2025

State OF CTE

The State of Career Technical Education: Credentials of Value

Full Report

ADVANCE CTE
State Leaders Connecting Learning to Work

Table of Contents

State OF CTE

The State of Career Technical Education: Credentials of Value

Executive Summary

Over the past decade, nondegree credentials have become a key focus in Career Technical Education (CTE) and workforce development, driven by a dynamic labor market in which learners seek skills that lead to jobs that pay a family-sustaining wage and employers seek flush talent pipelines.

Federal and state policies have placed increasing emphasis on the importance of credentials in education and workforce strategies. As a result, many states have made significant investments to develop credentialing systems. However, challenges remain to ensure the value of credentials, especially with the vast array of credentials available and the need for clear guidelines to prioritize those with the greatest labor market value.

When states build consistent, rigorous, and data-driven credentialing processes and systems:

Learners are more informed about their options and more prepared for their chosen career

Employers inform clear connections between industry needs and credential offerings

Policymakers maximize funding and resources dedicated to credentialing

About the Report

The State of Career Technical Education: Credentials of Value report draws on a 2024 national scan of state practices, a 50-state survey, and interviews with state leaders to gather insights and strategies for improving the identification, validation, incentivization, and data collection related to credentials that support learners' career success and workforce development.

The report is organized into four briefs, each of which includes major findings, policy exemplars, and practical strategies for implementing more robust processes around determining which credentials matter most. Additional companion resources include a list of commonly approved credentials with evidence of labor market demand, organized by Career Cluster®, and interactive data visualizations.

The report reinforces what many assume to be true about credentials—they remain highly incentivized, but too many states lack robust systems, policies, and data to ensure true quality and value.

Finding 1

States use a variety of approaches and inputs to identify and compile lists of credentials of value.

IN 2024

44 states had publicly available lists of industry-recognized credentials

Common strategies for assessing credentials' value:

- Employer Recommendations
- Educator Recommendations
- Occupational Demand
- Wage Data

23 states named state workforce agencies as most common collaborator on credential approval processes

Forty-four states had publicly available lists of industry-recognized credentials in 2024, and 34 of those states had a process to formally approve those credentials, either on a "use case" basis or through a "unified list" that is used across systems and programs.

Common strategies for assessing credentials' value include gathering employer recommendations (34 states), factoring in educator recommendations (27 states), and assessing occupational demand (24 states) and/or wage data (23 states). The most common strategy is for states to require employer recommendations of credentials to confirm value for approval.

Both secondary and postsecondary state agencies named state workforce agencies as their most common collaborator on credential approval processes (23 states). Eleven states engage their Workforce Investment Boards (WIBs) in their credential review process, and in one state (Kentucky), the WIB is the decisionmaker for final approval. Seven states engage their governor's office in the credential approval process, while eight states engage industry-focused regulatory or licensing agencies in their work.

Finding 2

States lack consistent processes for credential revalidation and phase-out.

27 states have processes for revalidating approved credentials

ONLY 14 states incorporate occupational wage information

While 27 states have processes for revalidating approved credentials, only 14 states currently incorporate occupational wage information in the revalidating process. Thirteen states reported not removing any credentials in the past 5 years.

Finding 3

States continue to invest in accountability and incentives to encourage credential attainment.

26 states include industry-recognized credential attainment

OVERALL 35 states fund credentials through state funds, federal funds, or a combination of both

Twenty-six states include industry-recognized credential attainment in their Every Student Succeeds Act and/or state accountability system, and 22 states include credential attainment as a secondary Perkins program quality accountability measure.

Overall, 35 states fund credentials through state funds, federal funds, or a combination of both. Most of these states (23 states) use both state and federal funding streams to incentivize credential attainment. Thirty states direct these funds to cover the costs of credential tests/assessments, and 23 states fund educator training or professional development to support credential attainment, among other uses.

Finding 4

States require additional capacity to connect learner data to credential outcomes.

35 states collect data from multiple sources

15 states currently track at least three leading indicators

ONLY 8 states reported the ability to access and use data that demonstrates outcomes

Thirty-five states collect data from sources such as school districts, colleges and universities, adult education providers, vendors, workforce boards, or state licensure boards/agencies to inform their credential data system, with 30 states collecting data from at least two sources.

Fifteen states currently track at least three leading indicators around credentials, such as enrollment or pass rates.

Only eight states reported the ability to access and use data that demonstrate outcomes of their credentials, such as wage and employment records.

Recommendations

1 Build a Cohesive Framework to Identify and Assess Credentials of Value

Strive to create a robust and data-driven decisionmaking framework incorporating labor market data, employer input, and learner outcomes to ensure credential relevance and value.

Unify Framework

Create a unified decisionmaking framework to assess the value of credentials, bringing together the K-12, postsecondary, and workforce sectors. Center this framework around data on wages and demand and adopt a collaborative approach by involving all relevant state agencies, boards, partners, and collaborators to ensure broad alignment and impact.

Unify Credential Lists

To minimize confusion for learners, aim to create a unified credential list, developed in collaboration with multiple state agencies, that can be adjusted or categorized as necessary for specific programs.

Align Practices and Timelines

Align credential identification practices and timelines across state agencies and create schedules to allow local educators to effectively incorporate newly approved credentials into their curriculum.

READ MORE: Brief 1 Section

2 Strengthen and Standardize Credential Revalidation Processes

Develop a systematic, cyclical approach to revalidate credentials to ensure that they continue to meet workforce needs and align with evolving labor market trends.

Develop Processes

Develop processes to regularly revalidate credentials on state-approved lists, building upon the decisionmaking framework used in the initial approval process. By aligning the revalidation process with the original decisionmaking framework, states can maintain a consistent and manageable cycle for leaders evaluating the credential value and the educational institutions offering those credentials to learners.

Integrate Data

Integrate learner outcome data such as postcredential wages and employment into the revalidation approach.

Clear Communication

Ensure clear communication with providers and learners regarding removing credentials from approved lists and provide adequate time for a smooth transition.

READ MORE: Brief 2 Section

Recommendations

3 Align Credential Attainment With Accountability, Incentives, and Employer Needs

Design state incentive structures that align credential attainment with industry demands and workforce needs, ensuring that credentials promote high-skill, high-wage, in-demand opportunities while also providing pathways for further education and career growth.

Design Incentives

Design credential incentives with intention so that the credentials promoted by state systems align with employer needs and provide opportunities for further education, such as through the creation of articulation agreements or credit for prior learning policies.

Structure Incentives

Structure incentives to discourage random acts of credentialing and gaming of the incentive systems. Design incentives thoughtfully so they encourage the attainment of only credentials that have both demonstrated value and a clearly articulated connection to a learner's program of study.

Differentiate Credentials

Consider differentiating or weighting credentials in state incentive systems. Weighting credentials allows states to acknowledge inherent differences in the amount of knowledge or skill that credentials represent.

READ MORE: Brief 3 Section

4 Use and Connect Data to Improve Credentialing Quality and Outcomes

Make use of and connect available data to improve credentialing decisions and ensure that they remain relevant, rigorous, and aligned with labor market trends.

Coordinate Across State Agencies

Reduce duplication of effort by coordinating across state agencies on data collection approaches. Integrating and leveraging existing state agency databases, such as those from secondary and postsecondary education institutions, workforce agencies, state licensure boards, and financial systems, can strengthen and streamline credential data collection and use.

Connect Learner Data

Expand capacity to connect learner data to short- and long-term employment outcomes, including wages. These data should be used to assess the quality and value of credentials and to communicate with learners, families, and the public about the impact of credential attainment.

READ MORE: Brief 4 Section

Visit *The State of Career Technical Education: Credentials of Value webpage* for companion tools, including a filterable list of commonly approved credentials by Career Cluster and interactive data visualizations.

State OF CTE

The State of Career Technical Education: Credentials of Value

Introduction

Over the past decade, nondegree credentials have become a hot topic not only in Career Technical Education (CTE) but also across the education and workforce development ecosystem.

With a dynamic labor market in which learners strive to prepare themselves with skills that lead to jobs that pay a family-sustaining wage and employers are seeking qualified talent to grow, state leaders have increasingly turned to non-degree credentials to meet the needs of learners; employers; and ultimately, state and local economies. Despite national discussions about the value of higher education, a recent projection estimates that by 2031, 72% of all jobs nationally will require some sort of postsecondary education.[1] With more than 30 million good jobs nationwide held by those with an associate degree, a postsecondary certificate, a journeyman's license, or an industry-recognized credential, the credentialing movement is part of a larger trend to recognize and value all types of learning.[2]

Recent federal and state laws have also emphasized the importance of nondegree credentials as part of broader educational attainment, workforce development, and economic mobility strategies. Consider the following:

27 states

Twenty-seven states have integrated credentials into their K-12 accountability systems since the 2015 passage of the Every Student Succeeds Act.[3]

22 states

Twenty-two states selected post-secondary credential attainment as a program quality indicator under the 2018 reauthorization of the Carl D. Perkins Career and Technical Education Act (Perkins V), while all states are required to use credential attainment to evaluate their postsecondary CTE programs.[4]

34 states

Thirty-four states have passed a total of 92 state laws focused on credentials since 2020. Forty of those state laws are aimed at enabling funding for credentials, representing substantial state investments in building robust talent pipelines.[5]

Even as states prioritize credentials, the challenge of ensuring that learners receive only *credentials of value* has remained pervasive. The credential universe is broad, with more than a million unique credentials available, which can make it difficult for states to prioritize those that have the greatest value in the labor market—and are worth public investment.[6] Leaders across the K-12, postsecondary, and workforce development systems regularly signal that the work to identify which credentials actually put learners—especially those who are underrepresented in jobs that pay family-sustaining wages—on a path toward economic and career success is challenging; time consuming; and at times, politically fraught. **The work to identify and incentivize the right credentials—credentials of value—takes coordination and intentionality.**

While 44 states have publicly available credential lists, information about how states identify and approve credentials for inclusion on those lists is limited. Yet, learners rely on the lists to guide their decisions about education and training, and substantial federal and state investments in credential attainment are tied to the lists.

To solve state credentialing challenges, more information is needed:

- How do states identify, assess value, and approve credentials?
- How do states review and revalidate credentials over time?
- What incentives exist for learners, educational institutions, and employers to embed credentials of value into their learning and skills development?
- How do states use data to make decisions on these issues?

The State of Career Technical Education: Credentials of Value report is a collection of four briefs that provides a national scan focused on these key areas. Each brief highlights state approaches uncovered through the research process, policy exemplars from across the nation, and practical strategies for implementing more robust processes around determining which credentials matter most to ensure that learners are prepared for the world of work and that employers have the talent they need to prosper.

The work to identify and incentivize the right credentials—credentials of value—takes coordination and intentionality.

Advance CTE identified four key areas in which states are advancing policies and processes related to credentials of value:

1. Identifying and Approving Credentials of Value
2. Revalidating Previously Approved Credentials
3. Incentivizing Credentials of Value
4. Collecting Data for Informed Credential Decisions

Report Sources and Terminology

To create this report, Advance CTE conducted a national landscape scan coupled with a survey of secondary, postsecondary, and workforce agencies of all 50 states and the District of Columbia in 2024 regarding the topics described above. In addition to the survey, Advance CTE collected all published state-approved credential lists and policies and conducted one-on-one interviews with state leaders responsible for credential policies. Through this research, Advance CTE identified four key areas in which states are advancing policies and processes related to credentials of value: *identifying and approving credentials of value*, *revalidating previously approved credentials*, *incentivizing credentials of value*, and *collecting data for informed credential decisions*.

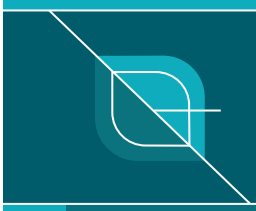
States currently consider a variety of credential subtypes within their approval systems. For this analysis, Advance CTE focused on four types of credentials commonly included on state lists: certificates, industry-recognized credentials, apprenticeship certificates, and occupational licenses. The report uses the term "credential" as a catchall for all of these types. While badges and microcredentials have ballooned in popularity in recent years, they are not commonly included on state-approved credential lists and, as such, are excluded from this report.

Advance CTE employed a four-part methodology to provide a comprehensive and nuanced understanding of credentialing practices implemented by states nationwide: a 50-state landscape scan, a 50-state survey, state interviews, and an analysis of in-demand credentials by Career Cluster according to the National Career Clusters® Framework.

More information can be found in the Methodology Appendix.

Common Nondegree Credential Types

Certificates	Used to designate the completion of a program of study, specific course sequence, or other learning experience. Certificates can be embedded as an interim designation on the way to a two-year or four-year degree.
Industry-recognized credentials	Awarded by a certifying body based on demonstrating the required knowledge, skills, and abilities through an examination process. The precise definition and use of industry-recognized credentials vary from state to state, but most include a few common elements: they are exam based, administered by third parties, originate from industry-focused organizations, and can be supplemental to a traditional postsecondary award.
Apprenticeship certificates	Earned through completion of an apprenticeship experience based on nationally defined apprenticeship standards. An apprenticeship consists of five components: employer involvement, on-the-job training, related technical instruction, paid work experience, and award of a nationally recognized industry credential.
Occupational licenses	Confers legal authority to perform specific duties and/or a specific occupation. Licenses are commonly awarded by governmental licensing agencies within states. Criteria vary across fields and states but may include degree attainment, assessments, certificates, certifications, and/or work experience.



Using This Resource

Each of the four briefs contained in this report can be used as a standalone resource or in concert to understand state approaches to credentials holistically. Each brief summarizes relevant trends and approaches states, highlights states with strong or innovative practices, and provides recommendations and questions for state leaders to consider. Additional companion resources include a filterable list of commonly approved credentials with evidence of labor market demand (using real-time labor market information from 2024) organized by Career Cluster and interactive data visualizations.

Acknowledgments

This research report was developed with the generous support of The Joyce Foundation and Lumina Foundation. Advance CTE recognizes and thanks the following individuals for their support in the development and release of the report and related assets.

This Advance CTE resource was authored by the team of Dan Adams, associate director, data solutions; Marie Falcone, research associate; Jessica Maddox, senior policy associate; Emily Passias, Ph.D., deputy executive director with content contributions from Layla Alagic, digital media associate, Kate Kreamer, executive director, and Stacy Whitehouse, associate director, communications.

The following individuals provided invaluable insight and information for this publication: Cindy Gutierrez, director of CTE program services, Arizona Department of Education; Janai Nesby, program project specialist, Arizona Department of Education; Joanna Staib, executive director, Delaware Workforce Development Board; Jonathan Wickert, director of CTE and STEM initiatives, Delaware Department of Education; Anthony Harl, associate commissioner for K-12 strategy, Indiana Commission for Higher Education; Beth Meguschar, associate chief operating officer, Indiana Department of Workforce Development; Pamela Clay, coordinator of apprenticeships and industry recognized credentials, Maryland Department of Education; Tracy Kittle, director of apprenticeships and industry recognized credentials, Maryland Department of Education; Kristin Larson, GED administrator, South Dakota Department of Education; Laura Scheibe, director for career and technical education, South Dakota Department of Education; Daniel Aldridge, senior coordinator of Career Technical Education programs, Tennessee Department of Education; Stephanie Kelly, director of Career Technical Education programs, Tennessee Department of Education; and Scott Secamiglio, president, KYVA Analytics.

ENDNOTES

[1] Carnevale, A. P., Smith, N., Van Der Werf, M., & Quinn, M. C. (2023). *After everything: Projections of jobs, education, and training requirements through 2031*. Georgetown University Center on Education and the Workforce. https://cew.georgetown.edu/wp-content/uploads/Projections2031-National-Report.pdf

[2] Carnevale, A. P., Strohl, J., Cheah, B., & Ridley, N. (2017). *Good jobs that pay without a BA*. Georgetown University Center on Education and the Workforce. https://cew.georgetown.edu/wp-content/uploads/CEW-Good-Jobs-wo-BA-final.pdf

[3] Advance CTE. (2025). *Making career readiness count: A 2025 update* [Report forthcoming].

[4] Perkins Collaborative Resource Network. (n.d.). *Perkins V performance data*. https://cte.ed.gov/pcrn/explorer/performance/perkins-v

[5] Advance CTE. (n.d.). *State policy tracker*. https://app.powerbi.com/

[6] Credential Engine. (2022). *Counting U.S. postsecondary credentials*. https://credentialengine.org/wp-content/uploads/2023/01/Final-CountingCredentials_2022.pdf

ABOUT ADVANCE CTE

Advance CTE is the longest-standing national nonprofit that represents State Directors and state leaders responsible for secondary, postsecondary, and adult Career Technical Education (CTE) across all 50 states and U.S. territories. Established in 1920, Advance CTE supports state CTE leadership to advance high-quality CTE policies, programs, and pathways that ensure career and college success without limits for each learner.

State OF CTE

The State of Career Technical Education:
Credentials of Value

1 BRIEF

Identifying and Approving Credentials of Value

The State of Career Technical Education: Credentials of Value report is a collection of four briefs highlighting state approaches to credentials uncovered through a 50-state survey, a 50-state landscape scan, and interviews. Each brief includes policy exemplars from across the nation and practical strategies for implementing more robust processes around determining which credentials matter most to ensure that learners are prepared for the world of work and that employers have the talent they need to prosper.

This section of the larger *The State of Career Technical Education: Credentials of Value* report shares findings from Advance CTE's national research on how states approach the identification and approval of industry-recognized credentials (IRCs) and provides recommendations for states, including:

- **setting criteria and evidence for credential assessments,**
- **connecting industry demand and wages to credential approval,**
- **collaborating with state partners and employers, and**
- **navigating policymaking barriers.**

The full report also explores state approaches to revalidating previously approved credentials, state incentive structures focused on credential attainment, and data collection.

States approach the work of identifying and approving credentials for use within their state education systems in a variety of ways. While 44 states (as of 2024) have publicly available lists of credentials, not all states consider those lists to be approved or endorsed. Just 34 states have a process by which they formally approve credentials for inclusion on their state list(s). The remaining states maintain "informational lists," in which they share back with the public credentials that are earned by learners or embedded within programming but do not formally approve or endorse specific credentials.

State Approaches to Credential List Development

Through its research, Advance CTE identified three distinct approaches that states take to developing approved credential lists. As states evolve their credentialing work to include high-stakes incentives and cross-sector coordination, their approach may evolve from one category to the next.

- **"Informational lists"** capture credentials that are available within the state or are being used locally without going through a formal approval process or assessment of value. States with informational lists rarely have incentives such as funding or accountability tied to credentials and may not consider these lists to be state endorsed or approved.
- **"Use case lists"** include credentials approved for particular programs or funding streams. States that create use case lists may have multiple lists that serve different purposes or populations. These states also may approve credentials for each list through distinct approaches that are informed by each list's aligned incentives or funding.
- **"Unified lists"** capture all approved credentials across use cases and are ideally aligned to state definitions and/or priorities. These lists serve the needs of multiple systems, including secondary and postsecondary education and workforce systems, and require strong cross-sector coordination and the development of common criteria, processes, and community engagement strategies.

Currently, most states are creating use case lists. For example, a state may maintain a list applicable to secondary accountability and graduation requirements, a separate list applicable to postsecondary programs, and other lists tied to workforce training programs. As a result of the use case approach, credential lists themselves have proliferated across states. While having use case lists might meet the short-term needs of state or local leaders charged with implementing credentialing programs or policies, maintaining multiple lists also leads to confusion for learners, educators, and employers. Creating a unified credential list—a list that includes state-approved credentials for all potential programs and uses—provides clarity for learners, a single voice and information source on credentials that hold value, and opportunities for coordination and alignment across education and workforce programs.

Narrowing the Field: State Approaches to Identifying Credentials

Credential Identification Sources

Making sense of the vast credential ecosystem can be daunting, and most states employ a variety of strategies to identify which credentials should be considered for state approval. The most common strategy for soliciting credentials is via an application process from schools, districts, or postsecondary institutions. Nineteen states leverage their state staff to identify credentials for inclusion on state lists, while fewer states accept applications directly from employers (13 states) or vendors (nine states). While 17 states are using only one strategy to identify credentials for consideration, most states are using a combination of strategies, sourcing credentials from a variety of interested parties. Many states leverage employer input in their approval processes, but only **Kentucky** reported exclusively accepting applications from the employer community.

CREDENTIAL IDENTIFICATION SOURCES	STATES	% OF ALL STATES	% OF STATES WITH PUBLICLY AVAILABLE LIST
Application from school, district, or institution	23	46%	52%
Identified by state staff	19	38%	43%
Accepting applications from multiple sources	17	34%	39%
Application from employer	13	26%	30%
Application from vendor	9	18%	20%

Review Timelines

States also vary in the cadence at which they review credentials for approval. While the most common approach is to review credential submissions annually, 17 states review credentials more frequently. A common challenge expressed by states with multiple use case lists is coordinating the timing of the credential review process such that interested parties, especially employers, who are engaged in the process can do so once, rather than through multiple processes across agencies.

TIMELINE FOR CREDENTIAL REVIEW	NUMBER OF STATES
Not applicable/no process	16
Annually	13
Rolling review upon submission	9
Varies by agency	6
Quarterly	4
Twice a year	2
Every 5 years	1

Additionally, state leaders noted that executing processes to review credentials is a substantial draw on the time and capacity of state staff. While nine states reported reviewing credentials as they are submitted in efforts to keep state lists as up to date as possible, others noted that their review process was timed to support annual planning on the part of educators and that program and course offerings are often solidified on an annual basis. **States should consider their staffing, the intensity of their review process, the planning needs of education and training providers, and the burden on interested parties engaged in the work as they design the cadence of their review process. Reviewing too frequently can tax employers or other critical parties whose input informs approval; reviewing too infrequently can leave critical credentials off the list in an ever-evolving economy.**

Once states have the credentials they wish to consider in hand, they take a variety of approaches to assessing quality and value and to collaborating with employers and other state agencies to approve credentials for use in education and training programs.

Approaches to Cultivating Collaboration: From Input to Joint Decisionmaking

Creating clarity for learners and employers in the credentialing ecosystem requires intentional collaboration within and across agencies. Many states are collaborating across agencies, boards, or their governor's office through their credential approval process.[1] A handful of states reported extensive collaboration across multiple state agencies; **Delaware**, **Florida**, **Indiana**, **North Carolina**, **Oklahoma**, and **Oregon** all reported collaborating with five agencies in the credential identification and approval process, while **Connecticut** reported collaborating with six.

Both secondary and postsecondary state agencies named state workforce agencies as their most common collaborator on credential approval processes (23 states). In particular, state workforce agencies are a common source of wage information that states use in their decisionmaking frameworks, with 15 states noting that they leverage wage information from their state workforce agencies in their process. Eleven states engage their Workforce Investment Boards (WIBs) in their credential review process, and in one state (Kentucky), the WIB is the decisionmaker for final approval. Seven states engage their governor's office in the credential approval process, while eight states engage industry-focused regulatory or licensing agencies in their work.

Throughout Advance CTE's research, states reported cultivating collaboration as a key component to create alignment across education and workforce development efforts. While they widely acknowledged that collaboration is crucial, many states reported getting partners to the table as an enduring pain point. One state reported that while it has invited its WIB to the meeting during which credentials are approved, a representative from the WIB has never attended. In contrast, Maryland shared that collaboration is key to its long-term plans for building an aligned and sustainable credentialing ecosystem. Tracy Kyttle, Director – Career Connected Learning, shared, "I think what's really special about **Maryland** is that we are building champions in other sectors [beyond K-12] to help us move this work."

While states consult or collaborate with other agencies, employers, or other interested parties in their process, that does not mean that they have a practice or routine around shared decisionmaking. To create clarity for learners, as well as to streamline and maximize the engagement and input process, states should work toward creating shared decisionmaking, outreach, and engagement approaches across all relevant state agencies.

To create clarity for learners, as well as to streamline and maximize the engagement and input process, states should work toward creating shared decisionmaking, outreach, and engagement approaches across all relevant state agencies.

State Approaches to Assessing Credential Quality and Value

Determining which credentials matter is crucial to ensuring that learners, employers, and states see a meaningful return on their investments. Because credentials can be earned through public providers such as schools, postsecondary institutions, or workforce development programs; private, for-profit providers; or employers themselves, collecting data on who earns credentials and how those credentials affect career trajectories and wages can be complicated for states. As a result, many states anchor their assessment of credentials in quality criteria that focus on strong practices around assessment, alignment to course or program standards or learning outcomes, and assessment security procedures.

Ideally, states seeking to assess credential value would be able to leverage wage data from credential earners in their decisionmaking framework; in the absence of those data, many states look toward wage data for occupations that request credentials under consideration. As approaches have evolved, some states have designed a combination of criteria and metrics to assess credentials. Their goal is to ensure that credentials that are endorsed by state Career Technical Education (CTE) and workforce agencies and offered by local education agencies, districts, and institutions meet quality and value thresholds that will enable positive wage and skills-based growth for all learners.

Common Strategies for Assessing Credentials

CRITERIA TO ASSESS VALUE AND/OR QUALITY	COMMONLY USED EVIDENCE
Alignment of the credential to local, regional, or statewide employer needs (as evidenced through labor market information or employer signals)	Traditional and/or real-time labor market information; employer engagement, including surveys, focus groups, and advisory groups
Alignment of the credential to state-determined high-skill, high-wage, and/or in-demand definitions	Traditional and/or real-time labor market information, including wage and demand data
Evidence of wage increase as a result of the credential	Pre- and postcredential wage data for credential earners or wage data for similar noncredential earners for comparison
Evidence of career advancement connected to attainment of the credential	Information about the career trajectories of credential earners; employer policies related to hiring and/or advancement as the result of credential attainment
Credential portability	Real-time labor market information; employer engagement that demonstrates wide acceptance of the credential across employers
Credential stackability	Demonstrated connection to additional credentials that can build an individual's skills or qualifications over time
Alignment of the credential to program/course standards or learning outcome	Demonstrated connection between program/course learning outcomes and competencies assessed by the credential
Transparent evidence of competencies demonstrated through the credential	Assessment materials and/or feedback reports that demonstrate which competencies are assessed/demonstrated through the credential
Assessment integrity	Evidence of strong and consistent assessment procedures, including assessment security

Assessing Value: Considering Occupational and Credential-Specific Demand

States generally articulated that they aim to ensure that credentials on state-approved lists are aligned to state, regional, or local "good jobs," thus providing a viable route to economic opportunity for learners and employers. State leaders are generally keeping industry and employers top of mind and involved in the credential approval process, with the goal of creating value for learners and employers. Many states are leveraging statewide definitions for high-skill, high-wage, and/or in-demand jobs as part of their credential review process, and 11 states use all three definitions as part of their credential review.

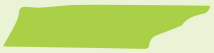
Demand data undergird most states' approaches to validating credentials, with demand data sourced from a variety of local, state, and national entities, most commonly the state workforce agency. States also source data from industry sector partners such as labor unions or associations, research entities such as postsecondary institutions, third-party data sources such as real-time labor market data providers, and local agencies to assess demand within a geographic area. Eleven states use real-time labor market information to assess demand for individual credentials. Real-time labor market information uses online job ads and similar sources of information to provide states with a current assessment of the labor market, including requests for specific credentials that employers list in job ads.

COUNT OF STATES USING STATE SKILL, WAGE, AND DEMAND DEFINITIONS IN THEIR REVIEW PROCESS

Assessing Value: Considering Wage Data

While 17 states use statewide high-wage definitions in their credential approval process, states vary substantially in how they deploy those definitions. No state reported using wage data for credential earners in the initial approval process; rather states are considering the wages tied to occupations for which individual credentials are a key qualification. Some states, such as **Tennessee**, consider wages by aligning credentials to programs of study and assessing whether the programs of study are tied to high-wage occupations, while others, such as **Hawai'i**, are evaluating whether individual occupations that leverage the credential have strong wages.

STATE EXAMPLE: Tennessee



Using a robust scoring rubric to assess identified credentials through an open application process, Tennessee prioritizes cross-agency collaboration to approve high-value credentials that align with CTE program standards and employer needs. All credential applications go through an internal team review at the state education agency level and an external partner review using the same rubric. Some external partners include the Tennessee Board of Regents, the Department of Labor, the Department of Agriculture, the Department of Transportation, and others. The rubric includes components that measure a credential against high-skill, high-wage, and in-demand occupation definitions; seeks evidence of attainment for employment; and cross-references labor market trends. Both teams compare rubric scores and settle discrepancies with a third evaluative team to ensure coherency across the state-approved credential list.

Tennessee has implemented an annual review process for both CTE programs of study and their associated IRCs. Transitioning from a 3-year evaluation cycle, state leaders have found that the updated annual timeline empowers local education agencies and educators with greater flexibility in their teaching and enables more responsive adjustments.

For instance, this approach allows vendors to update credential information more frequently, ensuring alignment with CTE program standards.

To strengthen this work, the state is upgrading and monitoring its data systems to track trends in existing credentials and identify opportunities to investigate credential value. Tennessee can better record trends and adjust previously approved credentials by incorporating new data components, such as pass, fail, and incomplete rates.

While some states consider a firm threshold for wages that must be met or exceeded for further consideration in the approval process, others do not employ wage thresholds as a decisionmaking factor. One state noted that, while wages were a consideration in its credential review process, it did not approach evidence of wages as a requirement but rather as one piece of the puzzle for considering credentials holistically. Other states, such as Florida, take a regional approach to using wage data, as wages vary across economic regions. In this case, the state considers whether credentials are tied to occupations that meet a particular wage threshold within some of the state's economic regions, rather than considering a statewide wage standard that may be affected by areas with especially high or low cost of living.

In the research, Advance CTE found that postsecondary agencies were less likely to report the use of wage data than state education agencies or workforce agencies, and state leaders noted that postsecondary credential review processes were often tied in with general program approval processes that may or may not require wage data for consideration. While most postsecondary agencies are not using real-time labor market information or wage data in their processes, **Wisconsin** requires substantive demonstration of labor market demand and wage information for every new program considered. Through the approval processes, colleges must provide average entry-level wage rates for new programs. This information primarily is provided through data analysis using a real-time labor market information provider and direct employer-supplied wage information from employer surveys. The state office then uses data from state and federal agencies to assess the college-provided information.

Finally, while many states use state-defined wage thresholds in their credential review work, others are looking to external thresholds to assess wages. Two states (**Michigan** and **New Hampshire**) reported using the Massachusetts Institute of Technology Living Wage Calculator to determine family-sustaining wages to assess the value of credentials, while others reported consulting the United Way's ALICE (Asset Limited, Income Constrained, Employed) reports to better understand financial hardship in communities and wage levels that create economic mobility for learners. **Considering wages as key criteria during credential approval processes ensures that the conditions for economic mobility are intentionally designed into the state's decisionmaking framework.**

Common Challenges: The Intersection of Demand and Wage

As states work to create a flush and skilled talent pipeline and meet the needs of local employers through their credentialing efforts, they share a common challenge of balancing employer needs to fill high-demand but low-wage positions with the intent to prepare learners for opportunities that are both high wage and in demand. This tension shows up in the state approval processes by the inclusion of tiered requirements in some state approaches to approving credentials. For instance, one state created an inverse approach to considering wage and demand: As demand increases, the wage threshold for approval decreases. States have sometimes coupled these approaches with additional requirements regarding credential portability and stackability. States should tread carefully when considering the balance of wage and demand. **Sacrificing wage considerations can result in learners attaining credentials that do not qualify them for employment that pays family-sustaining wages.**

Leveraging Input to Assess Quality and Value: Engaging Educators and Employers

Beyond leveraging data to understand occupational and credential demand and the wages associated with those opportunities, states are also deeply engaging their communities through their credential identification and approval processes. Twenty-one states consider recommendations from schools, districts, or postsecondary institutions in their process, while 27 states consider educator recommendations as part of their credential consideration process. Most commonly, educators are engaged in the credential approval process through the ability to develop applications and alert the state to consider new credentials, but in 10 states, educator recommendations are a required component in the approval process. State leaders rely on educators for information about everything from local demand to alignment to programs of study, and in 13 states, educators are engaged in reviewing the credentials themselves before approval.

APPROVAL PROCESS INPUTS	NUMBER OF STATES
Employer recommendations	34
Educator recommendations	27
Industry demand information	24
Wage information for occupations or credentials	23
Local education agency recommendations	21
Required educator recommendation	10

Engaging Employers: Validating Labor Market Value of Credentials

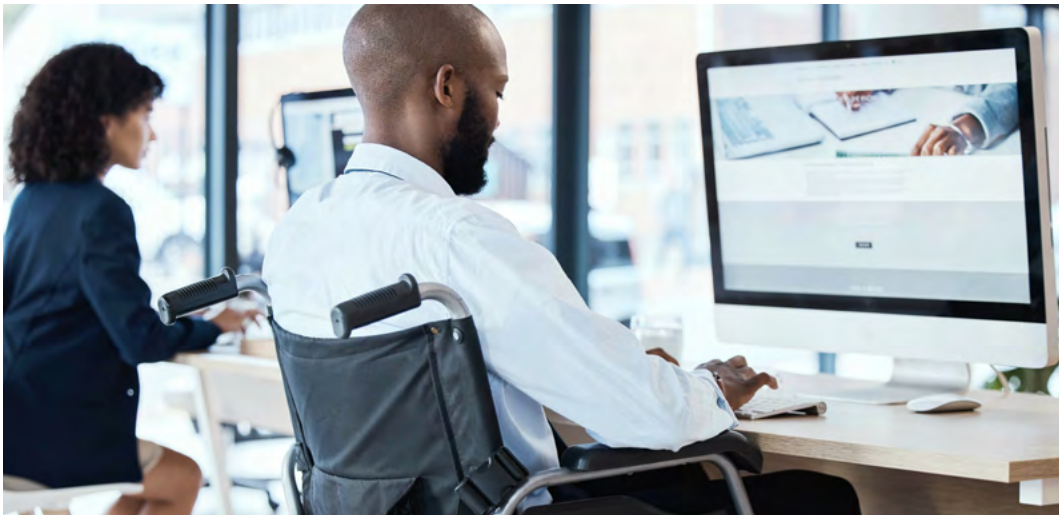
Validating credentials with employers during the approval process is key to ensuring that approved credentials meet the needs of employers. Nearly all states that have a codified process to approve credentials for use in education and workforce programs engage employers in some way throughout their processes. The vast majority of states consider employer recommendations in their processes, and in 21 states, such recommendations are required evidence to demonstrate value. While many states factor in employer input as one aspect of a multipronged approach to considering credentials, three states (**Arkansas**, **Ohio**, and **South Dakota**) note that employers provide final approval of their credential list(s). Though mechanisms by which states are using employer input vary widely, across the board states report employer engagement as both a crucial component of their work and one the most challenging components of their processes.

States vary in their approaches to leveraging employer recommendations. Some states consider the number of recommendations, coming in the form of letters of support for particular credentials or another form of endorsement coming directly from employers. The number of required recommendations varies across states, with some states requiring as few as two, while others require 10 or more. **Wyoming**, for example, asks employers two specific questions: (1) If a learner comes to you with this credential, would you monetarily incentivize them? (2) If a learner comes to you with this credential in a hiring situation in which all things are equal, will this credential give them hiring preference? Before approving a credential for addition to the state list, Wyoming requires a minimum of 10 employers to answer affirmatively to both questions.

To engage employers, most states articulated a multipronged strategy that leverages a combination of synchronous and asynchronous opportunities for employers to provide input. Common approaches to employer engagement include the following:

- employer/industry advisory committees (commonly used in most states)
- ad hoc engagement of state industry groups/partners
- solicitation of letters of support
- employer surveys and focus groups

Through employer engagement efforts, states aim to better understand not only credential demand and the wages associated with credentials but also which credentials themselves are *required* for employment, preferred for employment, or not a factor when considering a candidate for employment.



States recognize that employers are an essential component of state efforts to articulate the knowledge, skills, and credentials that are needed for in-demand jobs that pay family-sustaining wages. The employer and education communities must work hand in hand to create a flush and skilled talent pipeline and to ensure a clear throughline between the demands of the labor market and the career pathways, programs, and credentials offered within education and training systems. State leaders described four particular challenges to that collaboration that need to be considered when undertaking this work:

- **Strong employer engagement requires intentional relationship cultivation and management.** State leaders uniformly reported that employer engagement is challenging, regardless of the approach. Not only are industry professionals busy, making finding time to engage with state education leaders challenging, but finding the right individuals within organizations who can speak to the credentials and qualifications necessary for a variety of good jobs within their sector can also be difficult. Intentionally cultivating relationships and paying continued attention to network-building with industry leaders can help overcome these challenges.
- **Approaches to credentialing vary across sectors, and not all employers are familiar with the credentialing ecosystem.** States are prioritizing employer engagement as part of their credential approval processes across all industry sectors. Simultaneously, industries have vastly different approaches to how credentials are leveraged to assess knowledge and skill. Some industries—especially those that rely upon licensing—are especially knowledgeable about and reliant upon credentials; others are not. States struggle to respond to these distinctions and to balance the goal to have approved credentials closely match the needs of employers with the requests from the education community for each program of study to have credentials approved for use to meet accountability requirements and other state incentive structures.
- **Employer signaling about required knowledge and skills can be an inexact science.** Educators and policymakers strive to align career pathways and programs with the needs of industry. Yet, employers are imperfect at communicating the knowledge, skills, and credentials they need from prospective hires and the education system that prepares them. This imperfect signaling is reflected in real-time labor market data as well as employer engagement efforts. Leveraging multiple information sources and sharing them with employers, as well as creating a consistent decisionmaking and engagement framework for credential review and approval, can help employers understand the type of information that state leaders need to make sound and informed assessments of credentials.
- **Employers tend to prioritize employability skills over technical skills.** Across the board, states reported that employers emphasize the importance of employability skills, often articulating willingness to teach the technical skills as long as recruits come with the work ethic and disposition needed to thrive. States should intentionally design their employer engagement strategy to push past these shallow assessments of the skills most crucial to success on the job. Engaging employers in conversations about the qualifications of individuals they have recently hired and those who have been successful in particular roles may help state leaders learn more specifics about the technical qualifications for high-wage and in-demand occupations.

Political Challenges in the Credential Approval Process

Political challenges related to credential approval are reported across states as an unintended consequence of building credentials into CTE programs, state incentive and funding systems, and other educational pathways. Because these lists send signals to learners about what holds value for their futures, credential vendors see gaining approval as a key step in unlocking state or federal funds. Indeed, vendors see getting their credentials onto state-approved lists as money in the bank. Several state leaders shared that credential vendors are not shy about going directly to state leadership—including governors—in efforts to get their credentials approved.

Similarly, educators see credential lists as important to assessing programmatic value and evaluate the quality of their programs by the credential attained by their learners. Some states reward educators with financial incentives when their learners attain state-approved credentials (explored further in the *Incentivizing Credentials of Value* section of this report), which raises the stakes for educators further. As a result, state leaders can experience heavy pressure to approve credentials that do not meet quality, demand, or value thresholds. While most states reported some degree of political pushback when refining or building their credential lists, this pushback can be especially severe when removing credentials from their list, as explored in the next section of this report.

When funding and incentives are involved, having a strong, transparent, and collaborative decisionmaking framework is critical. Agreeing upon a common decisionmaking framework creates the conditions for strong and consistent political support across agencies and institutions and allows state leaders to weather political challenges by having clear and defensible reasoning for credential approval decisions. Ensuring that the decisionmaking framework results in approving only credentials with demonstrated value is of the utmost importance in states in which credentials are tied to funding, graduation requirements, or accountability. Once these incentives are in place, changing course on individual credentials, or the state's approach to decisionmaking, becomes more politically fraught. Those who benefitted from the established policy may object strongly when "their" credential is deemed to no longer meet value criteria and, therefore, is ineligible for associated incentives. States must be datadriven and selective from the start about the credentials they approve; adding credentials is much easier than removing them once incentives are in play.

When funding and incentives are involved, having a strong, transparent, and collaborative decisionmaking framework is critical.

State Highlight

FLORIDA

With the 2021 Reimagining Education and Career Help Act, Florida established a Credentials Review Committee that was tasked with defining what constitutes a credential of value and establishing the criteria used to measure the value of credentials for the Master Credentials List (MCL).[2] The list is a public-facing inventory of all state-approved credentials of value that are reviewed by the committee on a quarterly basis.

The Framework of Quality provides an overview of the three main quality metrics required by the committee to support newly proposed, or previously approved, credentials during the committee'sreview process:

Demand Criteria – Credentials submitted for review must be linked to at least one Standard Occupation Classification (SOC) code that has been identified by one of two internal state labor reports from the Labor Market Estimating Conference or the Florida Department of Commerce as an area of concern, or demand, at the state or region level.

Credentials that do not meet the previous criteria can submit additional documentation of support and evidence of local need based on a subset of criteria available in the framework. All criteria must be met for the credential to be considered for approval.

Wage Criteria – Florida uses the Florida Education and Training Placement Information Program (FETPIP), an internal data collection and consumer reporting system that tracks former learners from the state and matches them to their workforce earnings, to create reports that provide the wage outcome data from credential earners to compare against the committee-approved threshold for that IRC.

Credentials that do not have sufficient wage data available through FETPIP must provide additional evidence from the U.S. Department of Labor that meets a subset of criteria related to the associated SOC code.

Credential Sequencing Criteria – Credentials that do not meet the wage criteria set forth by the committee can still be approved if they are identified as part of a sequence of credentials that lead to a higher-level occupation. The criteria associated with this set of quality metrics establish a credential as a necessary building block to a high-wage occupation within a longer program of study.

The application for the MCL is open for submissions year-round, but credentials are reviewed only at the quarterly committee meetings. Applications must include all relevant and available evidence required by the framework to be considered for the list. Credentials previously approved by the committee come up for review annually, and continued evidence of state or regional demand aligned to the quality metrics is required for continued approval and inclusion on the MCL. The credentials list is active on a 1-year cycle from July 1 to June 30 of the following year.

State Highlight

MARYLAND

As an aspect of implementing the Blueprint for Maryland's Future, the CTE Committee was created by the Governor's Workforce Development Board. The committee was tasked with creating a set of criteria to assess IRCs for value and show viable benefits for learners who attained them. Maryland set the following criteria for credentials to be approved:

- alignment with in-demand occupations
- documented outcomes
- validated by industry
- assessment based
- standards driven
- attainable and accessible
- portable
- stackable
  (preferred, but not required for approval)
- renewable
  (preferred, but not required for approval)

To enforce these criteria, those who submit credentials for approval must provide documentation and artifacts (sample artifacts) to demonstrate alignment with the seven mandatory criteria.

Maryland's state-approved IRC list underwent an audit to measure each existing credential to the new standards, and the list went from 650 credentials to 170.

To facilitate cross-agency collaboration and ensure the viability of credentials for approval, each CTE program of study has a Program Advisory Committee and additional local advisory committees categorized by Career Cluster®. Members include employers, WIBs, and community colleges. Making space for these agencies to come together and discuss credential value in their own sectors builds relevant credentials for learners locally and statewide.

To ensure that the state-approved credential list holds only credentials of value, the CTE Committee and the Maryland State Department of Education undergo the same process of vetting existing credentials every 2 years to remain relevant and impactful.

The other sections of *The State of Career Technical Education: Credentials of Value* report can help leaders build the capacity to provide high-value credential opportunities in their state. Visit *The State of Career Technical Education: Credentials of Value webpage* for companion tools, including a filterable list of commonly approved credentials by Career Cluster and interactive data visualizations.

Recommendations for State Leaders

- Create a common decisionmaking framework to assess credential value that is shared across K-12, postsecondary, and the workforce. Ensure that data focused on wage and demand are at the center of the framework. Employ a collaborative approach to building the decisionmaking framework, ensuring that all relevant state agencies, boards, partners, employers, and other interested parties are involved and leveraged.
- Develop rigorous and data-driven processes to assess credentials using a mix of quality and value metrics outlined in the decisionmaking framework. Include labor market information; employer validation; and when available, learner outcome data.
- To reduce confusion for learners, work toward a unified list of credentials, agreed upon by multiple state agencies, that can be weighted or subdivided as needed for programmatic use.
- Coordinate credential identification practices and timelines across state agencies and time them so that local educators can integrate newly approved credentials into their programs of study.
- Validate any data used in the decisionmaking framework, as well as the final set of approved credentials, directly with employers.
- Ensure that criteria for approval are clear, well documented, publicly agreed to, and available to provide transparency for all interested parties and reduce political maneuvering through the credential approval process.

Questions for States to Consider

- To what degree does the state have a common decisionmaking framework to assess credential value that is shared across K-12, postsecondary, and the workforce? If not, what are the first steps toward building such a framework?
- Does the decisionmaking framework leverage thresholds for wage and demand and meaningfully integrate employer engagement into the approval process? If not, what are the first steps toward leveraging such wage and demand data?
- How can real-time labor market information be used throughout the process to assess credential demand and impact?
- How can the state strengthen employer engagement efforts through coordination with other state or local actors?

END NOTES

[1] In total, 25 states noted that they collaborate with at least one other agency on their credential approval processes; however, state agencies did not always report collaboration reciprocally, particularly in states with multiple use case lists. For instance, in several states, the state education agency shared that it collaborates with the higher education agency or coordinating board, but that agency did not report reciprocal collaboration with the state education agency. This analysis includes any report that agencies are collaborating, even if that collaboration was not reported reciprocally by both agencies.

[2] Career Source Florida. (n.d.). *Reimagining education and career help.* https://careersourceflorida.com/boardroom/reach-act/

State OF CTE

The State of Career Technical Education:
Credentials of Value

2
BRIEF

Revalidating Previously Approved Credentials

The State of Career Technical Education: Credentials of Value report is a collection of four briefs highlighting state approaches to credentials uncovered through a 50-state survey, a 50-state landscape scan, and interviews. Each brief includes policy exemplars from across the nation and practical strategies for implementing more robust processes around determining which credentials matter most to ensure that learners are prepared for the world of work and that employers have the talent they need to prosper.

This section of the larger *The State of Career Technical Education: Credentials of Value* report shares findings from Advance CTE's national research on how states approach the review and revalidation of previously approved credentials to maintain state credential lists and provides recommendations for states. The full report also explores state approaches to identifying and approving credentials, state incentive structures focused on credential attainment, and data collection.

As the world of work continues to evolve, state credential systems should be agile and adaptable to ensure that credential offerings remain relevant and worthwhile for learners and employers alike. To verify that credentials still meet the criteria of leading to in-demand and high-wage opportunities, leaders across the education, workforce, and employer communities should regularly review credential offerings using a data-informed decisionmaking framework. A collaborative and standardized approach to maintaining credential lists by revalidation of previously approved credentials ensures continued alignment with industry needs and allows for timely updates so that the credentials states encourage are valued in state, regional, and local workforces.

Enduring Relevance and Value: State Approaches to Reassessing Approved Credentials Over Time

Reaffirming the value of previously approved credentials creates truth in advertising for learners who look to these lists to inform decisions about their futures and provides employers with enduring talent pipelines of workers with skills aligned to industry needs. While many states are growing their capacity for the initial work to identify high-value credentials aligned to industry needs, fewer have clearly defined standard review or revalidation processes for these credentials. **Of the 34 states with established initial approval processes, 27 states have also developed a reapproval or review process for credentials on their state-approved lists.**

Some states, such as **South Dakota**, have intentionally mirrored their initial credential approval process by incorporating similar labor market information and employer feedback in their revalidation of previously approved credentials, along with additional metrics that align with their initial approval processes. Yet, other states undertake a distinct process for reviewing previously approved credentials that may not incorporate the use of labor market data or employer feedback to justify continued credential approval. For example, nine states reported using occupational wage data in their initial approval process but not in their revalidation processes. Only one state (**Kansas**) reported adding an assessment of occupational wages in its credential review/reapproval process that was not included in the initial approval. **Mirroring the use of data and stakeholder engagement from the initial decisionmaking framework in the state's credential revalidation process ensures that the outcome of the process reflects credential value, rather than methodological differences. States can also assess the impact of specific credentials directly by adding new data that may not have been available for initial approval (such as wage or career transitions data for credential earners) to their revalidation process.**

STATE SPOTLIGHT: South Dakota

South Dakota recently overhauled its state-approved credential list and the process for reviewing the list on an annual basis. Using real-time data from the state labor agency, leaders reviewed job listings across the state to determine the required credentials employers sought for specific occupations. This work prompted a thorough review of currently approved credentials, resulting in the identification of a number of credentials that are no longer available that, at a minimum, needed to be replaced with an updated version of the credentials that are more relevant to the field. From this reset, a new process was created to ensure that credentials remained relevant and of high value for learners who earn them.

The state education agency sent out forms to school districts to nominate a representative from economic development, industry partners, postsecondary partners, and their local advisory boards to create a statewide advisory board of 20 members to review credentials annually. Each nominee was then interviewed, briefed, and provided sufficient training to review credentials. Having input from multiple sectors provided a holistic and realistic viewpoint of which credentials were valuable to business and industry in South Dakota, rather than keeping a list of solely nationally recognized credentials. This process of annually reviewing a list of credentials guarantees relevant, applicable, and valuable credentials that change as the world of work does.

Employer Signaling: Engaging Industry and Leveraging Labor Market Data

Stakeholder input from employers, industry leaders, and educators emerged as a common practice in both the identification of credentials of value and revalidation of credentials that are already on state-approved lists. Overall, states engage stakeholders far more deeply to approve credentials initially than through their revalidation process. Thirty-four states leverage employer recommendations in their initial approval process, while only 21 states seek employer recommendations as part of continued follow-up. Similarly, 24 states use assessments of industry demand from national, state, local, or third-party labor market information providers in the initial approval process, as compared to only 16 states that use this information in their revalidation process.

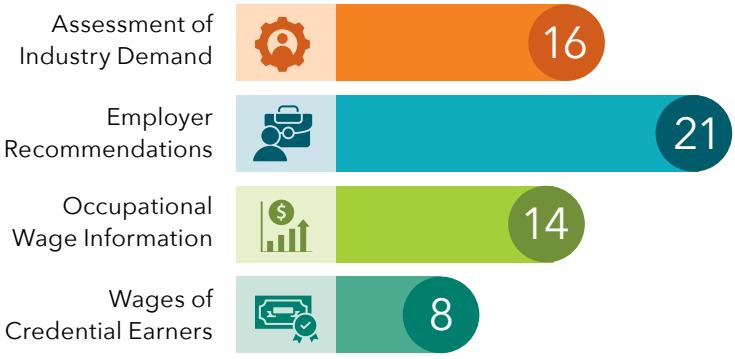
While 14 states include metrics on the occupational wages associated with particular credentials in their review process, only eight states (**Colorado**, **Delaware**, **Florida**, Kansas, **Kentucky**, **Minnesota**, South Dakota, and **Wisconsin**) are able to leverage actual wage outcome data from learners who attained the credential under consideration. Most states reported that they are not able to access wage outcome data for credential earners, but developing this capacity is worth the effort. With these data in hand, states can more deeply understand which credentials produce a true return on investment for learners, employers, and communities. Absent data on outcomes for learners who attain credentials, feedback from employers and other stakeholders is key to ensuring continued relevance of state-approved credentials. States should deepen their engagement with employers and other stakeholders through the revalidation process, rather than taking their foot off the gas.

Ensuring Workforce Alignment

At the secondary level, Colorado directly ties its reevaluation of approved credentials to its Talent Pipeline Report. The report "identifies areas of growing demand and opportunity, key features of the current labor force, and strategies to balance the supply and demand equation for talent." The report is updated annually through a partnership across multiple state agencies and additional partners. Indiana incorporates direct feedback from an in-state industry advisory board and weighs input from employers in its decision process.

States such as Wisconsin and Kentucky collect employment-related outcomes data, including wages, from various sources to review return on investment for graduates and credential earners. Wisconsin also requires annual program reviews at the postsecondary level with advisory boards whose members include employers and employees from the local workforce.

COMMON CREDENTIAL REVALIDATION CONSIDERATIONS BY STATES



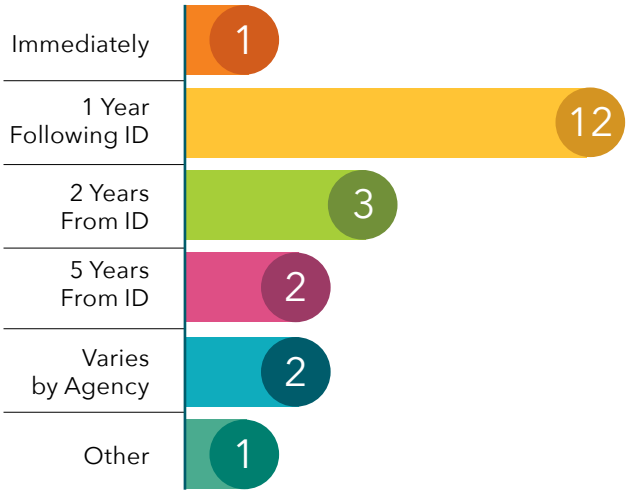
Thirty-four states leverage employer recommendations in their initial approval process, while only 21 states seek employer recommendations as part of continued follow-up.

Changing Course: Removing Credentials From State-Approved Lists

Phasing out outdated credentials that do not provide a strong return on investment for states, learners, or employers is crucial to making good on the promise of state credentialing efforts. While stakeholders may resist the removal of credentials from state-approved lists (discussed further in the *Incentivizing Credentials of Value* section of this report), ensuring a strong match between the credentials approved and incentivized by states and those employers seek creates value for both learners and employers. Maintaining outdated credentials runs counter to the needs of learners who seek credentials that will lead them to opportunities that pay a family-sustaining wage and employers seeking talent with relevant skills.

Despite the need to remove errant offerings from approved lists, **less than half of states reported having a process for phasing out credentials identified as no longer relevant for employers and learners, and 13 states reported not removing any credentials from their list(s) over the past 5 years.** Even in states with a codified process, the timeline to remove credentials from state-approved lists can be long. Most states provide a 1-year buffer between when they identify a credential for removal and when the credential is actually removed from state lists, but five give a multi year transition window.

CREDENTIAL REMOVAL TIMELINES



When designing an approach to phasing out credentials, states should act with learners in mind. Establishing a teach-out period for learners completing previously approved credentials and providing all external partners adequate time to adjust to programmatic changes resulting from credential removal eases transitions at both the state and local levels. To intentionally consider learner needs in its credentialing process, **Indiana** approves credentials in a learner cohort-based model. Credentials approved at the start of a learner's cohort remain available until they graduate high school to mitigate negative impacts to learners as the state's credential list evolves. **Mississippi** gives educational institutions the capability to teach out and report a credential up to 2 years after it has been identified for removal. This process allows secondary CTE learners currently enrolled in a program the opportunity to earn the credential they sought at the start of their program.

Overall, state processes to revalidate credentials are less robust than their approaches to initially approve credentials, resulting in stagnation of credential lists across the country. States should strive to design revalidation processes that are equally as rigorous as initial approval processes and build upon those processes by including information about outcomes for credential earners. Ideally, states should aim to have their revalidation processes shift from considering the promise that a credential holds to considering the real impact on learner career and educational trajectories. Keeping credential lists keenly focused on just those credentials that have demonstrated value ensures a strong return on investment for states, learners, and employers.

When designing an approach to phasing out credentials, states should act with learners in mind.

State Highlight

ARIZONA

Arizona has created a Credential Update Request Form that allows continuous submissions from local education agencies, educators, employers, and vendors that want to provide information and evidence about specific credentials that have been previously approved. This process gives the state team access to real-time information on what credentials need to be prioritized during the review and removal process. The web form provides options for edits that external partners can identify, such as if the credential has new requirements, no longer exists, or has a technical update.

Additionally, through a maintained internal data portal, credential attempts can be easily tracked. Using these data, leaders are able to identify credentials that have not been attempted for 4 years and set them to automatically be removed in the 5th year.

Recommendations for State Leaders

- Develop a process to revalidate credentials on state-approved lists. States should mirror and build on the processes they used to initially approve credentials. By mirroring and building upon the initial decisionmaking framework, states can ensure a consistent, manageable cycle for leaders that are involved in determining which credentials hold value and for the educational institutions bringing those credentials to learners.
- Leverage and match administrative records on wages, career transitions, and continued education for credential earners to assess the short- and long-term impact of credential attainment for each state-approved credential.
- Coordinate cyclical review of credential lists across secondary, postsecondary, and workforce agencies. This coordination should extend beyond using common definitions into using a shared decisionmaking framework.
- Communicate clearly with providers and learners about the impact of removing credentials from approved lists, and ensure that they have a runway for the transition.

Questions for States to Consider

- Does the state's approach to reviewing and maintaining its credential list(s) mirror the decisionmaking framework used for initial approval?
- Does the review timeline and cadence align to the release of new or updated wage, demand, or learner outcome data?
- Can the state add wage and/or educational attainment data for learners who earned credentials to the reassessment of the credential's value? If not, what steps does the state need to take to access these data?
- Which stakeholders are included in the review and updating process? Who is missing from this process, and how is the state approaching these relationships to build buy-in for the process?
- Does the state's process result in regular removals of credentials that do not demonstrate value or are no longer available? How is the state communicating these changes to local stakeholders and education providers?

The other sections of *The State of Career Technical Education: Credentials of Value* report can help leaders build the capacity to provide high-value credential opportunities in their state. Visit *The State of Career Technical Education: Credentials of Value webpage* for companion tools, including a filterable list of commonly approved credentials by Career Cluster and interactive data visualizations.

State OF CTE

The State of Career Technical Education:
Credentials of Value

3 BRIEF

Incentivizing Credentials of Value

The State of Career Technical Education: Credentials of Value report is a collection of four briefs highlighting state approaches to credentials uncovered through a 50-state survey, a 50-state landscape scan, and interviews. Each brief includes policy exemplars from across the nation and practical strategies for implementing more robust processes around determining which credentials matter most to ensure that learners are prepared for the world of work and that employers have the talent they need to prosper.

This section of the larger *The State of Career Technical Education: Credentials of Value* report shares findings from Advance CTE's national research on how states are approaching incentivizing credential attainment for learners, educators, and education systems and provides recommendations for states. The full report also explores state approaches to identifying and approving credentials, revalidating previously approved credentials, and data collection.

To develop learners with the skills needed to thrive in the workforce, postsecondary opportunities, and other training programs, states are turning to credentials as a key skill-building lever. In 2024 alone, 27 new state policies related to credentials were signed into law across 20 states.[1] With this increased emphasis on credential attainment, many states have developed incentive systems encouraging schools, districts, postsecondary institutions, and employers to build and sustain opportunities that lead to credential attainment.

States are thinking broadly about strategies to incentivize credential attainment, leveraging accountability, credit for prior learning, and funding to drive action around credentials. Some incentive structures are grounded in state and federal accountability measures through the Every Student Succeeds Act (ESSA), the Carl D. Perkins Career and Technical Education Act (Perkins V), or state/local accountability structures. Other incentive structures, such as performance-based funding, credit for prior learning policies, credit articulation policies, and high school graduation requirements, encourage learners, businesses, and institutions to move the needle on credential attainment.

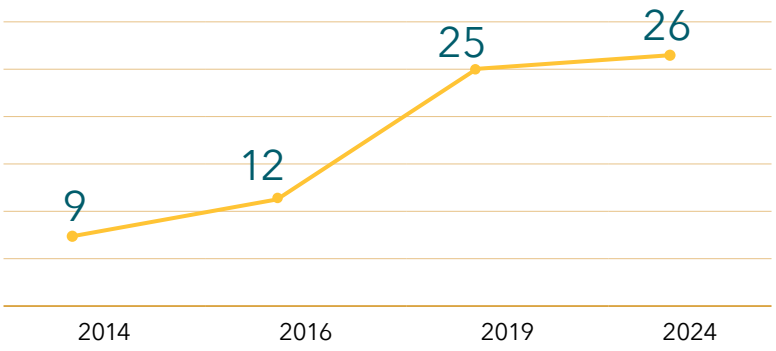
Incentivizing Credentials Through Accountability Systems

States leverage accountability systems to signal and measure progress on a host of priorities, from proficiency across subjects to demonstrating readiness for post-high school opportunities. The emphasis on credential attainment in accountability systems has grown substantially over the past decade; between 2016 and 2024, credential attainment as an indicator in ESSA and state accountability systems more than doubled. Attaining an industry-recognized credential (IRC) is now the second most common college and career readiness indicator embedded across state and federal accountability systems nationwide, second only to dual enrollment/credit completion.[2] Currently, 26 states include IRC attainment in their ESSA and/or state accountability systems.

The Elementary and Secondary Education Act was reauthorized and signed into law as ESSA in 2015, bringing new accountability options that encouraged states to value college and career readiness within their accountability system. Momentum for including credentials in accountability systems grew as states designed suites of college and career readiness metrics such that, when Perkins was reauthorized in 2018 with the option for states to use credential attainment as a program quality indicator, states were eager to create alignment between their ESSA and Perkins accountability systems.

Currently, 26 states include IRC attainment in their ESSA and/or state accountability systems.

STATES INCLUDING IRC ATTAINMENT IN ONE OR BOTH FEDERAL AND STATE ACCOUNTABILITY STRUCTURES OVER TIME (2014-24)



Credentials in Perkins V

Perkins V specifically includes two accountability measures related to the attainment of IRCs:

Postsecondary Measure 2P1: Earned Recognized Postsecondary Credential—Required	The percentage of CTE concentrators who receive a recognized postsecondary credential during participation in or within 1 year of program completion.
Secondary Measure 5S1: Attained Recognized Postsecondary Credential—Additional/Optional	The percentage of CTE concentrators graduating from high school having attained a recognized postsecondary credential.

All postsecondary Career Technical Education (CTE) programs are held accountable for attainment of recognized postsecondary credentials. In contrast, states are given the choice of three potential program quality indicators, of which they must choose at least one to include in their secondary CTE program accountability schema.[3] In the 2022-23 school year, 22 states featured IRC attainment as one of their secondary Perkins accountability measures. Of these 22 states, 15 also included IRC attainment in either ESSA, their state accountability systems, or both. For states that selected credential attainment as a secondary program quality indicator for CTE programs, credential attainment has steadily climbed, both in terms of number of learners

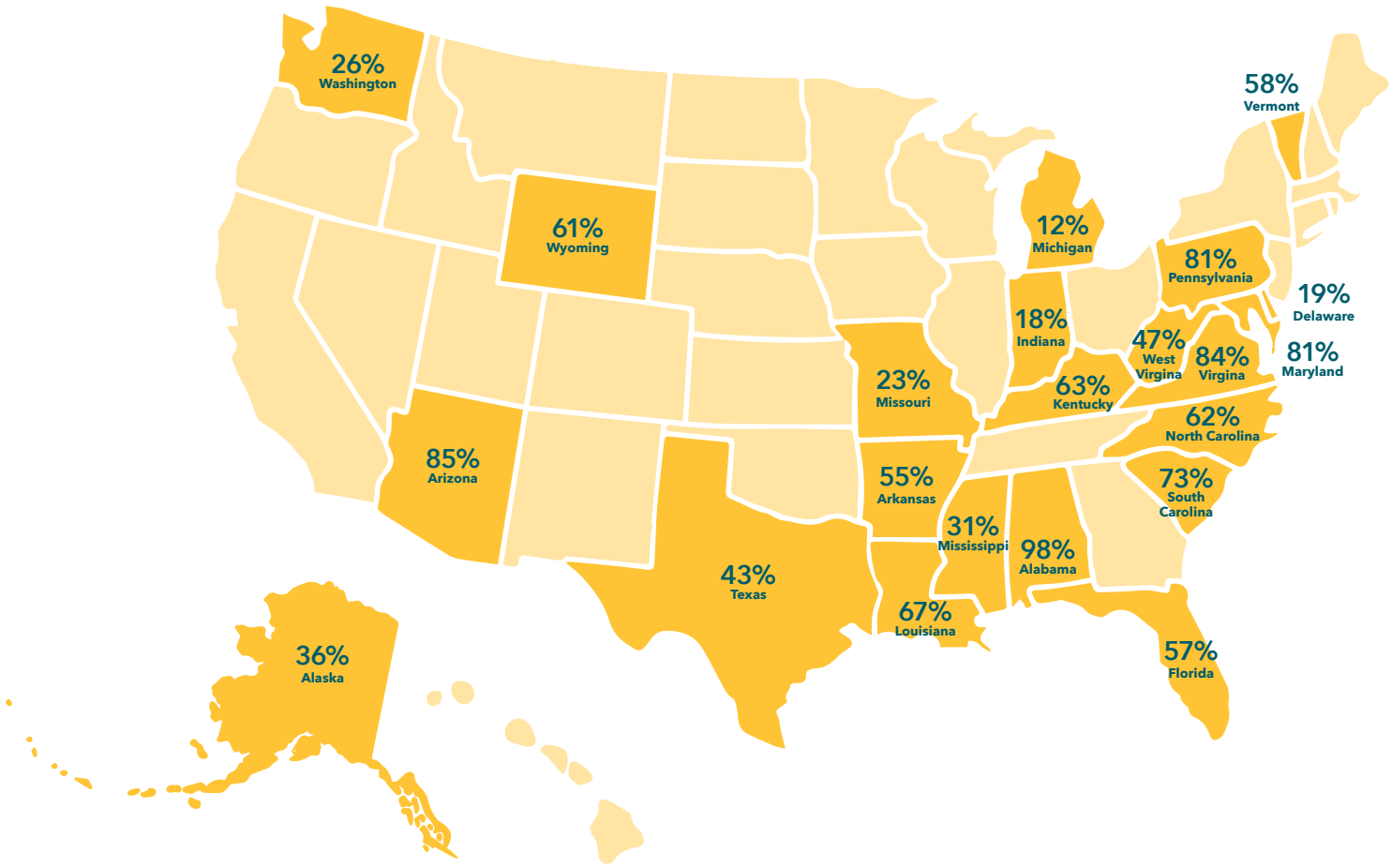
and overall share of learners who attain credentials. In 2023, more than 400,000 secondary CTE learners earned credentials through their programs, representing more than half of CTE concentrators nationally.

States have discretion over which credentials are approved to be included in these measures and leverage quality and value criteria differently to approve credentials for use in accountability systems, as described in the *Identifying and Approving Credentials of Value* section of this report. How states approach approving credentials dramatically affects attainment rates, and it is important to note when comparing attainment rates across states that the credentials that count toward each state's rate are different. States that design their credential approval and incentive systems with the underlying assumption that all learners should be able to attain a credential tend to include more credentials overall and are more likely to include educator-developed assessments or career readiness credentials. Other states take the approach of grounding their credential lists in quality and/or value criteria, with the understanding that not all learners should or will successfully attain a credential during their secondary CTE program.

PERCENTAGE OF ALL CTE CONCENTRATORS

YEAR	CTE CONCENTRATORS EARNING CREDENTIALS	PERCENTAGE OF ALL CTE CONCENTRATORS EARNING CREDENTIALS
2021	227,765	36.9%
2022	304,233	43.8%
2023	400,136	51%
Total	**932,134**	**44.5%**

PERCENTAGE OF CTE CONCENTRATORS EARNING CREDENTIALS IN STATES USING CREDENTIALS ATTAINMENT AS A SECONDARY PERKINS PROGRAM QUALITY INDICATOR, 2023



Incentivizing Credentials Through Funding

States also leverage funding as a mechanism to incentivize educators and educational institutions to support learners in attaining high-value credentials. Overall, 35 states fund credentials through state dollars, federal dollars, or a combination of both. Currently, 23 states use both federal and state funding streams to support credential attainment efforts. A smaller subset of nine states (**Colorado**, **Idaho**, **Mississippi**, **North Carolina**, **Ohio**, **Oregon**, **Tennessee**, **Texas**, and **Wisconsin**) use only state funding to support credential attainment, while another six (**Connecticut**, **Iowa**, **Michigan**, **New Hampshire**, **South Dakota**, and **Wyoming**) indicated using only federal dollars. The 15 states that do not provide explicit funding for credentials rely either on local school and district funding or on learners themselves to cover the costs of credentialing.

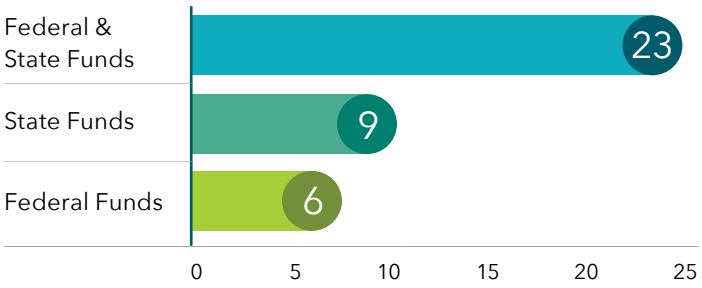
Most credential funding is allocated directly to education providers, such as school districts and community and technical colleges, to cover the costs of credential assessments for learners as well as educator training and professional development. However, as states have accelerated their work to increase credential attainment and meet their state attainment goals, some states have created financial incentives for educators, districts, institutions, and learners. Eleven states distribute funding directly to schools and educators as a reward for credential attainment.

North Carolina issues tiered bonuses to educators who instructed a course that led to a learner's attainment of an IRC. These bonuses of $25 or $50 per credential allow educators to increase their earnings up to $3,500 a year.[4] The state categorizes credentials into tiers based on their designated rigor and employment value to determine the bonus amount.[5]

Similarly, **Florida** issues teacher bonuses based on a tiered model of credential quality established through the state's Master Credentials List, which contains credentials of value that are verified to prepare learners for in-demand occupations. Established under the Reimagining Education and Career Help Act, the Master Credentials List is maintained by the Credentials Review Committee, which sets criteria to identify valuable credentials that align with the state's labor market needs.[6]

Credentials on this list can be identified for secondary and postsecondary funding from the Florida Career and Professional Education (CAPE) Act and reviewed through a rigorous set of criteria by the State Board of Education.[7] Those eligible for funding are included in an annually updated CAPE Industry Certification Funding List, with credentials weighted based on regional and local demands.[8] Educators who facilitate attainment of higher weighted credentials to learners offer greater opportunities for monetary bonuses, ranging from $25 to $100.[9]

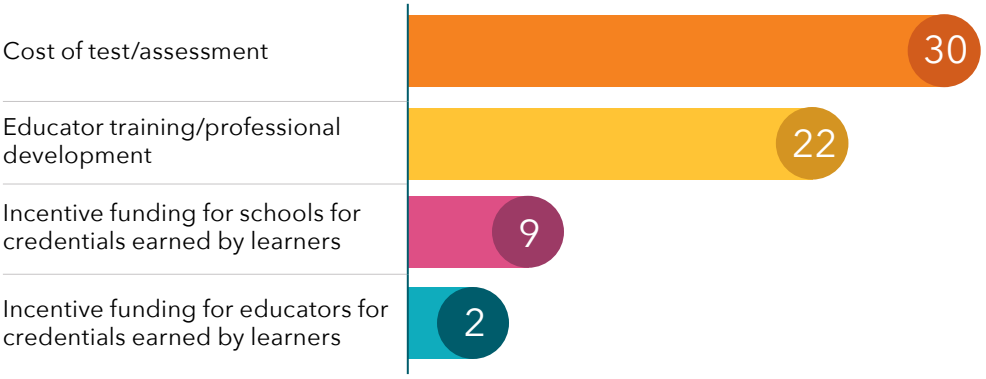
FUNDING STREAMS USED TO SUPPORT CREDENTIAL ATTAINMENT IN STATES



*In three states (Michigan, South Dakota, & Wisconsin) funding support varies by agency.

Currently, 23 states use both federal and state funding streams to support credential attainment efforts.

TYPES OF FUNDING ALLOCATIONS MADE TO SUPPORT CREDENTIAL ATTAINMENT



While incentive funding can encourage education providers and instructors themselves to promote and develop CTE programs that result in IRC attainment, direct payments to institutions, educators, or learners as an incentive can create or exacerbate the political challenges associated with developing and maintaining credential lists, as discussed in the *Identifying and Approving Credentials of Value* and the *Revalidating Previously Approved Credentials* sections. Funding bonuses can create pressure for states to include on state-approved lists credentials that fall short of thresholds for quality or value to ensure that all educators have similar opportunities to earn bonuses. This situation can, unfortunately, result in attempts to game the system through over reporting of credentials or unethical approaches to prepare learners for credentialing assessments. Some states, such as Florida, have created detailed regulations around these bonuses to minimize gaming of the system.

DIFFERENTIATING CREDENTIALS

As states evolve their approaches to incentivizing credentials, many are creating differentiation across their state-approved lists. This differentiation recognizes that credentials vary greatly in the amount of knowledge and skill they represent, as well as the value employers place on them in the labor market. Until recently, any credential on the **Delaware** state-approved list satisfied ESSA and Perkins V accountability requirements for credential attainment. In theory, this provided options for learners to select from a wide list of IRCs that complemented their career interests and preparation. In practice, state teams recognized various levels of value within the credential list, with a credential such as First Aid/CPR not carrying the same weight as a Career Cluster® aligned credential earned at the end of a CTE program of study. Some credentials within the list were introductory to a career field and could be relevant as early as middle grades. It was clear that these types of credentials should not be embedded into an accountability model at the high school level.

With further data analysis and cross-agency discussions, Delaware has created tiers within its IRC list to group credentials of similar rigor and outcomes. As Delaware progresses to finalize this new process, an identified credential must go through a program committee of postsecondary institutions; relevant employers; learners; educators; and representatives from the workforce board, CTE advisory council, and other state departments. The committee then reviews the supplemental data collected on the credential to determine its tier based on a set of criteria before passing the recommendation on for final approval.

Other states have including other types of differentiation in their incentives structures. Florida weights credentials for funding, while Ohio assigns point values to credentials and encourages learners to create bundles of credentials that meet a state-determined threshold foruse in graduation requirements and accountability. These approaches add nuance to state credentialing approaches, recognizing that not all credentials are created equal.

Performance-Based Funding

In 2023, the Texas Legislature passed House Bill 8, replacing the previous community college funding model with a performance-based system tied to specific learner outcomes. Backed by $683 million, the law aims to strengthen the role of community colleges in workforce development and career preparation. Community college funding is now determined by four key learner-focused outcomes:

- credentials of value awarded that position graduates for well-paying jobs
- credentials of value awarded in high-demand fields
- successful learner transfers from community colleges to four-year universities
- completion of a sequence of dual credit courses

With half of these outcomes directly tied to credential attainment, Texas has positioned its community colleges as key drivers in preparing learners for in-demand careers.[10] By moving away from a static model of funding, institutions can be strategic about incentivizing and supporting measurable outcomes.

While embedding support for credential attainment into federal and/or state funding models can minimize for schools and institutions the administrative burden of locating, applying to, and maintaining grants that support credentialing work, some states also use grant funds to incentivize credential attainment. The Iowa Department of Education issued $1.7 million in grants that covered the cost of assessments and education training, instructional equipment, non consumable instructional supplies, computer equipment and software, learner-required materials, and additional costs related to improving credential attainment for districts and schools. Named the Credentials to Career grant, the opportunity was funded by a portion of the state's American Rescue Plan Elementary and Secondary School Emergency Relief Fund.[11] New Hampshire also provides discretionary grants through Perkins V that support credential attainment by covering costs associated with supplies, equipment, and travel. All approved subrecipients of Perkins are eligible to apply for these funds as long as they are used to enable learners to earn IRCs.[12] There is no maximum amount, and funding can vary depending on the applicant's request.[13]

The Iowa Department of Education issued $1.7 million in grants that covered the cost of assessments and education training, instructional equipment, nonconsumable instructional supplies, computer equipment and software, learner-required materials, and additional costs related to improving credential attainment for districts and schools.

Incentives for Learners: Credentials as Graduation and Postsecondary Credit Qualifiers

Beyond incentivizing providers to offer high-value credentials to learners, some states are leaning into creating incentives for individual learners to pursue those credentials. Currently, 10 states (**Alabama**, **Arkansas**, Colorado, **Indiana**, Mississippi, **Nevada**, Ohio, South Dakota, **Virginia**, and **Washington**) have added IRC attainment as a component in their high school graduation requirements. Some states, such as Virginia, allow credential attainment to meet graduation course requirements, while other states have CTE-specific endorsements that learners can earn as part of their pathway to graduation. For example, Virginia includes credential attainment through a CTE course as an option within a broader menu that learners choose from to demonstrate readiness. That menu includes courses such as world language or fine arts alongside other experiences such as credential attainment, Advanced Placement, honors, International Baccalaureate, dual enrollment, or work-based learning.[14] Other states, such as Nevada, South Dakota, and Washington, require credential attainment, combined with other criteria such as a minimum cut score on a career readiness assessment or CTE concentrator status, to achieve a career-related diploma endorsement.[15]

States are also working to ensure that credentials earned during secondary education or while in the workforce confer postsecondary credit and accelerate learners toward postsecondary completion. Currently, 10 states (Florida, Idaho, Indiana, **Maryland**, Michigan, North Carolina, Nevada, Ohio, Oregon, and Wisconsin) have an approach to awarding credit for prior learning for credentials earned outside postsecondary enrollment statewide. For example, Florida has the Gold Standard Career Pathways Articulation Agreement through CAPE that provides guaranteed college credit for individuals who have earned an approved credential and are enrolled in an associate degree program at a Florida College System institution.[16] Through this agreement, learners who have a minimum of five postsecondary credit hours through IRCs that articulate for college credit and have completed 30 volunteer service hours can qualify for the Florida Bright Futures Gold Seal CAPE Scholarship.[17] The scholarship funds can cover a percentage of the cost of career certificate programs, applied technology diploma programs, technical degrees, and bachelor's degrees at any Florida postsecondary institution.[18] This approach not only expands access to postsecondary education but also helps learners transition more efficiently into in-demand careers by reducing time and financial barriers to degree completion.

To create clarity for learners, as well as to streamline and maximize the engagement and input process, states should work toward creating shared decisionmaking, outreach, and engagement approaches across all relevant state agencies.

Political Challenges: Gaming the System

States reported that strong incentives, especially those tied to funding or accountability, can sometimes result in manipulation attempts aimed at maximizing potential rewards for credential attainment. This manipulation can range from encouraging learners to pursue credentials that do not align to their program of study or career aspirations so that the educational institution or individual educator receives incentive funding to pressuring state leaders to approve credentials that do not meet quality or value criteria.

To minimize attempts to exploit incentives, states should:

- **Develop a clear, well-documented, and widely communicated decisionmaking framework and processes to approve and revalidate credentials.** Doing so ensures that state leaders can justify decisions about credential approval using clear and consistent evidence.
- **Thoughtfully design incentives to ensure that they encourage alignment between learner aspirations and programs of study.** Discourage random acts of credentialing by designing incentives that encourage the attainment of only credentials that have both demonstrated value and a clearly articulated connection to a learner's program of study.
- **Consider differentiating or weighting credentials in the incentive systems.** Weighting credentials allows states to recognize inherent differences in the amount of knowledge or skill that credentials represent. For example, some industries seek candidates with a single comprehensive credential (such as a professional license) while others seek candidates with multiple smaller, skill- or software-based credentials. States should prioritize how employers use credentials in the labor market when considering a weighting schema, such that incentive structures align to what employers are seeking.
- **Publicly report data on the impact of incentives on credential attainment,** and leverage those data to have meaningful conversations with the field about their impact.

As states work toward achieving their attainment goals and addressing critical workforce needs, they have developed incentive structures to encourage actors across the ecosystem to prioritize and pursue credential attainment. Encouraging credential attainment has become a key strategy to equip learners with the skills needed for success in the local workforce, postsecondary education, and other training pathways. With growing emphasis on IRC attainment, states have introduced incentive structures to promote and sustain high-quality credentialing efforts among agencies, local communities, and employers. Strategic alignment across incentives ensures that states are encouraging the credentials that employers most need and that will situate learners well for employment that pays a family-sustaining wage and career success.

The other sections of *The State of Career Technical Education: Credentials of Value* report can help leaders build the capacity to provide high-value credential opportunities in their state. Visit *The State of Career Technical Education: Credentials of Value webpage* for companion tools, including a filterable list of commonly approved credentials by Career Cluster and interactive data visualizations.

Recommendations for State Leaders

- Design an approach to incentivizing credentials to match statewide priorities, including considerations for state priority sectors and in-demand, high-wage employment. Focus on credentials that have demonstrated employer demand or positive impacts on wages for credential earners.
- Ensure that incentives align to what is appropriate for each learner level, from middle grades up through the workforce development system.
- Intentionally design incentives such that credentials that are encouraged through the state system are connected to both employer needs and opportunities for additional education through the development of intentional articulation or credit for prior learning policies.
- When implementing incentive policies, ensure that stakeholders understand the processes and timelines for adjusting both the credentials that are incentivized and the incentives themselves. Be transparent about the need for regular updates to state credential lists to keep pace with the needs of the labor market and the impact these changes will have on incentives.
- Recognize that credentials vary in both their value to employers and the amount of knowledge or skill they represent. Consider weighting credentials in the incentive systems to clearly distinguish those with the most value.
- Anticipate and address "gaming" of incentive systems.

Questions for States to Consider

- How are credentials being incentivized, and what entities or individuals benefit from these appropriations?
- What additional incentives outside of funding are available for credential earners or entities providing credential training/programs?
- Are incentive structures achieving the intended results? If yes, what strategies are especially effective? If no, how can the course be adjusted?
- How are incentive structures being messaged to learners, educators, and other stakeholders?

END NOTES

[1] Advance CTE & Association for Career and Technical Education. (2025, February). *State policies impacting CTE: 2024 year in review.* https://careertech.org/wp-content/uploads/2025/02/CTE_2024YIR_02_022025.pdf

[2] Advance CTE. (2025). *Making career readiness count: A 2025 update* [Report forthcoming].

[3] In addition to credential attainment, states have the option of choosing work-based learning participation or the attainment of postsecondary credits as their Perkins program quality indicator.

[4] Division of School Business. (2022, December 14). *Q&A: Industry certifications and credentials teacher bonuses (Session Law 2021-18, SB 105, Section 7A.4) school year 2022-2023.* North Carolina Department of Public Instruction. https://www.dpi.nc.gov/documents/fbs/finance/salary/faq-cte-teacher-bonus-fy2023pdf-0/download?attachment

[5] State Board of Education. (n.d.). *Report to the North Carolina General Assembly: CTE industry certifications and credentials teacher bonus program, SL 2017-57 Section8.9. (c).* North Carolina Department of Public Instruction. https://webservices.ncleg.gov/ViewDocSiteFile/15481

[6] CareerSource Florida. (n.d.). *Florida Credentials Review Committee.* https://careersourceflorida.com/boardroom/florida-credentials-review-committee/

[7] Florida Department of Education. (n.d.). *Career and adult education: CAPE—secondary.* https://www.fldoe.org/academics/career-adult-edu/cape-secondary/

[8] Florida Legislature. (n.d.). *Florida Statute 1008.44: CAPE Industry Certification Funding List.* https://m.flsenate.gov/statutes/1008.44

[9] Florida Legislature. (n.d.). *Florida Statute 1011.62: Funds for operation of schools.* http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&URL=1000-1099/1011/Sections/1011.62.html

[10] Texas Higher Education Coordinating Board. (2023, June 9). *Texas House Bill 8 becomes law, paves way for innovative community college funding.* https://www.highered.texas.gov/texas-house-bill-8-becomes-law-paves-way-for-innovative-community-college-funding/; H.B. 8, Texas State Legislature (2023). https://www.legis.state.tx.us/tlodocs/88R/billtext/html/HB00008F.HTM

[11] Iowa Department of Education. (2024, January 11). *Iowa Department of Education announces $1.7 million in grants to support high schoolers in earning industry-recognized credentials.* https://educate.iowa.gov/press-release/2024-01-11/iowa-department-education-announces-17-million-grants-support-high-schoolers-earning-industry

[12] New Hampshire Department of Education. (n.d.). *Industry Recognized Credentials (IRC) Grant frequently asked questions.* https://www.education.nh.gov/sites/g/files/ehbemt326/files/inline-documents/sonh/irc_grant_faq.pdf

[13] *Ibid.*

[14] Virginia Department of Education. (n.d.). *Standard diploma: Graduation requirements.* https://www.doe.virginia.gov/parents-students/for-students/graduation/diploma-options/standard-diploma-graduation-requirements

[15] Nevada Department of Education. (2024, August). *2024-2025 school year Nevada graduation college and career ready credit and assessment requirements.* https://webapp-strapi-paas-prod-nde-001.azurewebsites.net/uploads/24_25_diploma_requirements_one_pager_7d76501bd0.pdf; https://doe.sd.gov/gradrequirements/documents/1118-Infographic.pdf

[16] Florida Department of Education. (2022, April 8). *Gold Standard Career Pathways articulation agreements.* https://www.fldoe.org/core/fileparse.php/7671/urlt/GoldStandards-Memo.pdf

[17] Office of Student Financial Assistance. (n.d.). *Florida Bright Futures Scholarship Program Florida Gold Seal CAPE Scholars (GSC) 2024-25.* https://www.floridastudentfinancialaidsg.org/PDF/GSC.pdf

[18] Office of Student Financial Assistance. (n.d.). *Bright Futures student handbook: Chapter 2: What you need to know now that you are eligible.* https://www.floridastudentfinancialaidsg.org/PDF/BFHandbookChapter2.pdf?utm_source=chatgpt.com

State OF CTE

The State of Career Technical Education:
Credentials of Value

4
BRIEF

Collecting Data for Informed Credential Decisions

The State of Career Technical Education: Credentials of Value report is a collection of four briefs highlighting state approaches to credentials uncovered through a 50-state survey, a 50-state landscape scan, and interviews. Each brief includes policy exemplars from across the nation and practical strategies for implementing more robust processes around determining which credentials matter most to ensure that learners are prepared for the world of work and that employers have the talent they need to prosper.

This section of the larger *The State of Career Technical Education: Credentials of Value* report shares findings and recommendations from Advance CTE's national research on how states collect and connect data from a variety of sources on credential access, use, and attainment. The full report also explores state approaches to identifying and approving credentials, revalidating previously approved credentials, and state incentive structures focused on credential attainment.

As states invest substantial time and money into credentialing initiatives, many are also investing in related data infrastructure. States are working toward comprehensive, accurate, and actionable data on credential access and attainment, while simultaneously building systems and routines for state leaders to have the data-informed insights they need to make sound decisions.

Key Features of High-Quality Credential Data Systems

To ensure that credentialing efforts enhance employment and wage outcomes for all learners, states need high-quality data that capture all aspects of credentialing initiatives. While states often use labor market data to guide credential approval processes, they should also collect and use learner data to ensure that approved credentials open multiple career pathways for learners and that all career opportunities are high wage, high skill, and in demand. Meeting this need requires linked data systems that include disaggregated, learner-level data to measure credential access, attainment, and impact on individuals' short- and long-term outcomes, along with program-level data to evaluate the effectiveness of credentialing initiatives in helping learners achieve their goals.

Data systems capable of providing these comprehensive, accurate, and actionable credential data have several key features, including the following:

Make effective use of all possible data and data collection processes to source data. States should prioritize leveraging existing data collections, linking and using administrative records including those collected by secondary and postsecondary education institutions, workforce boards, and state licensure boards/agencies, potentially as part of data collections aligned with other statewide requirements. Linked administrative records can then be used to inform credential approval and review processes, understand learner success, and evaluate return on investment for state credentialing initiatives. Finally, while time consuming, sourcing data directly from credential providers can offer rich information that can be challenging to capture through administrative data.

Collect data on leading indicators of learner success as well as employment and earnings outcomes. Leading indicators measure learner progress toward earning a credential and include data such as learner course enrollment, Career Technical Education (CTE) program enrollment, learner credential test attempts and passes, and data pertaining to the specific credential they are pursuing. Such leading indicators provide actionable data to state and local education agencies so that they can identify and scale successes, as well make necessary adjustments in a timely fashion.

States should also develop strategies to collect and leverage outcome data on wages and employment for credential earners to assess the impact of credentialing initiatives and return on investment. Sharing these data back with local stakeholders, especially outcomes tied to specific geographic regions, school districts, community and technical colleges, and populations, is especially useful to learners and local education leaders.

Eliminate intra- and interagency duplication of effort through coordination. Intentionally coordinating data collection strategies by creating common data definitions, agreeing on collection timelines and target populations, and coordinating the sharing of data across agencies reduces duplication of effort and ensures alignment across state agencies and actors. Likewise, state longitudinal data systems (SLDSs) play a crucial role in integrating data across sectors, enabling a more comprehensive understanding of credentialing outcomes over time. Some states also coordinate with credential vendors to obtain or verify credential attainment data.

Making Effective Use of All Possible Data: State Credential Data Collection Sources and Timing

Comprehensive credential data systems collect and enable leaders to leverage information and existing data from across the credentialing ecosystem, including school districts, colleges and universities, adult education providers, vendor or credential providers, workforce boards, and state licensure boards/agencies. The right data from the right source at the right time help paint a more complete picture of credential access and outcomes. At present, nearly 60% of states (30) collect data from two or more of the sources listed previously.

Ideally, states should be collecting data on a regular cadence and, whenever possible, align those collection efforts with existing reporting timelines, such as the Perkins Consolidated Annual Report and annual secondary and postsecondary data collections. Given how many states have built credentials into their accountability systems, these timelines are largely set.

Finally, states should strategically sequence credential review cycles to ensure that they are using the most up-to-date data at the time of approval and validation. Aligning data timing with decisionmaking processes strengthens the ability to approve and revalidate credentials based on current labor market trends and learner outcomes. At present, data collection such as efforts described previously happen at least once per year in 27 states, yet only 11 states work to collect data *and* review current offerings on an annual basis.

Ideally, states should be collecting data on a regular cadence and, whenever possible, align those collection efforts with existing reporting timelines.

Collecting the Full Range of Data and Indicators: Leading Indicators and Outcome Measures

Most states collect some form of credential data, but the scope and depth of collection vary both among states and within states among state agencies. Nearly 70% of states (35) gather data on credentials, though the agencies responsible for this collection differ. State education agencies are the primary collectors, largely obtaining data from school districts and secondary institutions. Postsecondary agencies are less likely to track nondegree credential data comprehensively, especially from four-year institutions.

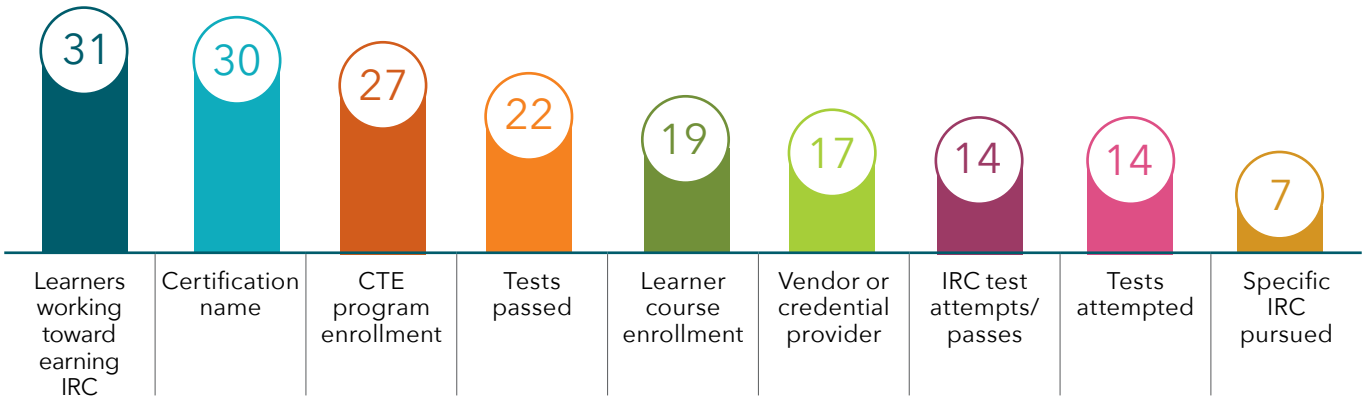
This disparity in collection means that while many states have some credential data, the available data may not capture the full scope of credential attainment across all education and workforce sectors.

The data elements states collect can generally be categorized as *leading indicators* and *outcome measures*. Leading indicators help predict whether learners are on track to earn or have earned industry-recognized credentials (IRCs). These indicators include learner course enrollment in CTE programs, learner credential test attempts and passes, and information about the specific credentials learners are pursuing. Outcome measures, including employment rates and earnings, are critical to understanding which credentials have true value in the labor market, helping learners secure good jobs.

By collecting and analyzing learner-level leading indicators, states can assess whether specific programs are serving all learners and leading to successful credential attainment. Program-level data can also be aggregated to measure overall effectiveness, allowing states to identify best practices and areas for improvement. Furthermore, linking credentialing data with employment and earnings records to measure outcomes provides insights into the long-term value of credentials, helping states refine funding strategies, incentive programs, and accountability measures to ensure that resources are directed toward credentials that yield meaningful economic benefits for learners.

Fifteen states currently track at least three leading indicators of IRC attainment, with Alabama, Indiana, and Kansas each tracking at least four. Kansas differentiates between high-value and standard IRCs, using leading indicators to monitor learner progress. Outcome data, such as employment rates and earnings, provide insight into how well the credentialing system has prepared learners for the workforce. Currently, only eight states (**Colorado**, **Delaware**, **Florida**, **Kansas**, **Kentucky**, **Minnesota**, **South Dakota**, and **Wisconsin**) reported that they are able to either collect or connect administrative records to obtain wage outcome data from learners who attained credentials. Most states reported that they are not able to access wage outcome data for credential earners, but developing this capacity is worth the effort. With these data in hand, states can strengthen their credential approval, revalidation, and incentive systems and better understand which credentials produce a strong return on investment for learners and employers.

COUNT OF STATES COLLECTING CREDENTIAL-RELATED DATA ELEMENTS



Coordinating for Quality: SLDSs, Cross-Agency Coordination, and Vendor Collaboration

Despite the widespread collection of leading indicators related to credential attainment, gaps remain in how these data are integrated into broader education and workforce systems. Nearly 50% of states (25) do not yet connect credential attainment data to state student information systems (SISs), limiting the ability of leaders—including teachers and advisors—to track learner progress toward credentials of value. SLDSs are designed to bridge this gap by linking statewide data across early childhood, K-12, postsecondary education, and the workforce. According to the Education Commission of the States, as of June 2024, 33 states had fully operational SLDSs, while an additional nine states were in the process of developing their systems.[1] Using SLDSs to analyze credentialing trends and outcomes provides a crucial opportunity to strengthen the connection between education and employment. To ensure that credential data can be easily integrated into an SLDS, state agencies should coordinate on the design of data elements related to credentials, as well as learner populations for which those elements are collected.

In addition to coordinating across state agencies, some states have been able to obtain credential attainment data directly from credentialing bodies or vendors through data-sharing agreements.

Currently, eight states (**Alabama**, **Arkansas**, **Mississippi**, **North Carolina**, **Utah**, **Vermont**, **Washington**, and Wisconsin) have agreements in place to facilitate this data exchange. North Carolina has prioritized this approach, with agencies such as the North Carolina Department of Public Instruction and the North Carolina Workforce Solutions Division securing agreements with credential vendors. States such as **Tennessee** provide the flexibility for local education agencies to partner with vendors independently to obtain and provide credential attainment data to the state. This flexibility gives local education agencies the opportunity to find vendors that best support the programs running in their districts and schools. These partnerships allow the state to track learner-level credential outcomes more effectively, enhancing the ability to evaluate educational and workforce programs.

However, establishing effective data-sharing agreements comes with challenges. Not all credential vendors are willing to establish such agreements, and those that are willing may not collect key data elements that allow for successfully matching records back to the state data system. Maintaining data-sharing agreements can also be a time-consuming process fraught with a number of legal hurdles related to the sharing of personally identifiable information that must be overcome for this strategy to be impactful.

Nearly 50% of states (25) do not yet connect credential attainment data to state student information systems (SISs), limiting the ability of leaders—including teachers and advisors—to track learner progress toward credentials of value.

Obstacles to Credential Data Collection and Connections

Building comprehensive, accurate, and actionable credential data systems is not just a technical challenge—it can be a political one as well. States must navigate competing interests, bureaucratic constraints, and funding limitations while ensuring that their data systems serve all collaborators effectively.

One major political hurdle is securing **data-sharing agreements** with credentialing agencies. With "over a million credentials and fifty thousand providers in the United States alone," the landscape is vast and fragmented.[2] Advance CTE's research reveals that, at present, more than 12,000 unique credentials have been approved by states. However, 84% of states reported having no formal data-sharing agreements with credential vendors or agencies. As a result, states must rely solely on self-reported data from schools, districts, and postsecondary institutions, limiting states' ability to verify credential attainment data.

More broadly, establishing data-sharing agreements—whether across state agencies or with external credential providers—is further complicated by privacy concerns because the agreements often involve personally identifiable information, such as Social Security numbers, raising fears about potential data security and breaches. Finally, the administrative burden of negotiating and maintaining data-sharing agreements requires significant staffing resources. However, without such agreements, states too often rely on self-reported data from learners or institutions, which can lead to issues with data quality.

Even among states that source labor market information, the majority do not have access to wage and employment records, setting up a technical and structural challenge to collecting and analyzing outcome measures. These outcome measures are crucial to understanding the impact that credentials have on learners' short- and long-term employment trajectories and return on investment for states. Obtaining these data could transform the way that states maintain their credential lists by moving state approval and revalidation processes from assessing *assumed* credential value to assessing *demonstrated* credential value.

Beyond funding and privacy concerns, the structural timeline for modifying state data systems is another major obstacle. Many states require a year or more to make changes to data collection processes due to the need for coordination across multiple agencies, including education and workforce departments. The lengthy revision process can delay critical improvements and make responding quickly to shifting credentialing needs difficult for states.

Despite these political and logistical challenges, many states have pushed forward, recognizing the long-term value of strong credential data systems. The ability to collect and analyze credentialing data effectively is not just an administrative goal—it is essential for ensuring that credentials lead to meaningful economic opportunities for learners and align with workforce demands. That many states have recognized, chosen to proceed, and overcome these and other obstacles is both evidence of the importance of data work to effective credentialing systems and a credit to those who have worked so hard to overcome the obstacles.

One major political hurdle is securing data-sharing agreements with credentialing agencies.

Recommendations for State Leaders

The potential impact of IRC data to improve credential evaluation processes and learner outcomes is a function of the quantity, quality, and effective use of available data. Any one of these three traits can be a focus to improve a state's credential processes, but none is sufficient in the absence of the other two. To improve employment and wage outcomes for all learners, states need a variety of high-quality, disaggregated data simultaneously to inform effective decisionmaking processes that consistently result in the exclusive availability of high-wage, high-skill, in-demand IRCs. Advance CTE therefore recommends that states implement the following strategies:

- Employ a collaborative approach to building the data collection and use framework, ensuring that all relevant state agencies, boards, partners, and collaborators are involved and leveraged.
- Leverage and match administrative records on wages, career transitions, and continued education for credential earners to assess the short- and long-term outcomes of credential attainment for each state-approved credential.
- Align data collection with decisionmaking processes, including approving and revalidating credentials, so that state leaders make use of data on the most current labor market trends, leading indicators, and learner outcomes available.
- Link and use existing state agency databases, including secondary and postsecondary education institutions, workforce agencies, state licensure boards/agencies, and financial data to improve IRC processes, which may require data-sharing agreements or revisions to the state's SLDS.
- Establish data-sharing agreements with credential vendors and licensing boards. These agreements should include all relevant state agencies.

Questions for States to Consider

- What data elements are being collected related to IRCs or the learners that are earning them? Does the state have the necessary data to assess access to, success in, and the impact of credentialing initiatives, including outcome measures, disaggregated by learner population or Career Cluster®/program of study?
- If the right indicators are not being collected to inform key decisions around credential approval or reapproval, what is the best timeline for building those indicators into the state's data collection efforts? Will this change require legislative approval, or can it be done through internal policy changes?
- Are credential data able to be connected across reporting systems if they are not already integrated into a larger statewide SIS or SLDS?
- What partnerships, including data-sharing agreements, have been or are being developed to support data collection efforts, either across agencies or with credentialing bodies?

END NOTES

[1] Education Commission of the States. (2024, June 4). *50-state comparison: Statewide longitudinal data systems*. https://www.ecs.org/50-state-comparison-statewide-longitudinal-data-systems-2024/

[2] Credential Engine. (2022). *Counting U.S. postsecondary and secondary credentials*. Washington, DC: Credential Engine. https://credentialengine.org/wp-content/uploads/2022/12/CountingCredentials_2022-FINAL.pdf

Additional Resources

For states looking to start, or improve, their IRC data collection processes and procedures, *Collecting and Understanding Noncredit Community College Data: A Taxonomy and How-To Guide for States* contains a well-designed roadmap based on lessons learned from direct interactions with states that collect noncredit data.

https://sites.rutgers.edu/state-noncredit-data/wp-content/uploads sites/794/2023/11/State-Noncredit-Taxonomy_EERC_11.17.23.pdf pg. 16

More information about data sources and evidence used to identify and approve credentials can be found in *Identifying and Approving Credentials of Value* section. Visit *The State of Career Technical Education: Credentials of Value webpage* for companion tools, including a filterable list of commonly approved credentials by Career Cluster and interactive data visualizations.

State OF CTE

The State of Career Technical Education: Credentials of Value

Methodology

Research for *The State of Career Technical Education: Credentials of Value* report was conducted in 2024 and encompassed all 50 states and the District of Columbia, henceforth collectively referred to as '50-state'. Advance CTE employed a four-part methodology to provide a comprehensive and nuanced understanding of credentialing practices implemented by states nationwide.

The first step was a 50-state **landscape scan**, which served as an essential foundation for identifying the scope and distribution of credentialing initiatives by states. This step was followed by a 50-state **survey**, which allowed for the collection of detailed data on specific credential processes. To further focus the findings, in-depth **interviews** were conducted with local and state-level stakeholders to capture insights into the challenges and practical implications of credentialing. Finally, the team performed an **analysis** of the most commonly approved credentials within each of the 14 Career Clusters®, enabling a clear assessment of whether and how approved credentials align with workforce demands and Advance CTE's modernized National Career Clusters Framework.

The 50-state **landscape scan** began with desktop research of published documentation by state agencies regarding approved credentials and processes by which credentials are approved. The team also reviewed documentation by state agencies related to standards used for approving credentials as well as documentation on input sought from collaborative state agencies and/or the private sector. The result of the landscape scan was not only process documentation for all 51 states but also a comprehensive list of more than 12,000 publicly available credentials approved by at least one state.

The result of the landscape scan was not only process documentation for all 51 states but also a comprehensive list of more than 12,000 publicly available credentials approved by at least one state.

One of the findings of the 50-state landscape scan was that a number of states had lists of approved credentials but no publicly available documentation as to how credentials were reviewed or approved. To supplement the findings of the landscape scan, Advance CTE created a survey employing a mix of multiple choice, select all that apply, and open text box questions, distributing it to representatives from secondary education, postsecondary education, and workforce agencies from all 51 states, with extensive follow-up to ensure the highest response rates possible. In the end, there were 64 survey responses, representing secondary education, postsecondary education, or workforce agencies from 35 states.

To move from agency-focused survey responses to a comprehensive, statewide view, Advance CTE combined data from the landscape scan and survey responses into state-level responses that captured the available data to form the fullest possible picture of state credential efforts.

Promising practices began to emerge from the landscape scan. Data from the survey expanded the list of promising practices and prompted additional research questions. The next step was to develop interview protocols for conversations with state representatives to shed light on the promising practices encountered in the landscape scan, the survey, or both and elucidate how published lists and documentation were implemented by practitioners. To accomplish these goals, Advance CTE selected 11 states from which to interview experts representing secondary education, postsecondary education, and workforce agencies.

In 2024, Advance CTE launched the modernized National Career Clusters Framework, providing "systems and structures that are accessible, responsive to evolving industry needs, and flexible for the needs of each state and community." The modernized Framework has already begun to inform state CTE efforts and will guide federal Perkins V reporting beginning with the 2025-26 academic year. The team leveraged the extensive labor market research that informed the modernized Framework to review real-time labor market information from Lightcast for the top 20 occupations for each of the 14 Career Clusters. Through this review, Advance CTE identified the certifications that were most commonly requested by employers for each occupation in 2024.

ABOUT ADVANCE CTE

Advance CTE is the longest-standing national nonprofit that represents State Directors and state leaders responsible for secondary, postsecondary, and adult Career Technical Education (CTE) across all 50 states and U.S. territories. Established in 1920, Advance CTE supports state CTE leadership to advance high-quality CTE policies, programs, and pathways that ensure career and college success without limits for each learner.

Visit *The State of Career Technical Education: Credentials of Value webpage* for companion tools, including a filterable list of commonly approved credentials by Career Cluster and interactive data visualizations.