UNDERSTANDING
CERTIFICATIONS

CSW
Corporation for a
Skilled Workforce

THE GEORGE WASHINGTON UNIVERSITY
GEORGE WASHINGTON INSTITUTE OF PUBLIC POLICY

workcred
Connecting credentials,
competencies, careers, customers

an affiliate of ANSI

AUTHORS

This report was developed by seven members of a team conducting a two-year study of industry and occupational certifications. Authors include:

CORPORATION FOR A SKILLED WORKFORCE (CSW)

Larry Good, President & CEO

Evelyn Ganzglass, Senior Consultant

1100 Victors Way, Suite 10
Ann Arbor, MI 48108

skilledwork.org

GEORGE WASHINGTON INSTITUTE OF PUBLIC POLICY (GWIPP)

Stephen Crawford, Research Professor

Kyle Albert, Assistant Research Professor

Media and Public Affairs Building
805 21st Street, NW
Washington, DC 20052

gwipp.gwu.edu

WORKCRED

Roy Swift, Executive Director

Karen Elzey, Associate Executive Director

Isabel Cardenas-Navia, Director of Research

1899 L Street, NW, 11th Floor
Washington, DC 20036

workcred.org

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

INTRODUCTION

Many workers seek to acquire new skills and credentials that they hope will support their careers. They do so to stay current in their field, obtain promotions, change careers, or find work after a layoff. In the process, however, they face a confusing landscape of credentials—degrees, certificates, certifications, licenses, and badges.[1]

Among these, the least understood may be certifications, a type of credential that reliably indicates an individual has acquired the knowledge, skills, and abilities required to perform a specific occupation or job.

This report is intended as a primer to help policymakers and practitioners navigate the complex and little understood "wild west" of certifications. Awarded by industry groups, professional associations, and companies, certifications have the potential to be useful tools in addressing re-employment, re-deployment, and re-education challenges that workers face in the current labor market. According to a report by Credential Engine, more than 6,700 different certifications are currently awarded to millions of workers nationally.[2] In all, more than 43 million Americans hold a professional certification or a license.[3] Yet many employers, workers, students, policymakers, and education and workforce development practitioners know little about the use and value of certifications.
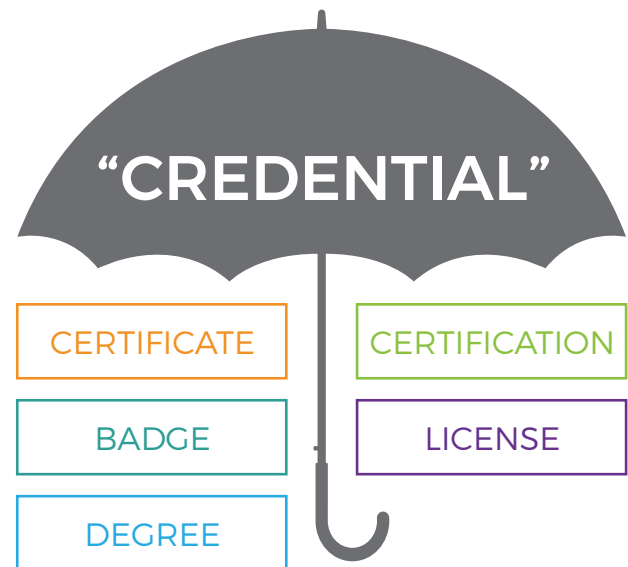
©2020, Workcred Inc., All Rights Reserved

The word "credential" is an umbrella term that can encompass a wide variety of different terms, including certifications. For a detailed explanation of their differences, see the following page.

---

1   See the video, **"Differing Types of Workplace Credentials"** for more information on the types and differences among credentials.
2   "Counting U.S. Secondary and Postsecondary Education Credentials," Credential Engine (September 2019): **https://credentialengine.org/counting-credentials-2019-report**.
3   Evan Cunningham, "Professional Certifications and Occupational Licenses: Evidence from the Current Population Survey," *Monthly Labor Review*, U.S. Bureau of Labor Statistics (June 2019): **https://doi.org/10.21916/mlr.2019.15**.

WHAT'S THE DIFFERENCE?

Apprenticeship certificates are credentials earned through work-based learning and postsecondary earn-and-learn models. They are applicable to industry trades and professions. Registered apprenticeship certificates must meet national standards.

Badges are digital representations of individuals' achievements, consisting of an image and metadata uniquely linked to the individual's skills. Digital badges have an issuer (institution that testifies), an earner (learner), and a displayer (site that houses the badge).

Certificates are credentials awarded by an education institution or other organization based on completion of all requirements for a program of study, including coursework and tests. They are not time limited and do not need to be renewed.

Certifications are credentials awarded by certification bodies—typically nonprofit organizations, professional associations, industry/trade organizations, or businesses—based on an individual demonstrating, through an examination process, that she or he has acquired the knowledge, skills, and abilities required to perform a specific occupation or job. Depending on the certification body, they may be called industry or professional certifications. Although training may be provided, certifications are not tied to completion of a program of study as are certificates. They are time limited and may be renewed through a recertification process. In addition, some certifications can be revoked for a violation of a code of ethics (if applicable) or proven incompetence after due process.

Degrees—associate, baccalaureate, and graduate—are awarded by public and private colleges and universities, and community colleges based on the completion of all requirements for a program of study. Programs of study vary in level, prerequisites, and length. Applied degrees provide enhanced career preparation through programs of study that combine theoretical and practical learning. Degrees are not time limited and do not require renewal.

Licenses are credentials that permit the holder to practice in a specified field. An occupational license is awarded by a government licensing agency based on pre-determined criteria. The criteria may include some combination of degree attainment, certifications, certificates, assessment, apprenticeship programs, and/or work experience. Licenses are time limited and must be renewed periodically. Similar to a certification, a license can be revoked for a violation of a code of ethics (if applicable) or proven incompetence after due process.

Non-degree credentials is an umbrella term that includes certificates, certifications, licenses, and badges.

The report discusses variations among certifications across numerous dimensions to make it easier to differentiate among the diversity of certifications in the marketplace, understand what constitutes a quality certification, and show how certifications can be used in building pathways to good jobs and further postsecondary learning.

WHAT ARE CERTIFICATIONS?

Certifications are attestations of their holders' ability to perform a set of skills relevant to a professional setting. They are awarded and tracked by certification issuers—typically nonprofit organizations, professional associations, industry or trade organizations, or businesses.

Certifications, like other types of credentials, vary significantly among themselves in the breadth and levels of knowledge, skills, and experiences they represent, and in the prerequisites and other requirements that people seeking the credential may need to meet. While some certifications can be obtained as standalone credentials, many are earned as a recognition of specialized skills held by workers already possessing a degree, such as nurse practitioners, occupational therapists, architects, and engineers. In some professions, state occupational licensing requires the licensee to hold a related certification.

WHY FOCUS ON CERTIFICATIONS NOW?

Enormous economic shifts predating and accelerated by the current worldwide pandemic caused by COVID-19, and the growing awakening to racial inequities in the U.S. are creating a labor market in which the use of certifications has the potential to grow significantly for several reasons:

Large numbers of workers may need to change to a different industry. Industry and occupational hiring patterns were already changing at a rapid pace before the pandemic. Now, it is likely that the number of people employed in several major industries will not recover to pre-pandemic levels for

HIGH-QUALITY CERTIFICATIONS ARE:

Based on third-party assessment. This oral, written, or performance-based assessment is based on a set of competency standards (minimum performance expectations) set through a defensible, industry- or profession-wide job analysis process which is reviewed/revised regularly.

Time limited and renewable. Requiring recertification to retain the credential ensures the holder's knowledge and skills are current and reflect changing needs within an industry and occupational area.

Revocable. Similar to an occupational license, some certifications can be revoked for a violation of a code of ethics (if applicable) or proven incompetence after due process.

many years, meaning both long-term displacement for many laid off workers and fewer opportunities for individuals looking for work in those industries. Low-income workers, who are disproportionately people of color, are particularly hard hit by these changes and can benefit from earning certifications that provide evidence of acquired skills to a potential employer.

Certifications can offer short-term pathways to employment. Many certifications can be earned in less time than a degree, making them a relatively "fast" credential to earn and a valuable option for working adults and low-income populations.

Certifications are tuned to rapidly changing labor market needs. Because many certifications use regularly updated competency standards based on job analyses, they are able to stay current in a highly dynamic labor market.

Certifications are often competency based. Certifications offer workers needing to change careers a means of providing credible evidence that they have the competencies employers are seeking. Earning a certification is one way for a worker to document what he or she knows and is able to do, regardless of how or where those skills or competencies were acquired.

Those who earn certifications and licenses fare better in the labor market.[4] Two recent studies by Gallup and the U.S. Bureau of Labor Statistics (BLS) find that someone who holds a certification and/or a license is more likely to be employed, earn more, and believe they have a good job or career compared with someone who does not—at every educational level.[5] BLS research concludes that a certification or license carries as much as a 33 percent wage premium over a high school diploma alone.[6]

Certifications offer employers a tool for skills-based hiring. At a time when employers will have many choices of job candidates, use of quality certifications with transparent competencies as a way of identifying qualified applicants can provide a means for increasing the pool of qualified applicants and ensuring a good fit between job candidates and available positions, as opposed to relying solely on degrees.[7]

Certifications can be counted as "credentials of value to employers" for purposes of federal and state workforce accountability systems. A certification can be designated as a credential of value in cases where there is evidence that employers use it in their hiring and talent management systems.

---

4   Currently available data does not allow for attribution of outcomes to certifications alone.

5   "Certified Value: When do Adults without Degrees Benefit from Earning Certificates and Certifications?," Strada Education Network, Gallup, Inc., and Lumina Foundation (2020): **https://go.stradaeducation.org/certified-value**.

6   Evan Cunningham, "Professional Certifications and Occupational Licenses: Evidence from the Current Population Survey," Monthly Labor Review, U.S. Bureau of Labor Statistics (June 2019): **https://doi.org/10.21916/mlr.2019.15**.

7   Sean R. Gallagher, Ed.D., "Educational Credentials Come of Age: A Survey on the Use and Value of Educational Credentials in Hiring," Northeastern University Center for the Future of Higher Education and Talent Strategy (December 2018): **https://www.northeastern.edu/cfhets/wp-content/uploads/2018/12/Educational_Credentials_Come_of_Age_2018.pdf**.

OVERVIEW OF THE DIVERSE CERTIFICATION LANDSCAPE

Certifications differ along a number of dimensions that make some more useful than others as tools for advancing the educational and employment prospects of workers with different goals and needs, and at different stages in their careers. These differences and their implications for policymakers and practitioners are outlined later in the report.

PURPOSE

Certifications can serve varying purposes for multiple stakeholders.

Certifications can support workers and learners at different stages in their careers. Some certifications, such as Certified Rigger or Certified Pharmacy Technician (CPhT), serve as entry-level credentials to help people become more employable, and therefore get a first job in the related industry or occupation. Some entry-level certifications assess foundational skills that cut across multiple occupations or industry sectors. Other certifications, such as Project Management Professional (PMP)® or Certified Information Systems Security Professional (CISSP), are designed as intermediary credentials to help mid-career workers (often already possessing degrees) keep their skills up to date, advance in their chosen fields, or potentially change fields. Still others, such as Medical Laboratory Scientist (MLS ASCP), Certified Financial Planner™ (CFP®), or Certified Energy Auditor (CEA) can be used by highly-skilled professionals to differentiate themselves from their peers, gain greater specialization, broaden their scope of expertise, and/or assume management or executive positions.

Some certifications are designed to safeguard the public and therefore may be tied to licensure.[8] Regulations governing some industries mandate that an individual earn a national certification in order to obtain a state license to legally practice in that state. Other professions have federations (representatives from multiple states) that create a licensing examination that is accepted across state lines. Moreover, in some fields—such as speech-language pathology—a national

> **The link between certifications and licenses is being affected during the current pandemic. Governors have used their executive order authority in some instances to temporarily loosen licensing requirements in some healthcare occupations in order to increase the number of medical professionals available and respond to peak demands for COVID-19 treatment.**

---

8   Craig G. Schoon, I. Leon Smith, and Professional Examination Service, *The Licensure and Certification Mission: Legal, Social, and Political Foundations* (New York: Forbes Custom Pub., 2000).

certification is accepted by the states for licensure purposes. Other examples of occupations in which states accept national certifications as a component of a licensing program include registered dieticians and occupational therapists.

Certifications can even serve as professional incentives. Some are intended to professionalize a field by increasing prestige, wages, and demand for professional services.[9] Still others are designed to demarcate the boundaries of a professional field, especially in new and emerging fields such as cloud computing, data science, and robotics engineering.[10] As such, they may distinguish the certified person as a marker of belonging to a professional community and status within the field, and possibly restrict others' entry into the field, even if only by practice and not by law.

CERTIFICATION BODIES

While most certifications are issued by industry and professional associations, some are issued by companies. For example, while one of the most widely used certifications in information technology (IT) is A+ offered by CompTIA, a technology industry association, the IT industry also has many company-specific certifications such as those offered by Microsoft, Amazon Web Services, and Cisco. And in manufacturing, companies such as Siemens and Autodesk also offer company-specific certifications. Particular certifications such as these attest to a certified person's competency in using the particular company's products and proprietary systems.

UTILIZATION

Certifications are offered in numerous industry sectors including healthcare, education, finance, IT, cybersecurity, manufacturing, retail, and hospitality. However, the extent to which employers in the industry or profession use them for hiring, promotion, and/or internal human resource purposes varies substantially. Other certification variations include their geographic scope (e.g., state, regional, national, or international), and the number of people who have earned them.

VALUE

There is a growing body of evidence about the value of certifications for different stakeholders with respect to earnings and employment outcomes.

> **Certifications can provide an earnings premium.**

A series of nationally-representative surveys in the 2010s found that the monthly earnings of individuals with a professional certification or a license were, on average, $1,057 more than those with neither type of

---

9   Kim A. Weeden, "From Borders to Barriers: Strategies of Occupational Closure and the Structure of Occupational Rewards," Ph.D. dissertation, Stanford University (1999).

10   Randi Cohen, "Who's Planning for Your Future? Jurisdictional Competition Among Organizations and Occupations in the Personal Financial Planning Industry," Ph.D. dissertation, Stanford University (1996); and Sylvester Osaze Osagie, "The Role of Credentialing in the Emergence of Employee Assistance as a Workplace Jurisdiction," Ph.D. dissertation, Cornell University (1996).

credential, equivalent to a 6.2 percent earnings premium associated specifically with certification.[11] This strong correlation between certification and earnings was confirmed by the U.S. Department of Education's 2016 Adult Training and Education Survey.[12]

While research suggests that certifications are associated with economic benefits, the likelihood of being certified and the earnings premium associated with holding a certification differs by race, ethnicity, and gender.[13] These differences partially reflect the concentration of different demographic groups in different occupations and industry sectors, as well as differences in compensation patterns across the labor market. They are also likely due, at least in part, to differences in the quality of certifications and employer perceptions of value.

Industry-specific studies have found evidence of an earnings premium associated with certification in manufacturing, financial planning, and green building.[14] Moreover, young workers benefit from certification, even when controlling for different levels of effort and academic achievement in high school.[15]

COST TO THE POTENTIAL CERTIFIED PERSON

All certifications come with fees for taking the exam and to maintain the certification, or recertify. However, the cost to the individual varies significantly, ranging from less than one hundred dollars to several thousand dollars, the average being around four hundred dollars as one source suggests.[16]

For individuals who want support preparing for a certification exam, there can also be costs associated with study guides, practice exams, reference manuals, and online and in-person training courses. The

---

11 Stephanie Ewert and Robert Kominiski, "Measuring Alternative Educational Credentials: 2012, Household Economic Studies," U.S. Census Bureau (issued January 2014): **https://www.census.gov/prod/2014pubs/p70-138.pdf**; and Maury Gittleman, Mark A. Klee, and Morris M. Kleiner, "Analyzing the Labor Market Outcomes of Occupational Licensing," Industrial Relations: A Journal of Economy and Society 57, no. 1 (January 2018): **https://doi.org/10.1111/irel.12200**.

12 Stephanie Cronen, Meghan McQuiggan, and Emily Isenberg, "Adult Training and Education: Results from the National Household Education Surveys Program of 2016. First Look. NCES 2017-103rev," National Center for Education Statistics (February 2018): **https://eric.ed.gov/?id=ED580875**.

13 Jeounghee Kim and Sangetta Chatterji, "Gender and Educational Variations in Earnings Premiums of Occupational Credentials," The Center for Women and Work, Rutgers University (December 2018): **https://smlr.rutgers.edu/sites/default/files/documents/Centers/gender_and_educational_variations_in_earnings_premiums_of_occupational_credentials.pdf**; and Lul Tesfai, Kim Dancy, and Mary Alice McCarthy, "Paying More and Getting Less: How Nondegree Credentials Reflect Labor Market Inequality Between Men and Women," New America (September 2018): **https://www.newamerica.org/education-policy/reports/paying-more-and-getting-less**.

14 Henry Renski, "Estimating the Returns to Professional Certifications and Licenses in the U.S. Manufacturing Sector," Economic Development Quarterly 32, no. 4 (September 2018): **https://journals.sagepub.com/doi/10.1177/0891242418792090**; and Jesse Arman and Joshua Shackman, "The Impact of Financial Planning Designations on Financial Planner Income," The Service Industries Journal 32 no. 8 (August 2011): **https://doi.org/10.1080/02642069.2010.545879**; and Jacob R. Tucker, Annie R. Pearce, Richard D. Bruce, Andrew P. McCoy, and Thomas H. Mills, "The Perceived Value of Green Professional Credentials to Credential Holders in the US Building Design and Construction Community," Construction Management and Economics 30 no. 11 (October 2012): **https://doi.org/10.1080/01446193.2012.728710**.

15 Kyle Albert, "Why Certify? Examining the Consequences of Occupational Certification for Individuals and Professional Associations," Ph.D. dissertation, Cornell University (2016).

16 Ibid.

---

range of services and costs varies significantly from one certification to another, with some preparation costing less than one hundred dollars to as much as several thousand dollars. When certification eligibility requirements include a portfolio or transcript review, there are usually additional fees associated with these items. In addition, workers may incur costs associated with courses and degrees required as a prerequisite to obtaining some certifications.

Education and training providers (including apprenticeship sponsors) may embed certifications into their programs, sometimes including the examination fees in the costs associated with the program. Individuals who do not pass a certification exam the first time will typically have to pay each time the exam is retaken. Finally, maintaining a certification often requires activities that come with a price tag, including the cost of continuing professional development or sitting for another exam.

QUALITY ASSURANCE

Certification quality is often assessed subjectively. This is in part because certification earners, certification issuers, certification consumers, and certification endorsers value certain characteristics of certifications differently, and also in part because these stakeholders look for different evidence of quality and use different methods for assuring quality.[17]

Certifications can also be examined for quality using approaches developed for all credentials. For example, the American Council of Education proposed six overlapping and mutually reinforcing dimensions of quality—transparency, modularity, portability, relevance, validity, and equity—that can be used to evaluate the quality of any credential in an interconnected credentialing marketplace.[18]

Accreditation is the most prevalent quality assurance mechanism in education, and it is also used for certifications. However, only approximately 10 percent of the certification bodies in the United States are accredited by a third party to meet a nationally recognized standard.[19]

Like accreditation for higher education institutions, the certification body accreditation process consists of a third-party review that assures the public, employers, and government that the competencies identified by the certification body have been appropriately evaluated using psychometrically-sound and legally-defensible assessment practices, and that certification holders demonstrate competencies as advertised.

---

17   Deborah Everhart, Evelyn Ganzglass, Carla Casilli, Daniel Hickey, and Brandon Muramatsu, "Quality Dimensions for Connected Credentials," American Council on Education (2016): **https://www.acenet.edu/Documents/Quality-Dimensions-for-Connected-Credentials.pdf**.

18   Ibid.

19   For more information about accreditation, see the ANSI National Accreditation Board (ANAB), **https://anab.ansi.org/credentialing**, and the National Commission for Certifying Agencies (NCCA), **https://www.credentialingexcellence.org/page/ncca**, which both accredit personnel certification programs.

Alternatively, the National Skills Coalition, in consultation with twelve states and national organizations, developed a consensus definition of quality non-degree credentials (including, but not limited to certifications) and criteria that states can adopt for their own quality assurance systems. Using this approach to assess quality requires valid, reliable, and transparent evidence that the credential provides substantial job opportunities associated with the credential, competencies mastered by credential holders, and employment and earnings outcomes of individuals after obtaining the credential.[20] Unfortunately, although research and federal and state data collection efforts have produced some data to inform these criteria, valid, reliable, and transparent evidence is lacking for many certifications.

Additionally, the Rutgers Education and Employment Research Center has developed a conceptual framework for examining non-degree credentials. Using this approach, quality certifications must be well designed, reflect actual competencies, and let employers and educational institutions know the holder has a particular, valued set of skills that can be rewarded with educational credit, employment, and/or increased earnings.[21] While information to assess some of these criteria can be found, some of the evidence may be lacking for certifications.

COMPETENCIES REPRESENTED

Certifications focus on different levels and combinations of knowledge and skills. Some focus on very narrow, specialized content (usually at higher professional levels), while others focus on broader foundational and/or cross-cutting skills.

As certification content differs, so does the currency of the competency standards that underlie the certification. Ideally, the competencies and standards used for assessment should be based on an on-going, systematic job or practice analysis for the occupation. This ensures that the competencies assessed by the certification and recertification examinations are updated in a timely basis and reflect current practice, which ultimately strengthens the relevance of the certification.

ELIGIBILITY REQUIREMENTS

Many advanced certifications, typically for higher-level or specific occupations, as well as a few entry-level ones, require individuals to meet a set of prerequisites before being eligible to sit for the certification exam. These typically involve educational requirements and work experience. For certifications used in licensure, the criteria is more stringent, such as requiring occupational therapists to have graduated from an accredited, occupational therapy degree program. Successful passing of the certification examination allows the individual to be eligible to obtain a state license.

20   Amy Ellen Duke-Benfield, Bryan Wilson, Kermit Kaleba, and Jenna Lenentoff, "Expanding Opportunities: Defining Quality Non-Degree Credentials for States," National Skills Coalition (September 2019): **https://m.nationalskillscoalition. org/resources/publications/file/9.18-NSC_QNDC-paper_web.pdf**.

21   Michelle Van Noy, Heather McKay, and Suzanne Michael, "Non-Degree Credential Quality: A Conceptual Framework to Guide Measurement," Rutgers Education and Employment Research Center (July 2019): **https://smlr.rutgers.edu/ NDCQuality**.

The purpose of eligibility requirements is to ensure that individuals sitting for a certification exam have the relevant knowledge and skills to demonstrate the competencies demanded by the occupation or industry. Also, since most certification exams do not test all aspects of an applicant's knowledge or skills, educational and/or work requirements serve as an indicator that certain academic and/or clinical expectations have already been met or exceeded, prior to the candidate seeking to obtain the certification. Thus, these requirements are not meant to inappropriately screen out individuals, as care is taken by certification bodies to ensure that their eligibility requirements can be reasonably justified. Furthermore, prerequisites are designed to ensure every individual has an equal opportunity to pass the examination. For this reason, many of the certifications listing eligibility requirements have multiple pathways to attain the requirements, which typically include different combinations of educational attainment, work experience, and/or another certification.

The number of prerequisites and the level of burden associated with satisfying them impacts the length of time it takes an individual to qualify for and earn a certification. Certifications without prerequisites can be obtained relatively quickly. On the other hand, those that require bachelor's or graduate degrees require a much longer time to earn because of the associated educational requirements.

EXAMINATION AND RECERTIFICATION PROCESSES

Certifications are based on a third-party assessment, but the quality of the examination and recertification processes differ. In order to have quality certification (and recertification) processes, the certification body should engage in the following practices:

» If the certification body is a part of another organization, it must be "firewalled" from the other organizational activities (e.g., membership) to ensure its independence so that its decisions are impartial and free from bias.

» The job or practice analysis assures that the certification examination standards reflect current skills and knowledge requirements. It also should be turned into a test blueprint that identifies the major knowledge domains of the examination and the amount of emphasis of each domain.

» The certification body reviews test items on an on-going, systematic basis to ensure they do not discriminate against race, ethnicity, gender, and geography, and to determine whether and why the individuals who pass the test get the items correct and those who fail the test get the items wrong.

» There are processes for revoking the certification for unethical behavior or violation of a code of conduct, if one exists.

An operational reality during the current pandemic is that certification bodies are struggling with whether and how to securely administer exams, given social distancing mandates and individuals' unwillingness to travel to testing centers. Some have entered into agreements with vendors to proctor online testing during this period; others have delayed issuing certifications temporarily. The use of simulations has also been expanded to evaluate some aspects of competence during this time as well.

PATHWAYS TO CAREER PROGRESSION

Certification bodies, at times, will clearly articulate how the certifications they offer relate to each other in a professional development hierarchy and/or broader career and learning pathway. Additionally, certification bodies often have their own sequences of stackable certifications and offer accessible training materials and classes to help certification seekers prepare for examinations.

Some provide information on associated skills and job opportunities that provide clear guidance to an individual about how certifications are related to specific jobs and career pathways within an industry and even across sectors. Some certifications, such as Project Management Professional (PMP)®, cut across industries and can be incorporated in many different career pathways.

Many certification bodies offer support for individuals pursuing their certifications, which can take the form of online access to reference manuals and/or practice tests. In some cases, certification bodies approve related training provided by other organizations. In addition, certification bodies may form partnerships with educational institutions or other organizations to provide training content, study materials, equipment, and other resources for stand-alone classes as well as classes that are a part of programs of study and articulated career pathways.

INCORPORATING CERTIFICATIONS IN EDUCATIONAL PROGRAMS OF STUDY

The relationship between certifications and other educational credentials at the high school and postsecondary levels, in career and technical programs, in academic programs, in apprenticeship programs, and as co-curricular activities is complex, with many examples of both effective practices and barriers to implementation.

Postsecondary examples include embedding certifications into programs of study that lead to the achievement of educational certificates and associate, baccalaureate, or post-baccalaureate degrees. Some of these are applied degrees, which may or may not be transferable, while some are credit-bearing or noncredit workforce and continuing education programs.

Formal relationships between certifications and other credentials often have one of the following approaches:

Aligning program of study or course learning outcomes with the competencies represented by certifications. This is often done to assure that curricula are aligned with validated industry standards and that it explicitly prepares students to pass certification exams. Sometimes earning the certification is a requirement of course completion and sometimes it is optional. Such alignment is often easier to accomplish within the context of non-credit workforce and continuing education programs because of the more flexible planning and approval processes associated with these programs. It should be noted that the U.S. Department of Education requires all academic institutions to inform both enrolled and prospective students that an academic program meets the educational requirements for licensure examinations and certifications that are used for licensure purposes and therefore required to practice that occupation.[22]

Using credit for prior learning (CPL) policies and practices to award educational credit for certifications already earned, thereby enabling certification holders to meet certain prerequisite requirements and/or not have to repeat content and skills already acquired. Although many institutions have CPL policies, the process of awarding credit is often cumbersome, resulting in experienced adult learners having to take courses that teach knowledge and skills they may already have or may have already proven by earning certification(s).

---

22   "Institutional Information," Code of Federal Regulations, title 34 (2011): **https://www.govinfo.gov/app/details/CFR-2011-title34-vol3/CFR-2011-title34-vol3-sec668-43**; and Lindsay McKenzie, "Grappling with Professional Licensure Disclosures," Inside Higher Ed (July 2020): **https://www.insidehighered.com/news/2020/07/14/colleges-grapple-professional-licensure-disclosures**.

Embedding certifications in credit-bearing educational programs so students can earn stackable credentials. This combination of different types of credentials allows students to obtain both a broad based education and technical or industry-specific skills. However, within this context, certifications are sometimes confused with other stackable credentials such as digital badges, micro-degrees, certificates, and other non-degree credentials.

Each of these strategies involves alignment between the discrete skills required by the certification and the curriculum associated with the completion of a broad program of study, including both general and specialized courses. It requires use of a common language and clarity about the competencies represented by the certifications and educational credentials as well as transparency about and trust in the assessment and quality assurance processes associated with certifications. Building pathways of stackable credentials may also require the development of articulation and transfer agreements between programs of study within an institution and across institutions.
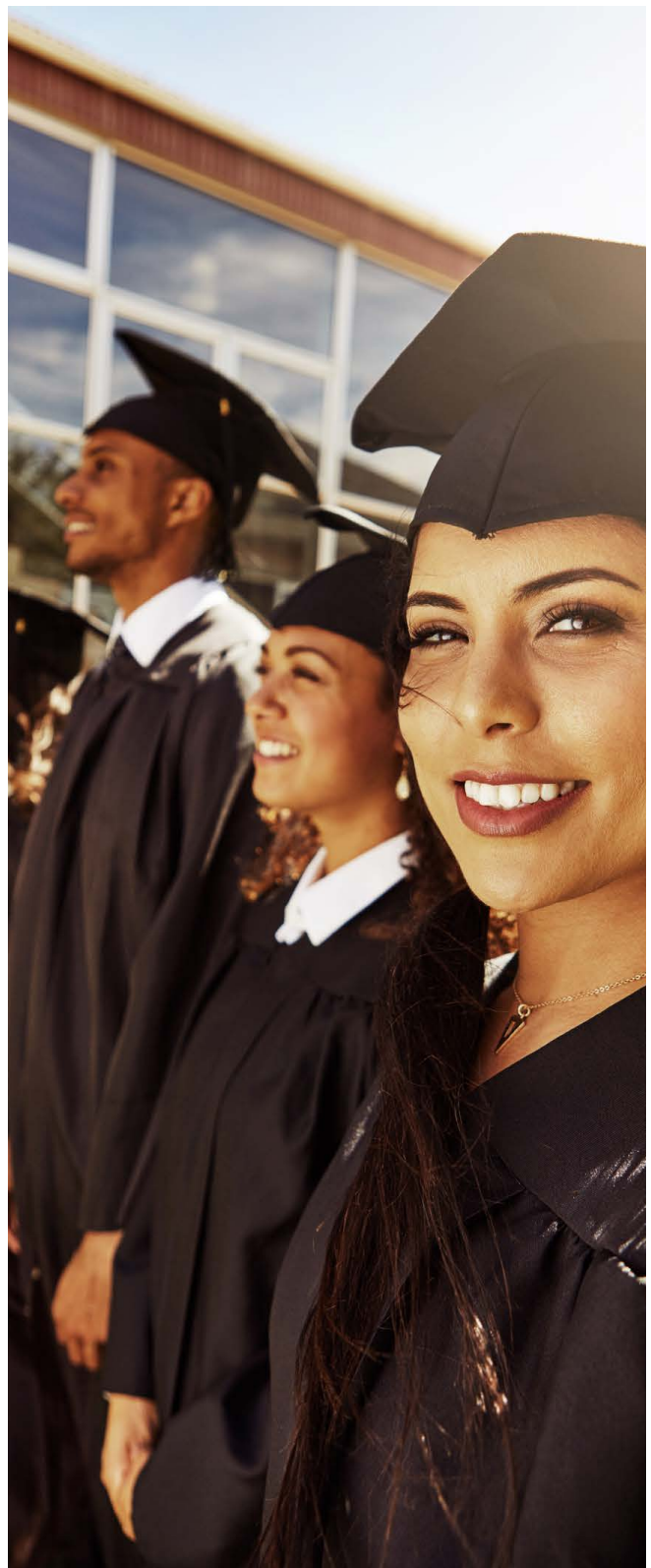
> **Workcred, the Association of Public and Land-grant Universities, the Coalition for Urban Serving Universities, and the University Professional and Continuing Education Association are exploring how certifications can be embedded into bachelor's degree programs, including developing a process for selecting which certifications are the most appropriate for the academic program.[23]**

---

23 University faculty and administrators can use the set of questions developed during the project to help them gather more information about certification bodies and related certifications, see **https://workcred.org/Our-Work/Aligning-and-Embedding-Industry-Certifications-with-Bachelor-Degrees.aspx**.

QUESTIONS ABOUT THE FUTURE OF CERTIFICATIONS

It is too early to know precisely how the current pandemic, changes in technology, or other forces will transform the U.S. and global economies, regional labor markets, and the world of certifications.

Certifications as alternatives and/or complements to degrees are well positioned to add significant value for their holders due to their ability to signal competencies and support reskilling and reemployment needs. However, in large part, the role certifications play in this transformation will be shaped by the actions that certification providers, employers, unions, and the education and workforce development communities take now to ensure certifications are a valuable tool for serving the needs of workers and employers as they navigate the new reality.

CERTIFICATION BODIES

» How will certification bodies improve transparency to users? Individuals considering certifications need clear and easily accessible information about certification requirements, processes, and outcomes. This transparency will also increase the likelihood that a certification will be trusted by employers, a quality which is critical for individuals looking to improve their economic status.

» What will certification bodies do to identify and address any implicit biases that may exist in their assessment processes?

» How will certification bodies support equity and access for socioeconomically disadvantaged learners and workers?

EMPLOYERS

» How will employers further integrate certifications in their hiring and promotion policies?

» Will employers use certifications and skills-based hiring in an inclusive way to increase employment opportunities and access to career pathways, or will certification requirements serve as additional barriers to job entry?

» How will employers support workers to pursue certifications to progress in their careers?

UNIONS

» How will unions provide workers with information about relevant or useful certifications and ways to obtain them?

» How will unions assist in training workers to complete these certifications?

» How will unions partner with employers to help workers better understand credentialing options?

EDUCATION AND WORKFORCE DEVELOPMENT PROFESSIONALS

» How will education and workforce development professionals expand the use of certifications as integral parts of their programs and complements to the credentials they already provide?

» How will education and workforce development professionals use certifications in accessible and affordable pathways leading to educational and career success?

» How will education and workforce development professionals prioritize the certifications that show the most beneficial labor-market outcomes, especially for low-income and minority students?

» What will education and workforce development professionals do to educate consumers on what certifications are and how they fit into the landscape of all educational credentials?

POLICYMAKERS

» How will policymakers provide workers and learners with information about how to pursue quality certifications at different stages of their careers?

» How will policymakers ensure that policies enabling certification attainment support economic development at the regional level?

» How will policymakers provide reliable consumer education on what certifications are and how they fit into the landscape of all educational credentials?

» How will policymakers hold workforce development, education, and training organizations accountable for using quality certifications in their programs and maximizing student success and employment?

WORKERS AND LEARNERS

» How will workers and learners use easily-accessible information to compare and select certifications to support their career goals?

» How will workers and learners have access to resources to support certification attainment?

MOVING FORWARD

Certification bodies, employers, workforce development organizations, education institutions, as well as foundations all have important roles to play in making certifications better tools for upward mobility and equity.

CERTIFICATION BODIES

Certification bodies can improve transparency by collecting and linking data about a certification holder's educational attainment and employment outcomes. A pilot initiative exploring such data linking involves a partnership between The Manufacturing Institute, the National Student Clearinghouse, and the U.S. Census Bureau, and is funded by Lumina Foundation.[24]

Certification bodies also can contribute to equity by assuring assessment policies and practices, prerequisite requirements, and pricing policies are free from discrimination. And, by ensuring that their certifications align with employer-defined job requirements, certification bodies reduce the risk that earning a certification may provide a false promise for individuals who seek to improve their economic status, whether as a young person preparing to enter the labor market or as an adult later in his or her career.

EMPLOYERS

Employers can further promote equity by helping workers obtain needed certifications and using certifications in their hiring and promotion policies to expand access for minority and other under-represented individuals. Making certifications better tools for upward mobility also requires recognizing skills learned on the job and connecting certifications to other credentials, such as degrees and certificates.
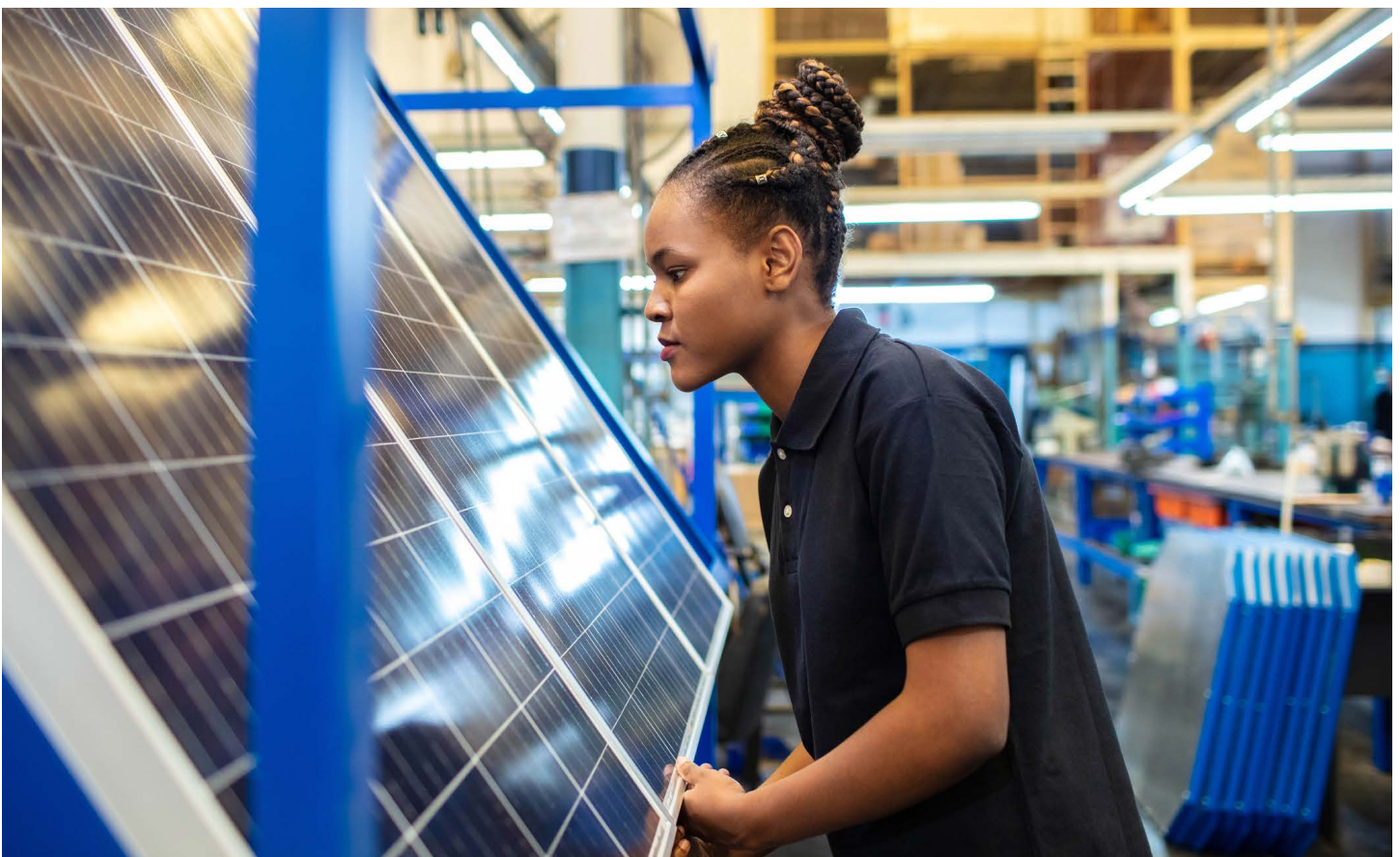
EDUCATION INSTITUTIONS

Education institutions can integrate certifications as part of a system of stackable credentials that a learner can earn on a pathway to educational and career success. For example, some certification bodies have created their own sequences of stackable certifications and offer accessible training materials and classes to help certification seekers prepare for examinations. Others have partnered with educational institutions and workforce programs to provide such opportunities as stand-alone classes, parts of programs of study, and articulated career pathways.

---

24   For more information on this initiative, visit **https://www.studentclearinghouse.org/workforce/industry-credentials**.

FOUNDATIONS

Foundations can also play an important role in supporting expanded use of certifications. Lumina Foundation has been a leader in investing in research to increase knowledge about certifications, and in 2020 they included certifications in their annual count of the number of adults with postsecondary credentials in the United States.[25]

In conclusion, as this report has made evident, more research is needed on certifications, including further study about the role, function, and economic value of certifications in the employment and progression of workers. This additional research can support policymakers, employers, and certification bodies to make investments and decisions to improve the quality and effectiveness of certifications for all.

---

25   For more information, see **https://www.luminafoundation.org/news-and-views/new-data-show-51-3-of-u-s-adults-hold-degrees-certificates-or-industry-certifications**.