider's website indicates the number of courses it offers. Researchers summed the number of courses across the three websites (80,117).

32. Connecticut, Florida, Illinois, Maryland, Missouri, New Jersey, Texas, and Virginia.

33. Imogen, Crispe, "The Best Bootcamp Prep Programs," Course Report, January 18, 2019, at <https://www.coursereport.com/blog/coding-bootcamp-prep-programs-the-ultimate-guide>.



Notes on Data

Skillshare does not offer course completion certificates. Other online course providers offering completion certificates may exist. In light of the uncertainty, this count is considered to be an estimate.

Digital Badges (Enumeration)

Nature of Credential

According to OpenBadges.org:

Open badges are verifiable, portable digital badges with embedded metadata about skills and achievements. They comply with the Open Badges Specification and are shareable across the web.

Each open badge is associated with an image and information about the badge, its recipient, the issuer, and any supporting evidence. All this information may be packaged within a badge image file that can be displayed via online CVs and social networks. Thousands of organizations across the world issue badges in accordance with the Open Badges Specification, from nonprofits to major employers to educational institutions at all levels.

Because the system is based on an open standard, recipients can combine multiple badges from different issuers to tell the complete story of their verifiable achievements—both online and off. Open badges can be displayed wherever recipients want them on the web, including on social media profiles and through services that store and display badges. Badges can be shared for employment, education, or lifelong learning.

Anyone can issue a badge, receive one, verify that a badge is real, or inspect the metadata and any associated evidence. Badge issuers can certify that their badges are technically compliant with the specification, and therefore can be readily moved among issuers and display sites. Badges can be used to set goals, motivate behaviors, connect learning environments, and communicate achievements across many contexts.³⁴

The Open Badges Specification, published by the IMS Global Learning Consortium, standardizes how badges are digitally represented.³⁵

The Open Badges Specification can be used to validate another credential type. For example, the American Medical Certification Association use badges as one part of its verification services for the Phlebotomy Technician Certification.

34. See <https://openbadges.org/get-started/>.

35. See <https://www.imsglobal.org/sites/default/files/Badges/OBv2p0Final/index.html>.



Credential Count—Source and Method

In fall 2018, Credential Engine staff conducted a survey of badge vendors via the IMS Global Open Badges Workgroup concerning badge classes in America. Participating badge vendors included Badgr, Credly (now also includes Acclaim), LRNG, MyMantle, and Participate.

Aggregating across all responses yielded a badge class count of 191,459. This count does not include badge classes that are self-hosted by the issuing party, the incidence of which is unknown, although believed to be comparatively low.

Notes on Data

Digital badges were not counted in the first credential counts estimate. The number of unique digital badges makes up 29.4% of this report's total count.



Secondary Schools

Count of U.S. Postsecondary and Secondary Credential Programs				
Credential Type	Program Count	Change from Previous Estimate	Nature of Current Count	Method and Sources
Secondary Schools	46,209	22,755		
Public School Districts – Diplomas	33,540	19,956	Estimate	Count of number of public school districts, by state – CCD Count of number of diploma options, by state – Achieve
Private Schools – Diplomas	12,669	2,799	Estimate	Count of number of private secondary schools – PSS (Assume one diploma option per school)

Public Secondary School Diplomas (Estimate)

Nature of Credential

A diploma is a North American academic school-leaving qualification awarded upon high school graduation after a course of study over four years, from grade 9 through grade 12.

In public school districts, the diploma is typically awarded by a school in accordance with the requirements of the local state or provincial government. Requirements for earning the diploma vary by jurisdiction, and there may be different requirements for different streams or levels of high school graduation.³⁶ This credential excludes high school equivalency and other high school completers (e.g., those granted a certificate of attendance).

Each state offers one or more types of high school graduation options, ranging from one (25 states) to eight (New York).

States define diplomas and graduation requirements differently and may offer one diploma, multiple diplomas, multiple courses of study leading to one diploma, or endorsements students may earn in addition to a standard diploma.³⁷

Credential Count—Source and Method

The number of public secondary school diplomas was determined by:

1. Counting the number of public school districts in each state that offers a high school diploma.
2. Multiplying each state's number by the number of that state's graduation options.
3. Summing across the states.³⁸

The source of the list of school districts offering grade 12, by state, was the U.S. Department of Education's Common Core of Data (CCD).³⁹ Categories for the count included regular

36. See https://en.wikipedia.org/wiki/High_school_diploma.

37. From the Achieve Data Explorer, at <https://highschool.achieve.org/data-explorer>.

38. A substantial number of districts do not go to grade 12 and were excluded from this analysis.

39. See <https://nces.ed.gov/ccd/>.



school districts, specialized public school districts, and independent charter school districts. The nationwide count of public school districts with grade 12 was 12,642 in 2017–18.

According to Achieve.org, 25 states have one high school graduation option, 13 have two options, three offer three, six offer four, and one state each offers five (Wyoming), six (North Carolina), seven (Texas), and eight (New York).⁴⁰

Calls to education agencies in eight states with more than one graduation option indicated that nearly all school districts with grade 12 offer each graduation option. For the purposes of simplicity, then, the count estimate was calculated by multiplying the number of school districts in a state that offer grade 12 by the number of graduation options in that state. The total was 33,540.

Notes on Data

The number in this report (33,540) is substantially greater than that in the initial credential count estimate (13,584) in that, to be conservative in the absence of state-specific information, each public school was counted only once, regardless of the number of state graduation options.

This count is deemed an estimate in light of the assumption made that each school district offers the number of graduation options allowed by its state. It is possible that the actual count is smaller than the number provided here.

The number of school districts reported this time (12,642) was fewer than last time (13,584), as districts without a grade 12 are now excluded.

Private Secondary School Diplomas (Estimate)

Nature of Credential

This category covers high school diplomas offered by private secondary schools.

Credential Count—Method and Source

The U.S. Department of Education indicates that in 2015–16 there were 12,669 private schools with secondary grades.⁴¹

On the assumption that each school offers one type of diploma, the estimated count of credential programs is the same as the number of schools.

Notes on Data

The number reported here (12,669) is greater than that reported in April (9,870), as it includes both stand-alone secondary schools (2,946) and combined primary-secondary schools (9,723).

This count is considered an estimate, in light of the assumption that each private school offers one type of credential. The actual number could be greater than that provided here.

40. From the Achieve Data Explorer, at <https://highschool.achieve.org/data-explorer>.

41. See <https://nces.ed.gov/surveys/pss/tables/TABLE16.asp>.



Conclusion

We now have a better understanding of not only the number of credentials in the United States but also the range of programs. In this report, estimates of both the breadth and number of credentials expanded substantially, with the count more than doubling our preliminary estimate in 2018. This work can inform both policy and practice in the education and workforce fields. However, to truly leverage this new knowledge, we still need an even more rigorous accounting and a better understanding of the value and relative returns of various credentials.

This report, in many ways, raises as many questions as it answers—such as whether we have enough credential options to meet the needs of both the economy and individual Americans. We also know that the number and types of credentials are in constant flux, as they react to market needs and innovations in education. Thus, any static count will be obsolete as soon as it's created. This is why we are creating the Credential Registry—to provide a common location and language for credentials that will update in real time to vastly advance our understanding of the full credential marketplace. With those tools, reports of this kind will no longer be necessary. This work is critical to answering pressing questions about whether the current mix of credentialing programs in the United States is equipped to power the economy and promote individual mobility—and if not, how we might change it.



Navigating the Credential Marketplace: A How-to Guide



A wide range of credentials—from certificates, certifications, and licenses to badges, apprenticeships, and degrees of all types and levels—have value for individuals and employers in the marketplace. Credential Engine estimates that there are more than 738,000 unique credentials in the United States alone.

The number of both traditional and non-degree credentials is exploding, but as programs proliferate, it becomes more difficult to acquire information about the precise skills and abilities they develop, the pathways they support, and their impact on employment and earnings outcomes. At the same time, today's economy is in constant flux, bringing changing demands for skills and credentials. To keep up with these changing landscapes, there emerges an obvious need for and value of a common credential description language and a Credential Registry that is updated in real time to ensure that everyone can make informed decisions about education and career pathways. Credential providers, policymakers, employers, and regulatory agencies all have an important role to play in making this a reality.

Tackling credential transparency takes everyone. Join us!

TAKE ACTION

Credential and competency providers (education and training providers, employers offering certificates, or anyone issuing credentials and competencies)

- **Publish to the Credential Registry.** A robust library of credential data, which uses a common language and is searchable and updated in real time, is essential for creating better policies, making more informed decisions, and improving individual decision-making. [Explore how to start publishing your credential and competency information.](#)
- **Use the Credential Transparency Description Language.** Until now, there has not been a common language available to describe all credentials and competencies, making it difficult for employers, students, and policymakers to compare costs, pathways, relevance, and credential outcomes. Credential Engine and its partners have developed an open-source schema—the Credential Transparency Description Language, or CTDL—creating a dictionary of terms that provides a common approach to describing all types and levels of credentials, from diplomas, badges, certificates,



Navigating the Credential Marketplace: A How-to Guide



and apprenticeships to licenses, certifications, and degrees. The CTDL powers the Credential Registry, but also can be used on the open web to power information gathering. [Get started](#) using the CTDL to describe your credentials.

- **Make informed decisions with open data.** Build and use [applications](#) that leverage open credential data to help better understand trends in the marketplace, differentiate your offerings, describe how your credentials are part of broader pathways, improve navigation and guidance tools for learners and job seekers, and solve other pressing challenges.

Policymakers

- **Enact policy solutions that champion transparency.** Local, state, and federal decision-makers can adopt system, regulatory, and legislative solutions that will help scale and solidify credential transparency efforts, expand adoption of the Credential Transparency Description Language (CTDL), and continue to build a complete and comprehensive Credential Registry for all credential offerings. [Policy-focused solutions](#) can be implemented at every level to support this work.
- **Encourage participation in the Credential Registry.** Decision-makers within local, state, and federal governments—especially those who work in education and workforce agencies (e.g. Department of Education, Department of Labor, Workforce Board)—can [support training providers in their efforts to publish](#) to the Credential Registry.
- **Partner with Credential Engine.** Over a dozen states have officially partnered with Credential Engine to increase transparency. [Join this growing network.](#)

Employers, business associations, and vendors to the business community

- **Publish information on industry credentials.** If you are an association, corporation, or other organization that offers credentials, [publish your data](#) to the Credential Registry and use CTDL. Credential Engine's tools and resources offer [numerous benefits to the business community](#) and it's easy to [get started](#).
- **Use open data to strengthen your business.** If you are an HRIS vendor, integrate the Credential Registry into your tools and services. Use Credential Registry data to strengthen your hiring processes through a better understanding your prospective employees' credentials. [Applications are already in development](#) and it's easy to [get started](#).



Navigating the Credential Marketplace: A How-to Guide



Open data application developers

- **Integrate open data into existing and new tools.** Integrate open data into new tools that help transform the education and talent marketplace. Whether the application targets individual users, like students or guidance counselors, or organizations, like research firms and employers, credential data can be leveraged to help solve real-world problems. [Applications are already in development](#) and it's easy to [get started](#).

Quality assurance agencies (organizations that serve as accrediting or standardization bodies for credentials)

- **Contribute to transparency.** [Publish data](#) about your standards to the Credential Registry.
- **Utilize data from the Credential Registry.** [Use the data](#) in the Credential Registry to share updates to standards with credential providers in real time and help parents and students understand why your standards matter. Utilize the Credential Registry to better understand and compare new credentials.

Consumers and the general public

- **Advocate for transparency.** Help build a better education and workforce ecosystem through credential transparency. Continue to [learn](#) about and share why credential transparency has value for students and consumers. Encourage policymakers to implement practices and policies that expand adoption of the CTDL, participation in the Credential Registry, and the creation of applications for individual or institutional users.
- **Talk to decision-makers.** Reach out to credential providers, businesses, and standards agencies about [why their organization should publish](#) to the Credential Registry and utilize CTDL.

To learn more, visit us at www.credentialengine.org.





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