

Credential Currency

How States Can Identify
and Promote Credentials of Value



Table of Contents

Executive Summary _____	2
Introduction _____	8
Identifying High-Value Credentials _____	14
Establishing Incentives to Increase Attainment of Credentials of Values _____	23
Reliably Collecting and Reporting Credential Attainment Data _____	32
Conclusion _____	36



Executive Summary

Postsecondary credentials matter more today than any time previously in history. They provide currency in the labor market and serve as key momentum points for individuals on a path to economic opportunity, especially those from underserved communities. From industry-recognized credentials to postsecondary certificates and licenses to associate and bachelor's degrees, “post-high school credentials” have become necessary for career success, and those with a high school diploma or less are often left behind.

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In credential-driven labor markets, however, not all students must attain a bachelor's degree. In fact, there are 30 million “good jobs” nationwide¹ that are held by individuals with less than a bachelor's degree (B.A.) and more than a high school diploma. This important “middle” represents a significant opportunity for growth. Recent data find that 28 percent of associate degree holders, and many workers with one-year certificates, earn more than the average B.A. holder.²

In response to this economic shift, state K-12 leaders have made college and career readiness a larger focus of their high school strategies. Of

particular note is the increase in the number of states—from 11 prior to the passage of the Every Student Succeeds Act (ESSA) to 26 today—that have included industry-recognized credentials as a component of their reporting or accountability systems for high schools.³ This represents a significant shift in state recognition that earning an industry credential while in high school can pay dividends for a student's long-term prospects.

Identifying industry-recognized credentials that are high value, and differentiating them from those that do not provide a return on investment for credential earners, is of paramount importance. Otherwise, states risk that their new attainment goals and accountability metrics could drive students and returning adult learners to unwittingly pursue lower-value credentials that do not lead to good jobs. This would not only be detrimental to those individuals, but it would also undercut the impact and credibility of the new state policies.

1 Georgetown University Center on Education and the Workforce, *Good Jobs that Pay without a BA*, 2017, <https://goodjobsdata.org/wp-content/uploads/Good-Jobs-wo-BA-final.pdf>.

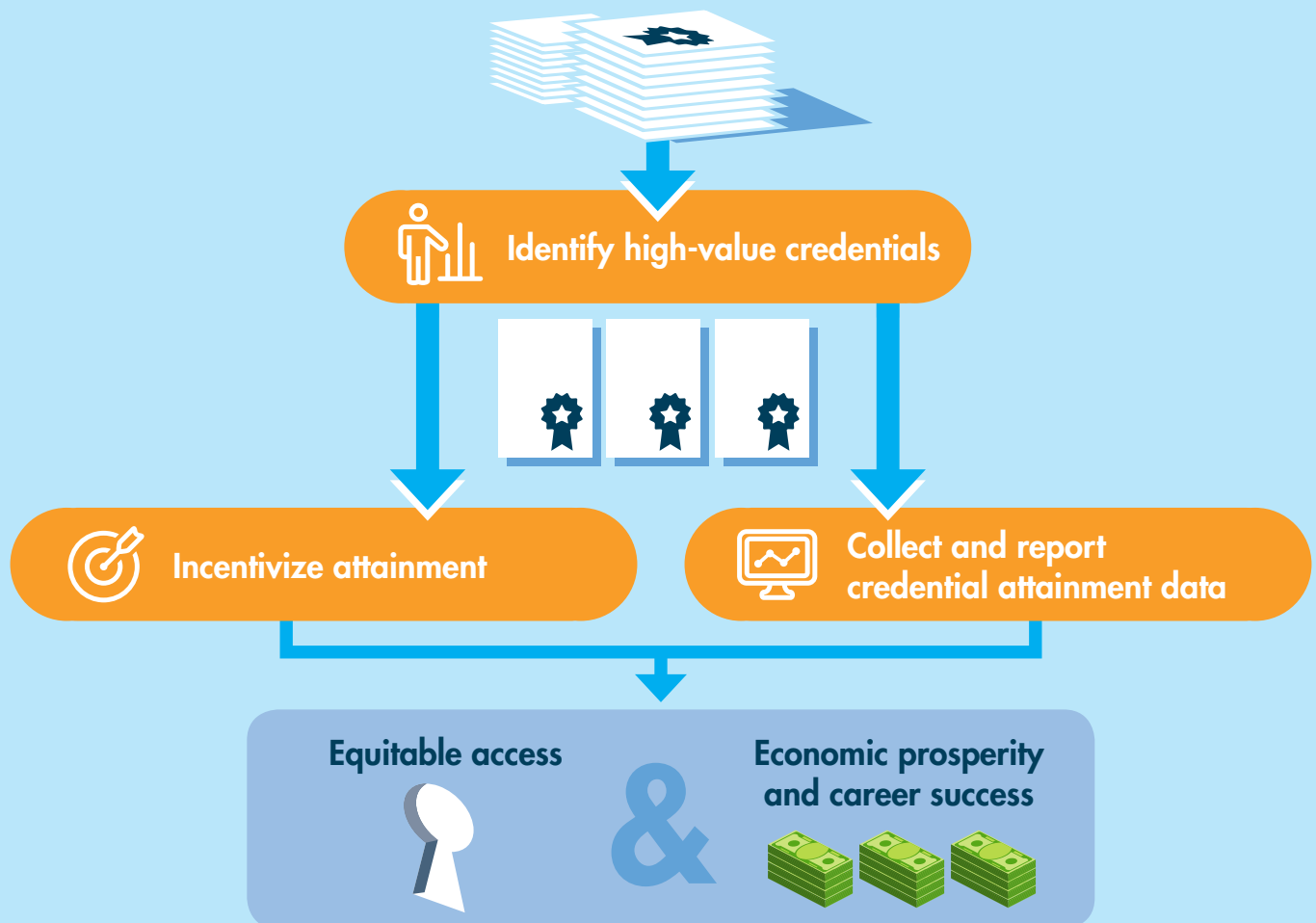
2 Georgetown University Center on Education and the Workforce, *Five Rules of the College and Career Game*, 2018, <https://cew-7632.kxcdn.com/wp-content/uploads/Fiverules.pdf>.

3 Advance CTE and Education Strategy Group, *Career Readiness & the Every Student Succeeds Act: Mapping Career Readiness in State ESSA Plans*, December 2017, http://edstrategy.org/wp-content/uploads/2017/12/Mapping_Career_Readiness_ESSA_FULL_2017.pdf.

Yet states grapple with making such a shift in three primary ways. They wrestle with systematically and reliably identifying those industry-recognized credentials that are valued by employers in hiring, compensating, and promoting workers. They question whether and which incentives for students, schools, and districts will lead to growing attainment rates. And they are hindered by a lack of access to source data on credentialing attainment results, which limits their ability to understand which credentials are being earned and by whom.

Ensuring students' equitable access to earning high-value industry credentials is a critical step toward enabling their economic and career success. Such work requires committed partnership between K-12, postsecondary, workforce development, and industry leaders. This report provides recommendations to states for identifying credentials of value and increasing the number of students who attain them. It reflects best practices from around the country. It also identifies emerging national initiatives and opportunities for collective action that can help states accelerate their work.

Recommendations to Promote Credentials of Value





Identifying High-Value Credentials

Credentials have currency in two primary ways: they (1) help an individual find employment or move up in the workforce and/or (2) accelerate a student's progression into and through postsecondary education and training. As leaders from K-12 and postsecondary education, economic development, and business and industry work together to identify the credentials that are high value, they should take into account the extent to which each credential shapes employer decisions and provides currency to learners. Each are valuable individually, and the credentials that can accomplish both provide the greatest value. To accomplish this, states should:

- **Build stronger employer signaling analyses** to identify the industry-recognized credentials that are valued by industry by using specific criteria, including the extent to which employers
 - ▶ state in their job postings and advertisements which credentials are required or preferred for hiring;
 - ▶ use the credential as a factor in selecting candidates for interviews and/or in determining which candidates are chosen for a job;
 - ▶ offer higher wages for those who have earned the credential; and/or
 - ▶ use a common credential within the same industry, providing portability across employers.
- **Identify which industry-recognized credentials count for credit toward postsecondary education and training**, noting that credentials with the greatest postsecondary currency
 - ▶ are transferrable for postsecondary course credit or credit hours in core program courses;
 - ▶ count toward hours in an aligned apprenticeship program at the postsecondary level; and/or
 - ▶ “stack” to allow students to progress to a more advanced industry credential within a specific field (e.g., machining levels 1, 2, and 3) or to a postsecondary certification, an associate degree, a bachelor's degree or beyond within a given field.

- **Build a cross-sector priority industry-recognized credential list spanning the education and workforce systems** that is backed by labor market data and has demonstrated postsecondary value, which includes
 - ▶ designing and executing a systematic, evidence-based process across K-12, higher education, and workforce development that utilizes a balanced collection of primary and secondary sources, including both real-time and lagging labor market data, to decide which credentials fall above and below the line;
 - ▶ maintaining the identification process through annual or biennial reviews to update and validate the list over time to ensure it reflects changing workforce needs; and
 - ▶ undertaking longitudinal analyses that track credential holders into the marketplace to be certain that credentials identified as high value do in fact lead to greater employment outcomes for learners over time.

In addition to leveraging these recommended strategies, states can take their high-value credential identification work a step further by developing new technology-based approaches to streamline employer signaling, establishing industry-recognized credentials that are the industry-accepted standard, and building cross-state agreements to award postsecondary credit for both youth and adults seeking to upskill.





Incentivizing Attainment of High-Value Industry-Recognized Credentials

Without clear incentives for attainment of these industry credentials classified as high value, students, schools, and districts may not make pursuit of these credentials a priority. States may be best served in deploying a wide range of incentives intended to increase students' and schools' motivation to earn high-value credentials and recognize the importance of those credentials statewide. To accomplish this, states should:

- **Inspire and support students' high-value credential attainment** to show the clear value proposition such credentials offer by
 - ▶ communicating the workforce and higher education benefits of credentials of value;
 - ▶ removing financial and access barriers to earning high-value industry credentials;
 - ▶ enabling priority industry credentials to count for postsecondary credit or hours; and
 - ▶ making attainment of high-value industry credentials a graduation expectation.
- **Spark school and district prioritization of high-value credential attainment**, encouraging and rewarding them for offering more pathways that lead to credentials and increasing the number of students who earn them by
 - ▶ providing funding for high-value industry credential attainment;
 - ▶ recognizing schools and districts for success and improvement; and
 - ▶ making high-value credential attainment count in accountability systems.
- **Recognize and emphasize the importance of high-value credentials statewide** to communicate to the public that attainment of high-value industry-recognized credentials matters by
 - ▶ leveraging the program of study approval process to ensure that career pathways are anchored in high-value credentials; and
 - ▶ publicly reporting high-value credential attainment for all students and schools.

Beyond implementing these recommended strategies, states can leverage additional opportunities to advance their work by counting high-value industry-recognized credentials in postsecondary attainment goals, leveraging online credential databases to capture and promote priority credentials, and harnessing collective buying power by partnering with other states to lower credential price points.



Collecting and Reporting Credential Attainment Data

Every potential incentive to prioritize industry-recognized credentials is contingent upon having accurate and reliable data on credential completion. To date, many states have to rely upon self-reported credentialing exam data from students to determine which credentials have been earned. All states need to put in place high-quality mechanisms to collect and report how many and which students successfully take and pass credentialing exams and earn specific industry-recognized credentials. To accomplish this, states should:

- **Set a new minimum data threshold for collection** through one of two different approaches:
 - ▶ execute data-sharing agreements with each vendor offering a credential from the state's high-value list to receive student-level data on exam taking and passage rates by credential type; or
 - ▶ initiate secure data transfers of individual student credential certificates from schools and districts.
- **Create a standardized reporting framework** that allows for tracking high-value credentials tied to specific pathways and courses.

While these strong steps will improve states' ability to track and report credential completion, states can go further by leveraging emerging national reporting systems to identify students who have earned industry credentials from the high-value list. Or they can enter into multi-state data-sharing agreements with credentialing vendors to collect data on credential attainment rates.



Introduction

Postsecondary credentials matter more today than any time previously in history. They provide currency, or value, in the labor market and serve as key momentum points on a path to economic opportunity. From industry-recognized credentials to postsecondary certificates and licenses to associate and bachelor's degrees, “post-high school credentials” have become a necessary commodity for career success.

Postsecondary credentials provide currency, or value, in the labor market and serve as key momentum points on a path to economic opportunity.

The likelihood that an individual with only a high school diploma earns more than \$30,000 per year is about 3 in 10, and most of those individuals are male.⁴ In 2010, the Georgetown Center on Education and the Workforce (CEW) projected that more than two-thirds of all jobs would require a postsecondary certificate or degree by the end of the decade.⁵ Yet, even that projection may have underestimated the actual demand. Taking into account the

effects of the labor market resetting after the Great Recession, CEW later found that a remarkable 99 percent of all jobs created during the recovery required some postsecondary education or training.⁶

That does not mean, however, that all students must attain a bachelor's degree. In fact, 30 million “good jobs” nationwide are held by individuals with less than a B.A. and more than a high school diploma. This important “middle”—made up of individuals with postsecondary certificates, journeyman licenses, and associate degrees—represents a significant opportunity for growth. Recent data find that 28 percent of associate degree holders, and many workers with one-year certificates, earn more than the average B.A. holder.⁷

The good news is that education policy leaders at both the K-12 and higher education levels are responding to this new reality by setting more ambitious goals for postsecondary credential attainment and creating incentives for their growth. Governors and higher education officials in 41 states have set postsecondary attainment goals to drive credential rates upward for both traditional students and adults seeking to upskill. State K-12 leaders have also made college and career readiness a larger focus of their high school strategies, with nearly all states promoting dual enrollment and other early postsecondary opportunities.

4 The Century Foundation, *Educational Adequacy in the Twenty-First Century*, May 2018, <https://tcf.org/content/report/educational-adequacy-twenty-first-century>.

5 Georgetown University Center on Education and the Workforce, *Help Wanted: Projections of Jobs and Education Requirements through 2018*, June 2010, <https://1gyhoq479ufd3yna29x7ubjn-wpengine.netdna-ssl.com/wp-content/uploads/2014/12/fullreport.pdf>.

6 Georgetown University Center on Education and the Workforce, *Recovery: Job Growth and Education through 2020*, June 2013, https://cew-7632.kxcdn.com/wp-content/uploads/2014/11/Recovery2020.FR_Web_.pdf.

7 Georgetown University Center on Education and the Workforce, *Five Rules of the College and Career Game*.

DEFINING “CREDENTIAL”

The term “credential” is all-encompassing. It includes industry-recognized credentials, certificates, and badges at the secondary and postsecondary levels that are awarded by industry; long-term certificates and licensures; and associate, bachelor’s, and advanced degrees at the postsecondary level that are awarded by educational institutions and government agencies.

Each can play an important role in helping individuals find economic and career success. Associate and bachelor’s degrees are widely perceived as having value because, as well-known credentials with a long history, they strongly signal to employers the education and training prospective employees bring to a role. However, the space between postsecondary degrees and high school diplomas—in which industry credentials fall—is relatively new and not well-defined in some industries. For that reason, this report focuses primarily on high-value industry-recognized credentials, referred to as “credentials of value.” This is in direct response to the mounting challenges states face in sifting through the growing number of industry credentials offered to identify those that have “currency” or value, i.e., they reliably put students on a strong, sustainable, and financially rewarding career path.

While a precise definition of “industry-recognized credentials” varies from state to state, most stipulate that they are exam-based, administered by third parties, and supplemental to a traditional postsecondary award.

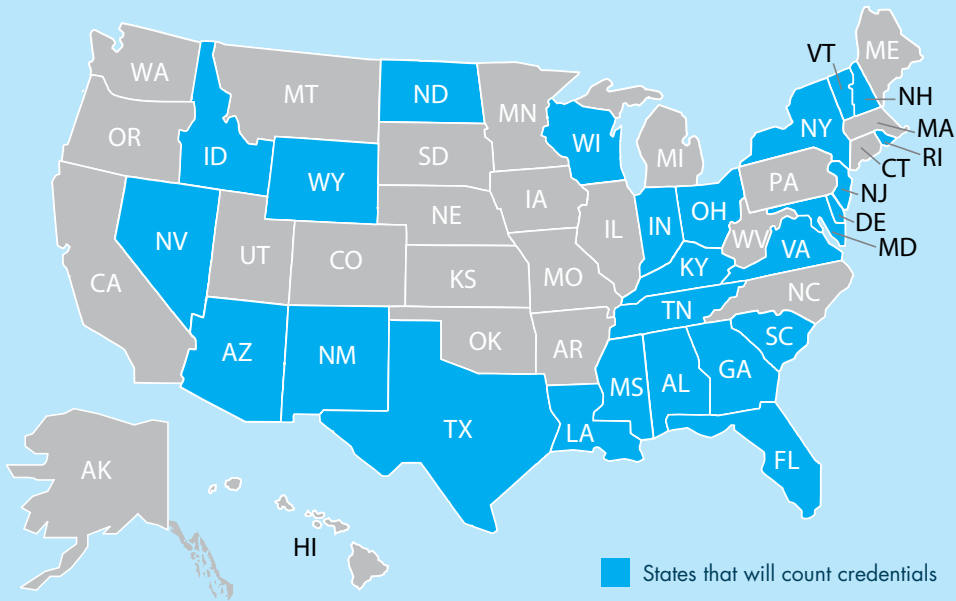
Of particular note is the increase in the number of states that are prioritizing students’ completion of an industry-recognized credential in their high school measures of college and career readiness. Twenty-six states included industry credentials as a component of their reporting or accountability systems for high schools under the Every Student Succeeds Act (ESSA) (see map, next page).⁸ This is up from 11 states prior to ESSA and represents a significant shift in state recognition that earning an industry credential while in high school can pay dividends for a student’s long-term career prospects.

As greater weight is placed on these credentials, a fundamental challenge has emerged: **with over 4,000 credentialing bodies nationwide⁹ offering thousands of different industry-recognized credentials across sectors, very little information is available about their value. How can states that have encouraged the growth of industry-recognized credentials determine which ones to prioritize to scale attainment?**

8 *Career Readiness & the Every Student Succeeds Act: Mapping Career Readiness in State ESSA Plans.*

9 Lumina Foundation, *Connecting Credentials: Making the Case for Reforming the U.S. Credentialing System*, June 2015, <http://connectingcredentials.org/wp-content/uploads/2015/06/MakingTheCase-6-8-15.pdf>.

States that Will Count Credentials in High School Accountability under ESSA



Identifying industry-recognized credentials that are high value, and differentiating them from those that do not provide a return on investment for credential earners, is of paramount importance. Otherwise, states risk that their new attainment goals and accountability metrics could drive students and returning adult learners to unwittingly pursue lower-value credentials that do not lead to good jobs.

Identifying industry-recognized credentials that are high value, and differentiating them from those that do not provide a return on investment for credential earners, is of paramount importance. Otherwise, states risk that their new attainment goals and accountability metrics could drive students and returning adult learners to unwittingly pursue lower-value credentials that do not lead to good jobs. This would not only be detrimental to those individuals, but it would also undercut the impact and credibility of the new state policies.

A deeper look suggests that among the many thousands of industry-recognized credentials available today, the requirements to obtain them differ drastically. For instance, the federal government serves as the issuing entity for a number of credentials, including certifications. Requirements for obtaining a credential range from 10 hours of classroom instruction to attain the Occupational Safety and Health Administration Construction Industry

Certification to 12–24 months of specialized training, 18 months of supervised on-the-job training, or some combination of both, and passage of an 8-hour written and oral exam to obtain the Federal Aviation Administration Aviation Mechanic Certification. As such, it would not make sense for systems to give equal weight to the attainment of those two credentials and incentivize them in the same manner.

WHY IDENTIFYING CREDENTIALS OF VALUE MATTERS FOR STATES

There are five main reasons why states should work to establish and improve their processes for identifying and promoting high-value industry-recognized credentials.

STRENGTHENS ALIGNMENT BETWEEN EDUCATION AND THE WORKFORCE

Earning credentials with verifiable labor market value benefits both students and state economies. To meet the goal of preparing individuals for success in the workforce, education systems must simultaneously support students' academic and technical success and ensure that the acquired knowledge and skills are aligned to workforce needs. Better understanding of the state's labor market—through a process to identify credentials of value—is a meaningful step toward ensuring this alignment exists between education and workforce systems.

PROVIDES “TRUTH IN ADVERTISING” THAT CERTAIN CREDENTIALS ARE IN-DEMAND IN THE LABOR MARKET

Developing a list of credentials that have value can provide peace of mind to students and their families that their chosen path will lead to future economic opportunity. Without clear information about the value of credentials, students may expect all credentials to offer similar opportunities in the workforce, which could lead to frustration, delayed attainment of a postsecondary credential, or even unnecessary student debt.

ENABLES DATA-DRIVEN CONVERSATIONS ABOUT EQUITY

Accessing direct student data—rather than aggregate or self-reported figures—on credential earning can help a state better understand, and potentially close, its equity gaps. Without high-quality, individual data, a state cannot know whether all students—including students of color, those experiencing poverty, and youth with barriers to high school graduation—have opportunities to attain credentials in high-skill, high-demand fields. For instance, finding that only one-quarter of information technology certificates are awarded to females can help education leaders grapple with questions about access, stigma, advising, supports, and communications.

IMPROVES RETURN ON INVESTMENT

While some districts use local, state, and federal dollars to cover the cost of student credential examination fees, in others, exam costs—that can reach several hundred dollars—are borne by the student and his/her family. It is important that individuals, school districts, and institutions of higher education have information about the value of earning credentials, so that they can make informed investment decisions. Ultimately, investing in credentials with the highest value can provide the greatest return on investment for students and the state.

PREVENTS “GAMING” OF THE K-12 ACCOUNTABILITY SYSTEM

Though there are more than 4,000 industry-recognized credentialing bodies, not all of the credentials they offer provide legitimate pathways to high-skill, high-demand employment. Without a “quality” mechanism for tracking only those credentials that provide labor market value, schools may be incentivized to encourage low-level credential attainment when faced with accountability pressure—including in the 26 states that have credential completion as one college and career readiness measure in their ESSA accountability systems. For instance, in one state that included completion of an industry-recognized credential in its accountability system prior to ESSA, more than 50 percent of the credentials earned were Career Readiness Certificates or Microsoft PowerPoint or Word certificates,¹⁰ and this is common across states. While these credentials provide complementary value to a student, they alone will not open doors to long-term job opportunities that require industry-specific, technical skill proficiency.

¹⁰ Public Schools of North Carolina Department of Public Instruction, *North Carolina Career and Technical Education: 2016–17 Credentialing Data*, September 2017, <http://www.dpi.state.nc.us/docs/cte/certification-report.pdf>.

While some industries have set standards for credentials that are agreed to and recognized by all employers in that field, other sectors have not, leaving states in a quandary when determining which industry credentials have value. Skilled trades, information technology, and advanced manufacturing, for example, have made clear progress in identifying which credentials are needed for various jobs and how those credentials can be stacked to allow for career advancement. That clarity and consensus provides a helpful foundation upon which states can build. In other fields, however, there are a plethora of credentials offered by an array of vendors with no agreed upon industry standard. This inconsistency puts states in a very difficult position.

Over the past year, Education Strategy Group (ESG), with support from the Council of Chief State School Officers and Advance CTE, facilitated a Career Readiness Expert Workgroup (CREW) through the New Skills for Youth initiative that focused on credentials of value. Given the acute need facing K-12, postsecondary, and workforce development leaders to help many more youth and adults earn credentials that meet current and projected workforce demands, the CREW focused on three substantial challenges facing states:

1. How can states reliably identify industry-recognized credentials that are valued by employers in industries aligned to their economy?
2. What incentives for students, schools, and districts will likely accelerate and grow credential attainment rates?
3. How can states overcome a lack of access to source data on credentialing exam results to reliably measure and report student attainment of those credentials?

The CREW, consisting of leaders from states, business and industry associations, and policy and research organizations, identified robust strategies based on current and emerging best practices from across the country in these three challenge areas that every state can adapt and adopt to more effectively help students earn valuable credentials that prepare them for continuing education and good jobs.

This report provides recommendations to states for identifying credentials of value and increasing the number of students who attain them. It reflects best practices from around the country. It also identifies emerging national initiatives and opportunities for collective action that can help states accelerate their work.

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Identifying High-Value Credentials

Credentials have currency in two primary ways: they (1) help an individual find employment or advance in the workforce and/or (2) accelerate a student's progression into and through postsecondary education and training. These are not mutually exclusive, as an individual may be able to find employment based on the demonstration of skill, as represented by an industry-recognized credential, and gain postsecondary credit for prior learning. As leaders from K-12 and postsecondary education, economic development, and business and industry work together to identify the credentials that are high value, they should take into account the extent to which each credential shapes employer decisions and provides currency to learners. Each are valuable individually, and the credentials that can accomplish both provide the greatest value.

State Priority: Build Stronger Processes to Capture Employer Signals

Every day, employers send thousands of small signals about their workforce needs. Whether it is voicing the challenges they face to their peers at a local chamber of commerce meeting, conducting searches to fill new or vacant positions, investing in training for current employees, or promoting workers when they attain a new credential or certification, individually and collectively, these opinions and decisions signal what employers value. If harnessed properly, the signals can be a powerful source of information for students, educators, administrators, and policymakers in K-12 as well as for postsecondary and workforce development leaders.

Common Barriers

The mere fact that these signals exist, however, does not mean that they are properly captured or used. Too often, data on job openings and the skills required for positions are either not catalogued or not captured in a timely manner. Further, fewer than half of the states are able to link K-12, postsecondary, and workforce data systems to provide robust, longitudinal data about how students with certain credentials fare in the labor market.¹¹ And when the data are available, there are not always processes in place to review the information and make decisions about prioritization.

This is a particular issue as states seek to engage with employers. In the past few years, states have taken significant strides to expand their outreach to employers and employer associations so that programs and career pathways are relevant to industry needs. Convening mechanisms, such

¹¹ Data Quality Campaign, *Paving the Path to Success: Data for Action 2014*, November 2014, https://2pido73em67o3eytaq1cp8au-wpengine.netdna-ssl.com/wp-content/uploads/2016/03/DataForAction2014_0.pdf.

as local workforce boards and industry advisory councils, have traditionally helped facilitate the coordination and alignment of career pathways and workforce training programs and connect to credentials in higher education. These, and other employer engagement opportunities, present a prime avenue to hear from industry leaders about the skills and credentials necessary for success in their respective fields.

This engagement has paid dividends, as states have expanded and strengthened pathways that begin in high school and end in a postsecondary credential. **And yet, states largely have not used these engagement mechanisms to give stronger voice to employers in identifying credentials of value.** And in some cases, local, regional, or state efforts to understand employer needs rely too heavily on a limited set of individuals, who may not represent the full needs of their industry, or employers in general. The needs of a Fortune 500 company may differ greatly from those of a small, family-owned company. Without a concerted effort to expand representation and check employer opinions against current and projected labor market information, the state may not be accurately capturing employer signals, leading to misinformed decisions about which credentials to prioritize.

Recommended Strategy

Build stronger employer signaling analyses to identify credentials valued by industry.

States are becoming increasingly sophisticated in their use of traditional and real-time labor market information and workforce projections. These data present a robust vision of the current and future job openings and associated wages, often at both the regional and state levels, which can be mined to better understand the types of credentials most in need today and in the future within those priority industries. States can harness this information as a source of evidence regarding credential value, but they need to be intentional about it.

The needs of employers are embedded within that labor market data, especially in the form of job openings and position descriptions, and provide important signals regarding the skills, competencies, and credentials that prospective employees need. In addition to relying on labor market systems and reports to identify industry employment trends, **states should use specific employer signaling criteria in their analyses to determine and capture which industry credentials are valued, including:**

- Employers clearly state in their job postings and advertisements which industry-recognized credentials are required or recommended for positions;
- Employers use the industry credential as a factor in selecting candidates for interviews and/or in determining which candidates are chosen for a job;
- Employers offer higher pay for those who have earned the credential; and/or
- Employers use a common credential within the same industry, providing portability across employers (e.g., a certification required by one auto manufacturer is also required by other auto manufacturers).

However, obtaining this information is not easy and often requires deep analysis of many sources to fully understand and capture the industry-recognized credentials that the labor market rewards. The text box entitled “Data Sources for Employer Signaling Systems” describes the sources states might consult as a first step in their work to identify priority industry credentials.

DATA SOURCES FOR EMPLOYER SIGNALING SYSTEMS

States should gather information from multiple sources—ideally a balanced collection of primary and secondary sources that include both traditional and real-time labor market information—to determine which industry-recognized credentials are valued in high-skill, high-demand fields.

- **PRIMARY DATA** are often culled from national and state databases, data analytics companies, and state and national trade and industry associations.
- **SECONDARY DATA** are often derived from local workforce boards, industry-specific focus groups and surveys, national policy research reports and databases, and other states' approved lists of priority industry-recognized credentials.

State leaders across K-12, higher education, and workforce development who have specialized expertise in regional and state labor markets and priority industry sectors should gather and analyze data from primary sources to form initial understandings of the industry-recognized credentials that priority industries seek. Subsequent review of secondary data sources can be used to confirm or revise initial determinations. While sources that provide primary and secondary data vary across states, the following table, though not exhaustive, offers insight into helpful sources states can use to mine for labor market data.

TRADITIONAL DATA SOURCES	REAL-TIME DATA SOURCES
<ul style="list-style-type: none"> ● State Departments of Labor: Occupation data and reports ● U.S. Department of Labor Certification Finder: National source of specific credentials ● State Departments of Economic Development: Industry outlook data and reports ● State Higher Education Commissions: Postsecondary credential attainment data ● State Longitudinal Data Systems: Credential to occupation data ● Chambers of Commerce: State, regional, and local chambers with employer data ● O*Net: National and state standardized and occupational descriptors of occupations ● Bureau of Labor Statistics: National and state occupational data and reports 	<ul style="list-style-type: none"> ● Data Analytics Companies: Burning Glass, EMSI, JobsEQ, etc. identify and clarify current employer needs using online job postings ● Online Registries: Credential Engine provides information on credential attributes ● Industry Advisory Councils: Real-time, qualitative feedback on in-demand industry credentials ● State and Regional Workforce Boards: Real-time, qualitative feedback on in-demand industry credentials ● Economic Development Advisories: Real-time, qualitative feedback on in-demand industry credentials ● Online Jobs Postings: In-demand credential information showing what employers value

A sample process is provided on page 20 that describes how states might capture and verify employer signals using these criteria and arrive at final determinations of high-value industry credentials.

State Priority: Determine the Postsecondary Currency that Credentials Offer Learners

High-value industry-recognized credentials can also open doors to continued learning for students. Education and training programs, like employers, provide signals about the value of credentials. Those that offer students currency in postsecondary education or training programs are valuable because they accelerate students' progress toward a degree or completion of a training program while also reducing their financial burden.

Common Barriers

Too often, high-value industry-recognized credentials do not count toward postsecondary education or training programs. For generations, the postsecondary credentials that have mattered most have been degrees awarded by higher education institutions. As the national and state economies have shifted, industry-recognized credentials have gained momentum in the marketplace as a mechanism to help individuals find good jobs or move into successively higher levels of employment. States are also increasingly interested in recognizing high-value industry credentials as early postsecondary opportunities and linking them to long-term postsecondary certification and degree-bearing programs. But states may have an incomplete understanding of how and where those credentials fit into the bigger system of postsecondary education and training. Greater collaboration between K-12, higher education, and workforce development is needed to prioritize high-value industry-recognized credentials as early postsecondary opportunities for students.

Recommended Strategy

Establish the currency of credentials within the postsecondary system.

While employer signals are the primary determiners of a credential's value, industry credentials that give earners a head start toward a postsecondary degree, certificate, or training program also offer clear value to students and their families. This currency can take several forms, and states should understand the extent to which those opportunities exist within their systems. To do this, states should rigorously examine their policies and program requirements using specific criteria. Industry credentials that offer postsecondary value are those that

- transfer for postsecondary course credit or credit hours in core program courses;
- count toward hours in an aligned apprenticeship program at the postsecondary level; and/or
- “stack” to allow students to progress to a more advanced industry credential within a specific field (e.g., machining levels 1, 2, and 3) or to a postsecondary certification, an associate degree, a bachelor's degree or beyond within a given field.

Credentials that meet one or more of these criteria should be classified as having value or currency to learners. States should make explicit the ways in which students can earn credit for their prior learning experiences (i.e., credential of value attainment) within and beyond the K-12 system. This may mean revisiting postsecondary program requirements and learning objectives to better understand the skills and competencies needed for success in certain fields and the industry-recognized credentials that meet such requirements.

State Priority: Build a Priority Industry-Recognized Credential List Backed by Evidence of Labor Market and Postsecondary Value

It is important that states use both their employer signaling information and their knowledge of postsecondary advancement opportunities to identify which industry-recognized credentials have the greatest value and then build a priority list to drive attainment of those high-value credentials. Priority credential lists can be used by K-12 to steer state investments, to approve programs and pathways for local implementation, and to determine what will “count” for credit in high school accountability systems. They can also be used in higher education as part of state strategies to meet postsecondary attainment goals and in workforce development to signal to adults which credentials are needed to find jobs that pay a livable wage.

Common Barriers

Building a priority list of industry-recognized credentials is a complex undertaking. The multi-step process includes gathering information from many sources; consulting numerous stakeholder groups; triangulating feedback; and making difficult decisions, sometimes amid political pressure, about which credentials deserve to be placed on the list. It forces “cuts” that separate industry-recognized credentials that have high value from those of lesser value, and it can be difficult to tell long-time supporters and allies or well-meaning industry partners that the credential they want on that list will not earn a spot. Multiple sources of evidence, including those gathered from employer signaling and assessment of postsecondary currency, are key to building a defensible list that is tightly aligned with states’ high-skill, high-demand labor market needs.

Recommended Strategies

Design and execute a systematic, evidence-based process across K-12, higher education, and workforce development.

What differentiates robust processes to identify high-value industry-recognized credentials is the ability of state leaders to collect strong evidence of credential value and their willingness to make tough decisions about which ones fall above and below the line. While there is no single “right” process for identifying high-value credentials to produce a priority credential list, strong processes generally include a common set of components such as those described in the table on the next page.

Importantly, K-12, postsecondary, and workforce development leaders all struggle with the same set of challenges and undertake similar labor market data analyses and employer engagement to understand which credentials offer the greatest value. Yet these processes, and the resulting high-value credential lists, are often disconnected from one another. States should encourage and empower leaders across agencies to collaborate on labor market and employer signaling analyses and collectively create priority credential lists that can then be used across sectors to scale and align their programs.

COMMON COMPONENTS OF AN ANNUAL OR BIENNIAL CREDENTIALING VERIFICATION PROCESS

STATE PRE-WORK

Identification of Priority Industries



Prior to the credentialing verification process, the state analyzes labor market data to determine the high- and middle-skill industries and occupations that are high-demand, high-wage and establish them as economic development priorities around which industry-recognized credential determinations will be made.

IDENTIFICATION USING PRIMARY SOURCE DATA

Employer Signaling Analysis



Labor market analysis of traditional and real-time primary source data within priority industries and occupations, using employer signaling criteria, indicates industry credentials that may be high value. Cross-sector state leaders prepare an initial, internal list of priority credentials for further vetting.

Internal Quality Assurance Review



Using the initial list, cross-sector state leaders research the industry credentials to ensure that each meets quality criteria beyond employer signaling (e.g., they are developed by a third party, provide entry-level job opportunity with a livable wage, require skill and knowledge proficiency, and are state or nationally recognized).

VERIFICATION USING SECONDARY SOURCE DATA

Industry Advisory Councils



Established mechanisms, such as industry advisory councils, vet the preliminary list using clear criteria and either confirm or refute the market value of those industry credentials. Where there is more than one highly-valued industry credential identified for the same occupation, members help determine which has greater value. For credentials that are determined to be high value, the council members also classify the degree of value they offer (if the state is designing a weighted system); those that require postsecondary education or training and are in the highest-demand fields command the greatest "weight." The state then revises its list accordingly.

Industry-Specific Focus Groups



Cross-sector state leaders conduct industry-specific focus groups, often with the help and/or endorsement of industry associations, to gather additional insight into the designated industry credentials to verify that they are high quality, valued by employers in their talent sourcing work, and essential to recruiting new employees. Participants represent each region of the state, a range of business sizes, and both urban and rural perspectives.

Industry-Specific Credential Surveys



To reach an aggregate voice of employers within a designated industry beyond those the state can reach in person, the state administers an online credentials survey to employers in every priority sector statewide. This outreach solicits feedback to confirm that the designated industry credentials are high quality, valued by employers, and used in recruitment practices.

National Verification



The state validates the list of priority industry certifications using an objective source, such as the U.S. Department of Labor's Certification Finder. Then K-12, postsecondary, and workforce leaders, using a preponderance of feedback, finalize the resulting priority list of high-value industry-recognized credentials and denote those that are most often appropriate for high school, postsecondary, and workforce development candidates.

Postsecondary Currency Identification



State education leaders review the final list of priority industry credentials to determine which count toward credit for postsecondary education and training programs. Those that count are clearly designated on the list.

ADOPTION AND PUBLICATION

Approval by State Boards



Cross-sector state leaders take the final list through their official board review processes and receive approval of the priority industry-recognized credentials.

Priority List Publication



Cross-sector state leaders publish the final list in appropriate, clearly labeled places on K-12, higher education, and workforce development websites and disseminate the list to local entities to ensure that the information is clearly communicated.

While the process described on the previous page is primarily designed and led by state K-12, postsecondary, and workforce leaders, some states provide an open application window through which local school districts and employers or local workforce boards (not credential vendors) can propose an industry-recognized credential for inclusion on the state list. This is instead of, or in addition to, the state-led employer signaling analyses. In these cases, applicants are generally asked to submit evidence of the credential's value according to clear criteria, which include letters of support from economic development leaders, workforce boards, and industry associations verifying that the proposed credential is valued by the employer community, aligned with the state's industry priorities, and otherwise meets any and all criteria established by the state for credentials on its priority list.



Ohio presents one example of a process for identifying credentials and determining their value that includes both labor market data and employer validation. The state has created an open application process to identify and vet potential credentials. Employers and school districts jointly submit an application to the state for a specific credential to be included, and a collection of industry leaders and agency staff annually review the applications in the spring. To be approved, the applications must provide evidence of “significant and ongoing demand, regionally or statewide” using labor market data and other information, such as positions for which the credential is used and letters of support from employers that specify how they use the credential in their hiring process.

Maintain the process to ensure the priority list reflects changing workforce needs.

Initial identification of high-value credentials is not the end goal; K-12, higher education, and workforce development leaders should also utilize an annual or biennial process to update

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and validate the list over time. Just as technology changes, so too do the skills expectations for employees, and new occupations continually arise. For instance, “green” jobs were largely unheard of a decade ago. Today, according to the Bureau of Labor Statistics, the two occupations with the fastest projected employment growth through 2026 both involve green work: solar photovoltaic installers and wind turbine service technicians.¹² State processes for identifying and prioritizing credentials with labor market value need to stay up-to-date with these changes so that students receive appropriate signals to guide their decisions in obtaining a credential that retains value when they make it to the workforce.

¹² Elka Torpey, *Green Growth: Employment Projections in Environmentally Focused Occupations* (Washington, DC: U.S. Bureau of Labor Statistics, 2018). <https://www.bls.gov/careeroutlook/2018/data-on-display/green-growth.htm>.



In **Louisiana**, the state's Workforce Investment Council (WIC), with support from an Industry-Based Certification subcommittee, reviews each credential every two years, considering both labor market information and pathway completion data. Credentials that fail to meet the state's standards of quality are removed from the list. At the same time, the state maintains an open submission process for annually adding credentials to its "Focus List." Each credential application must include, among other criteria, the support of three Louisiana employers, evidence that individuals with the industry credential receive preferential hiring compared to those without, and proof that individuals with the credential will have the opportunity for entry-level employment in occupations recognized as four- or five-star (out of five) jobs based on labor market needs, workforce projections, and wage thresholds.

Verify value by connecting industry credentials with workforce outcomes.

Finally, to be certain that credentials identified as high value do in fact lead to greater employment outcomes for learners over time, states should undertake longitudinal analyses that track credential holders into the marketplace. Such analyses should examine key employment characteristics such as employment status, starting and annual earnings over time, job retention, career advancement, and attainment of additional degrees and/or certifications and certificates. States should use the results of these analyses in their policymaking to help a growing number of learners achieve workplace success. For example, starting with the class of 2018, **Louisiana** plans to map credentials to wage earnings data to calculate return on investment, and it will consider that information in future reviews.

Taking It a Step Further: Innovations in Identifying High-Value Credentials

Beyond these strategies to capture signals by employers and postsecondary systems to identify credentials with currency to the labor market and to students, there are several breaking opportunities K-12, postsecondary, and workforce development leaders can leverage together to arrive at new solutions in identifying high-value credentials that better keep pace with the changing credentialing marketplace.

Develop new technology-based approaches to employer signaling.

While states clearly recognize that employers must validate which credentials industries rely on in their hiring and advancement practices, as mentioned earlier, this information is not always easy to come by. Advisory boards and sector councils can be effective ways through which to enable employers to validate credentials that have labor market value, yet these processes may not provide a complete picture of employer need or provide that picture in a timely, actionable manner. Labor markets are dynamic, and industry needs are constantly evolving. States can work with their employer partners to develop the technical capacity needed to gain faster, more reliable information about workforce needs than what can currently be gleaned through labor market data analyses. For example, the U.S. Chamber of Commerce Foundation is developing and piloting an

employer-led job registry service that will provide more complete and comparable job descriptions across industries so that individuals better understand the specific competency and credentialing requirements.¹³ State education and workforce leaders can encourage employers to participate in this or other similar initiatives that use technology to send stronger, faster, clearer signals about competency and credentialing requirements. When these systems come to fruition, states will need to adapt their processes to respond frequently to those signals to avoid having patchwork solutions to workforce needs.

Establish agreement within sectors on gold standard industry-recognized credentials.

As states work to build “demand-driven” systems for determining which credentials warrant continued investment and integration in career pathways, there is a pivotal role for employers. Given their vested interest in, and unparalleled understanding of, their state and regional workforce needs, employers can and should band together to develop shared industry norms about competency expectations.

There is a clear trend among today’s workforce of moving from company to company throughout their careers rather than staying with one employer for their professional lifetime, as workers in previous generations did. Given that increased mobility, it is paramount that, where possible, employers within industry sectors agree to prioritize the same credential for the same occupation. This gives “portability” to those industry credentials and provides additional value to those who earn such credentials. Examples of this are already present in certain sectors, including automotive (ASE certification) and manufacturing (AWS certification). To that end, states should work with industry sector leaders and industry associations to develop shared norms that can be embedded within a credential that becomes the industry-accepted standard.

Build cross-state agreements to award postsecondary credit.

States can increase the currency of high-value industry credentials to students in higher education through cross-state or cross-institution agreements to award postsecondary credit. Just as the value of a postsecondary credential generally holds constant as individuals seek employment across state lines, so too should the value of an industry-recognized credential earned in high school hold constant as a student attends a higher education institution in another state. For states that have already articulated postsecondary credit for specific industry-recognized credentials earned by students in their state, they can work to ensure that students are afforded the same credit opportunities regardless of where the credential was earned. That makes good sense for the student and can be a selling point for enrolling out-of-state students. There are two related ways states might approach this:

- States can work together to identify high-value credentials they have in common and develop agreements stipulating that holders of those credentials would be eligible to earn postsecondary course credit or hours if they attend colleges in their states; or
- States can go a step further to develop methods to capture industry credentials on student transcripts and recognize those that are high value across state higher education institutions.

13 “U.S. Chamber Foundation to Develop Web-Based Job Description Resources with Support from Google.org and JPMorgan Chase & Co.,” Press Releases, U.S. Chamber of Commerce Foundation, updated April 14, 2018, <https://www.uschamberfoundation.org/press-release/us-chamber-foundation-develop-job-registry-project-support-googleorg-and-jpmorgan>.



Establishing Incentives to Increase Attainment of Credentials of Value

Without clear incentives for attainment of these industry credentials now classified as high value, students, schools, and districts may not prioritize pursuit of these credentials. States may be best served in deploying a wide range of incentives to motivate students to earn those credentials and schools to offer them, in addition to recognizing the importance of these credentials statewide.

Common Barriers

When it comes to making decisions about programs and pathways, students and families understandably value and prioritize those that they believe will “pay off” in their futures. Until very recently, industry-recognized credentials earned in high school were not recognized as opening doors in the same way as other indicators of college and career readiness, such as dual enrollment, Advanced Placement, or International Baccalaureate, and thus were not prioritized by school systems. There are not good national data on completion rates of industry-recognized credentials—which is a problem itself—yet district and state data confirm that the number of students passing Advanced Placement or International Baccalaureate exams and completing dual enrollment courses dwarf the number of students earning credentials. This is likely the result of a combination of factors, such as a lack of student knowledge of credential value, limited access to aligned career pathways, industry certifications not counting toward postsecondary credit, and focus on other college and career readiness measures that factor into a school’s performance rating, among others.

When it comes to making decisions about programs and pathways, students and families understandably value and prioritize those that they believe will “pay off” in their futures.

Lacking clear information about credentials’ currency to their current or future education and training, students have largely chosen to focus their attention on other aspects of college and career preparation. High school students and their families generally prioritize assessments that open the door to college, such as SAT or ACT, or opportunities for earning early postsecondary credit, such as Advanced Placement, International Baccalaureate, and dual enrollment. At the same time, the general stigma that continues to exist around career and technical education as a less rigorous option also likely contributes to depressed

rates of industry-recognized credential completion. Given that these credentials are generally the culmination of a three-or-more-course career pathway, when students shy away from pathway enrollment, they shut themselves off to the opportunity to earn a credential with educational and/or workforce currency.

Prior to the new accountability systems proposed under ESSA, only 11 states valued industry-recognized credentials on the same level as other indicators of college and career preparation in their accountability and financing systems. School and district administrators are savvy. When they do not see clear prioritization signals from the state, they are less likely to invest limited resources and capacity to expand the number of students earning credentials. Particular issues arise when states do promote industry credential attainment generally, but do so without prioritizing specific industry-recognized credentials deemed to be high value. This can lead to schools and districts operating in the dark about which pathways and credentials best set their students up for future economic success. Or worse, schools and districts might push students to earn industry credentials simply for the sake of meeting accountability expectations only to find later that those particular credentials do not lead to good jobs.

Recommended Strategies

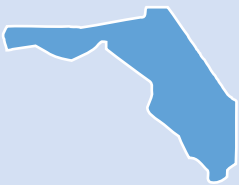
Inspire and support students' high-value credential attainment.

Students and their families need to see a clear value proposition for earning a high-value industry-recognized credentials and receive proper encouragement and support to pursue and attain them. Four promising state strategies to support students' high-value credential attainment include

- communicating the workforce and higher education benefits of credentials of value;
- removing financial and access barriers to earning high-value industry credentials;
- enabling priority industry credentials to count for postsecondary credit or hours; and
- making attainment of high-value industry-recognized credentials a graduation expectation.

Communicate the value of industry-recognized credentials to students clearly.

Students and their parents should see that school districts hold priority industry credentials in high regard, and all students and their parents should have access to clear, reliable information that spells out the career, postsecondary education, and economic benefits of earning a credential that has been determined to have high value.



For example, **Florida** legislation requires districts to notify parents and students about the return on investment for individual industry-recognized credentials. This notification includes the estimated cost savings earned through acquiring the credential while in high school versus after graduation. Districts also have to notify any student that has earned an industry credential about any additional credentials in the same path that they may be eligible to pursue with further studies. Simultaneously, the state produces a list that ranks credentials by tiers to indicate those that lead to transferrable postsecondary credit, thereby signaling the specific educational currency the credential has beyond high school.

Remove barriers to student access.

States should expand access to credentialing exams and reduce the associated financial burden to make credential completion more feasible for students. This may mean working with credentialing vendors to increase the number of locations at which credentialing exams are offered so that all students who are qualified to sit for the exam have convenient, accessible testing opportunities. States might also consider covering the cost of credentialing exams—some of which cost several hundred dollars—to enable more students, and especially those from underserved communities, to sit for an exam. Just as some districts cover Advanced Placement exam fees, so too should districts consider using local, state, or federal dollars to remove access barriers that disproportionately impact students experiencing poverty.



For example, **Tennessee** leverages the states' Perkins Reserve Grant funds to allow districts to pay for industry-recognized credential exams and to become a testing site for promoted credentials. And every student in **Idaho** receives an allocation of \$4,125 to use toward “advanced opportunities” in grades 7-12, including covering the cost of industry credential exam fees. These are two potential approaches, and there are many more opportunities to think about strategic investment to serve greater numbers of students.

Enable students to earn postsecondary credit for high-value industry-recognized credentials.

As discussed in the previous section, students will be more likely to earn industry-recognized credentials when it is clear that they can serve as an accelerant to postsecondary education and training. State and institutional policies to award postsecondary credit or hours toward a long-term certificate, apprenticeship, or degree program to students who earn a high-value credential can be powerful levers for reducing stigma and encouraging completion. States should consider executing comprehensive articulation agreements between K-12 and postsecondary systems, and potentially even across institutions, to recognize students' acquisition and demonstration of meaningful skills that are valued by the labor market.



For instance, in **Tennessee**, the state's promoted capstone industry certifications must count for postsecondary credit at any of the Tennessee Colleges of Applied Technology. **Florida** has a specific category of state-approved credentials—CAPE Acceleration Industry Certifications—that offer 15 or more statewide articulated college credits in an associate degree program.

Allow high-value industry-recognized credentials to count for graduation.

States might go even further to put incentives in place for credential attainment through the use of their graduation requirements. However, this should not be in lieu of core assessments. Ohio and Louisiana, among others, include industry-recognized credential completion as one criterion for earning a high school diploma.



In **Ohio**, students have three pathways available to meet the state's graduation requirements. One of those pathways requires a student to earn an industry-recognized credential or a group of credentials that totals at least 12 points on the state's priority credential list. In **Louisiana**, students that earn a Jump Start TOPS Tech (career) diploma must complete a technical course sequence, workplace experience, and at least a regional core credential.

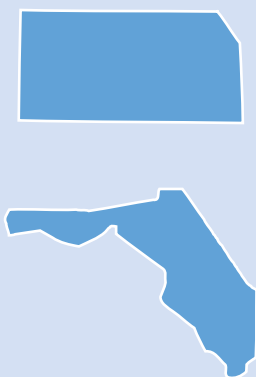
Incentivize schools and districts to prioritize high-value credential attainment.

Schools and districts need to be encouraged and rewarded for offering more pathways leading to high-value credential attainment and for increasing the number of students who complete these pathways and earn credentials. Promising strategies to spur school and district prioritization include

- providing funding for high-value industry credential attainment;
- recognizing schools and districts for success and improvement; and
- making high-value credential attainment count in accountability systems.

Strategically use state funding levers to incentivize schools to grow credential attainment.

States have a number of approaches available to use funding to prioritize attainment of credentials of value. First, states can offer additional funding to schools or districts that offer pathways that culminate with the opportunity for students to earn high-value credentials. Conversely, they can exercise discretion in whether they use funding to support pathways that culminate in credentials deemed to be of lesser value. Second, states can provide “bonus” funding to schools for each high-value credential earned. This could be done either as a flat or tiered amount; those credentials that are more rigorous and in greater demand in the labor market could earn a higher dollar amount for the school or district.



Kansas allocates \$500 to school districts for each high school student that graduates with a credential on the state's priority list. Alternatively, **Florida** differentiates award amounts according to the degree of value each credential offers; those that are more rigorous and in greater demand in the labor market have a higher dollar amount attached to them. Funds are generated based on a weighted full-time equivalent calculation. The weights range from 0.025 for a Digital Tool Certificate to up to 1.0 for an Acceleration Industry Certification that provides students with 30 or more articulated postsecondary credits. This results in additional funding from \$100-\$4,100 per credential, with most falling in the \$400-\$800 range. Additionally, teachers receive bonuses up to \$100 based on the number of credentials awarded in the same tier structure.

States that have led on financial credential incentives offer an important lesson learned: fiscal incentives often motivate progress toward credentials on the priority list that are easier for students to earn and less aligned with technical proficiency (e.g., Microsoft Office). While these credentials are important, states that offer a financial bonus to schools and/or teachers may consider differentiating award amounts significantly to drive attainment of more advanced industry-recognized credentials on the priority list that require industry-specific technical skill demonstration.

Provide visibility and recognize state and district progress toward credential attainment.

State recognition of high-quality work is another strategy to spur school and district action. A state committed to increasing its high-value industry credential attainment rates might offer an annual award program recognizing the schools or districts with the greatest number of credentials awarded, the greatest growth in credential awards, or even the most significant equity gap closure in the number of credentials of value earned by traditionally underserved student populations. The state might host a recognition ceremony with the governor or state superintendent, feature the schools in communications from the state agency, and award a seal or banner to be displayed locally and on the state's online school report card.

Make industry credential attainment count in school performance metrics.

States should also make industry credential attainment meaningful as an accountability measure for schools and districts. Under ESSA, more than half of states proposed including student attainment of industry-recognized credentials in their accountability system as a contributing factor in measuring high school performance. This has placed industry credential attainment on a similar level as measures such as dual enrollment and AP participation.



For instance, **Idaho** will measure both the number of industry-recognized credentials attained and the year-to-year growth as a component of its college and career readiness measure. **New York** has developed a tiered structure for calculating college, career, and civic readiness, with the highest eligible points going to students who attain an industry-recognized credential. And **Kentucky** continues a strong policy of weighting industry-recognized credentials that are classified as high demand at 1.25 points in its accountability system rather than 1.0 for all other certifications.

States are still developing the specific business rules that will govern high school metrics and should use those rules as an opportunity to make explicit their focus on credentials of value. Those business rules might include a weighted system that awards more points for industry credentials identified by employers as having greater labor market value, as Ohio has done. And the nearly half of states that did not include industry credentials in their accountability system can learn from their peer states about the processes used to identify and collect that information, so that they may begin tracking it for reporting and/or continuous improvement purposes or work to include it in the high school accountability system over time.

Recognize and emphasize the importance of high-value credentials statewide.

More than providing incentives to students and schools, states need to clearly communicate to the public that attainment of high-value industry-recognized credentials matters. From program design to public reporting, there are a variety of ways that states can prioritize the credentials with the greatest currency in education and the workforce. Strategies to recognize the importance of high-value credentials statewide include

- leveraging the program of study approval process to ensure that career pathways are anchored in high-value credentials; and
- publicly reporting high-value credential attainment for all students and schools.

Leverage the program of study approval process across the state.

States can leverage their career and technical education program of study approval process to raise awareness of credentials of value and incentivize student attainment of them. As states work to build and strengthen career pathways that begin in high school and link to postsecondary programs, students must have a culminating experience in high school that sets them up for success after graduation. States can and should anchor each program of study in identified high-value credentials, where available and appropriate.



Delaware requires that all new pathways offer the opportunity for students to earn college credit, attain a meaningful industry-based credential where available and appropriate, and participate in a high-quality work-based learning experience. They have also begun a review cycle for older pathways and will decrease funding to those that do not meet the new requirements as a strategy to incentivize transformation and provide adequate warning signals that such pathways are at risk of being retired.

Publicly report high-value industry credential attainment statewide.

Public reporting of high-value credential attainment can go a long way to bringing much needed attention and motivation to the issue—especially when that reporting is based on the performance of all students in a school, district, or state. States can follow the lead of **Virginia** and add the attainment of high-value credentials as a performance metric or transparency indicator on school accountability report cards or high school feedback reports to signal that those achievements are valuable indicators of postsecondary readiness. It will be particularly important for the 26 states that have included industry-recognized credential attainment in their measure of school quality to disaggregate that information from other measures of college and career readiness and by student subgroups to clearly illustrate the degree of credential attainment in the state without masking it among a range of other indicators.

Further, states should strive to disaggregate the high-value credential attainment data based on multiple denominators. Currently, most reported data on industry-recognized credentials is simply based on the number of students that actually sat for the exam, but that often underreports students who were eligible to take the exam and does not provide a complete picture of attainment across a school. To address that and incentivize districts and schools to grow the number of students qualifying for, taking, and passing the credentialing exam, states should report the number of students who took and passed all courses leading up to the qualifying credential against the number of students who actually sat for the credentialing exam and who passed the exam. They should also provide the number of graduating students who earned a credential of value against the total graduating class.

Taking It a Step Further: Incentivizing High-Value Credential Attainment

Beyond these strategies that every state can adopt in the immediate term to incentivize and grow their pool of high-value credential holders, several additional opportunities await states that are willing to band together to advance new incentives that will consolidate resources and accelerate the work.

Count high-value industry-recognized credentials in postsecondary attainment goals.

In the long term, when data are available to verify that industry-recognized credential holders fare well in the labor market, states may begin to count completion of high-value industry-recognized credentials in their efforts to reach the state's postsecondary attainment goal. More than 40 states have set postsecondary credential attainment goals that are aligned to their future workforce needs. In measuring their progress to meet the goals, most states include long-term postsecondary certificates, often defined as those resulting from a postsecondary training program lasting at least one year. Program time is used as a determinant based on research indicating that individuals with a one-year certificate, on average, are able to obtain employment with a family-sustaining wage. With better data on wages connected to specific credentials or certifications, a state could consider including proven industry credentials earned in high school—those leading to jobs with good salaries and linked to related high-value degree programs—in their postsecondary credential attainment rates.

Leverage online credential databases to capture and promote priority credentials.

States can leverage an emerging national database that is intended to house all credentials earned by students and adults nationwide as a starting point for compiling, maintaining, and promoting their credential priority list over time. The newly created Credential Engine is an online repository of secondary and postsecondary credentials—ranging from Ph.D.'s to certificates, and even badges.¹⁴ The goal of Credential Engine is to provide transparent information to employers about the skills and competencies that can be expected of credential holders and to students about the value of credentials in the labor market and their availability nationwide. Indiana and New Jersey have each begun to upload credentials to the site, which is receiving philanthropic support from Lumina Foundation and JPMorgan Chase & Co.

States can take advantage of this opportunity in several ways. First, they can ensure that their most earned and prioritized credentials are entered into the database to send clear signals about their workforce priorities and educational opportunities, allowing consumers to make more informed decisions about which credentials to pursue. Second, the collection of cross-state credentialing information amassed in the central repository can be used by states to inform demand-driven policy and programming priorities. Third, groups of states can partner to develop a tool or application for using the database to create lists of priority credentials to promote through state policy and funding.

14 "Credential Registry," Credential Engine, Accessed August 22, 2018, <https://www.credentialengine.org/credentialregistry>.

Harness collective buying power to lower credential price points.

States should recognize the power they have as a connected group in the marketplace. By banding together, they make up a considerable portion of consumers accessing credentialing exams, especially as more states cover student industry credential exam fees. Working together, states can identify the high-value credentials they have in common, approach those credentialing vendors, and negotiate pricing based on economies of scale across vendors. Efforts to conduct cross-state joint purchasing have been successful in education previously. For instance, **Maine**, **Hawaii**, and **Vermont** previously partnered on the Multi-State Learning Technology Initiative, which facilitated the purchase of education technology devices and services. State leaders in Maine worked with their colleagues to put out a joint solicitation. The cooperative procurement reduced the burden and cost for all involved parties.^{15, 16}

Similarly, education and workforce development leaders within a state can lead a multi-jurisdictional in-state procurement. In this case, leaders would negotiate statewide rates for industry credentialing exams at a lower price point for exam takers from high school, postsecondary, and workforce development programs. This would capitalize on economies of scale to significantly reduce the cost burden to students and their families.

15 Sean Cavanagh, "Maine Leading Initiative for Multistate Tech Buys," *Education Week*, March 12, 2013, <https://www.edweek.org/ew/articles/2013/03/13/24maine.h32.html>.

16 "Request for Proposals: Multi-State Learning Technology Initiative (RFP #201210412)," About, Maine Department of Education, Accessed August 22, 2018, https://www.maine.gov/tools/whatsnew/index.php?topic=MLTI_RFP&id=652839&v=details.



Reliably Collecting and Reporting Credential Attainment Data

Every potential incentive to prioritize credentials of value is contingent on having accurate and reliable data on credential completion. To date, when it comes to industry-recognized credentials, many states have had to rely on self-reported data from those taking the credentialing exams, which in turn is uploaded to a collection site that cannot meaningfully differentiate the range of credentials that have been earned. That presents significant challenges to states that are serious about incentivizing the growth of high-value credential attainment tied to their economic and workforce development priorities, especially among students from underserved communities. It is critical that each state puts in place high-quality mechanisms to collect and report how many and which students successfully take and pass credentialing exams and earn specific industry-recognized credentials so they are no longer relying solely on the students to report that information accurately.

Common Barriers

High-quality credential data are hard to come by, too often leaving educators and policymakers in the dark about access and completion. In general, data on credential assessment and completion is controlled by the credentialing bodies. Performance information is shared with students, not the state, which is unlike most other measures of college and career readiness. This means that states, by and large, have to rely on student self-reporting to count the number of credentials attained, which is problematic when high-stakes accountability and funding decisions rest upon the outcomes.

States that are unable to collect information at the individual student level face additional challenges. In certain scenarios, schools and districts may simply report the numbers of credentials attained, or flag only those students who did receive a credential. That presents two issues. In the first, the state would not be able to analyze performance by subgroups (e.g., race/ethnicity, gender). In the second, the state would not be able to accurately assess the number of students attempting the credential assessment nor the rate of students' credential passage. Both can provide valuable information about opportunities to provide additional supports.

It is critical that each state puts in place high-quality mechanisms to collect and report how many and which students successfully take and pass credentialing exams and earn specific industry-recognized credentials.

Schools and districts are responsible for reporting the industry credential data to the state, yet how that information is reported may differ from location to location. Without common approaches to reporting and adequate training to ensure that occurs, the reporting of credential

attainment may be disconnected from students' participation in or completion of specific career pathways. Before the recent passage of the Strengthening Career and Technical Education for the 21st Century Act (SCTEA), states were required by the Carl D. Perkins Career and Technical Education Act to collect information about students' "technical skill attainment." States were given flexibility to define this indicator, and many chose to use industry credential attainment. However, while many states have included completion of an industry credential as a valid measure of attainment for Perkins, the collection requirements for this measure have been minimal. States have not been required to calculate passage rates differentiated by the value of the specific credentials, nor have they been required to gather individual student-level data on credential completion. Schools in most states have simply self-reported how many students successfully attained any credential.

Aggregate data are unlikely to meet the needs of states as they transition to including industry credential attainment in their high school accountability systems or using the data for strengthening and expanding their career readiness strategies in K-12 with respect to economic development priorities. The time is right for states to improve their credential collection and reporting systems.

Recommended Strategies

Set a new minimum data threshold for collection.

As states work to gather more actionable information about credential completion, they should tighten their data collection and quality controls. There are two different approaches that leading states have taken to ensure high-quality credential data. The first, and perhaps optimal, approach is to get the credential information directly from the authorizing body or vendor. This requires executing data sharing agreements with each vendor offering a credential from the state's high-value list. The agreement would enable the state to receive student-level data on exam taking and passage rates by certification type.



Tennessee is the model for this approach, as it has established agreements to receive data from 15 industry certification agencies for the 42 promoted industry certifications that comprise the state's priority list. This process has been underway for several years, and despite the effort required to secure all of the agreements, state officials believe it will pay off in the long run. Not only will it ensure accurate data for school accountability decisions, it will also provide a wealth of data upon which to conduct further research to identify opportunities for improvement.

The second approach is to initiate secure data transfers of individual student credential information from schools and districts. Just as states collect documentation around student transfer for calculation of high school graduation rates, so too can states work with school districts to acquire documentation of students' credentialing examination results. This could include having districts upload verification of students' industry-recognized credentials to a secure platform. The state would then collect that information and regularly audit those submissions to ensure authenticity and accuracy. The audit process could also be developed and administered jointly by the state's K-12 and higher education systems.



This is the approach **Louisiana** has undertaken. Each school is responsible for uploading images of industry-recognized credentials into the student information system in a format that indicates the graduation pathway, student ID, school year, and specific certification area. The state agency then conducts a pre-determined number of random audits to ensure accuracy.

Create a standardized reporting framework to track high-value credential attainment.

To further improve efficiency and quality, each state can also implement a standardized reporting framework to track high-value credentials tied to specific pathways and courses. For instance, **Florida** created standard codes and descriptions for all industry certifications that are used in both the secondary and postsecondary data reporting systems. The eight-digit alphanumeric code includes information about both the certifying agency and the specific credential. The industry credential codes are mapped to the courses where they are eligible to be earned, which reduces the burden on school and district officials.

States should also consider providing technical assistance to districts around using the unique course codes to track, collect, and report disaggregated data on student participation and pass rates over time. This will also enable the state to signal which high-value credentials are earned across priority industries as part of the larger economic development effort to meet employers' skills needs.

Taking It a Step Further: Tracking and Reporting High-Value Credential Attainment

Executing data-sharing agreements, initiating secure data transfers, and creating standardized reporting frameworks will undoubtedly help advance states' goals to track high-value industry credential attainment against skills gaps and economic development priorities. They will help states learn which specific credentials are being earned, and by whom, and will help close equity gaps as better, clearer credentialing data will allow states to focus more intently on helping students from underrepresented communities work toward and earn specific high-value industry-recognized credentials that open doors to economic and career success. While these are important and ambitious first steps to take, states should continue to explore additional solutions that will ultimately minimize states' time and resource expenditure while increasing the efficiency of their work.

Leverage emerging national reporting systems to identify students who have earned credentials.

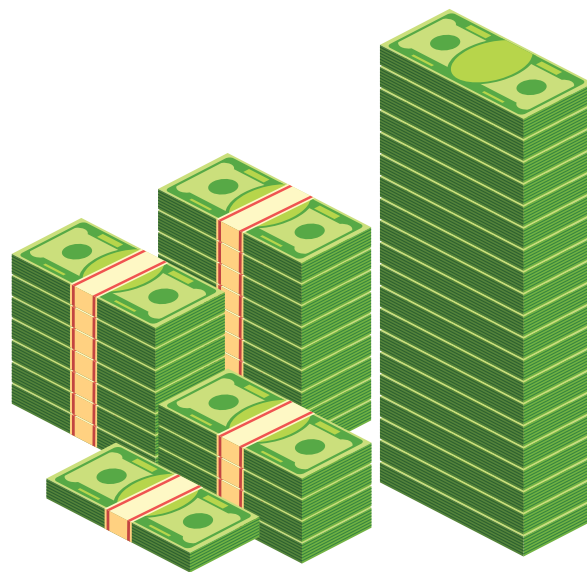
Just as states have gotten markedly better at using third-party repositories to determine how many and which high school graduates enroll in and complete college across the country, so too can states focus on matching students to credentials earned. For example, the National Manufacturing Institute has partnered with the National Student Clearinghouse to pilot a process to identify, analyze, and report outcomes of credential earners using data from community colleges and third-party credential providers. They are working to match student records with IRS employment and earnings information to provide data on labor market outcomes

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of academic programs and third-party credentials and to identify the industries employing students with specific credentials. This initiative is intended to enable states to access these matched credentialing records as part of their membership service contract with the Clearinghouse. This is a potentially game-changing play, one that will significantly reduce the time it takes states to match students to credentials earned and increase the accuracy of those matches, but it will take time to build and include the full breadth of credentials offered to students in K-12. In the short term, states should continue to focus on data-sharing agreements—described above—to access and analyze credential outcomes.

Enter into multi-state data-sharing agreements.

While each state in the near term might enter into data-sharing agreements with credentialing vendors to collect data on their students' industry credentialing exam rates (as described in the earlier recommendations), it is cumbersome and redundant to have each state making a similar request to many of the same vendors. States should consider working together with vendors to develop a common data-sharing agreement template that could be adapted by any state and used with participating credentialing vendors. The agreements that [Tennessee](#) has executed may provide a strong foundation for this work, and they could be built upon over time, recognizing that each state's priority credential list will slightly differ.



Conclusion

The labor market, now more than any time previously in history, expects workers to have some level of postsecondary education or training. This expectation is outpacing the country's ability to produce or upskill workers, and it is unlikely that this pace will change any time soon. Every state will need to support dramatic increases in the number of students prepared to succeed in the workforce. This means more students accessing postsecondary education and training, and more students earning credentials and credits that prepare them for workforce opportunities. This is especially true for traditionally underserved racial and ethnic groups and individuals from low-income families. The escalator to economic prosperity starts with a credential that has labor market value, and far too many underserved youth today remain empty-handed.

Navigating to a coherent list of industry-recognized credentials with labor market value will certainly be challenging for states, but it is even more challenging for students, parents, schools, and districts to wade through the thousands of industry credentials on their own and draw conclusions about which offer value. Students need targeted supports to find their way through the maze of pathways from education into employment.

Information is power, and that power should be distributed equally across communities. The employer community and higher education system send clear signals about the credentials they care most about and that matter most to students. It is up to state leaders across agencies working hand-in-hand to capture, coordinate, communicate, and harness those signals—using incentives and reporting systems—to propel many more students, and especially those from underserved communities, to earn those industry-recognized credentials that lead to good jobs and shortened times to degree. The economy demands no less.

Ultimately, a credential is currency for students. It is up to K-12, postsecondary, and workforce leaders to ensure that students can cash in that currency to realize economic prosperity.

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