

Expanding Opportunities

Defining
Quality
Non-Degree
Credentials
for States



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NATIONAL SKILLS COALITION
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About Lumina Foundation

Lumina Foundation is an independent, private foundation in Indianapolis that is committed to making opportunities for learning beyond high school available to all. The foundation envisions a system that is easy to navigate, delivers fair results, and meets the nation's need for talent through a broad range of credentials. Lumina's goal is to prepare people for informed citizenship and for success in a global economy.

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Introduction and overview

More than ever before, postsecondary education and training has become essential to the nation's economic mobility and growth. More than 80 percent of all jobs in today's economy require some form of education or training beyond high school,¹ and virtually all new jobs created since 2008 have gone to workers with at least some postsecondary education.² But as a nation, America is not keeping pace with these accelerating demands. Nationally, fewer than half of all Americans have a postsecondary degree or credential, and in some states fewer than 40 percent of working-age adults have any form of postsecondary attainment.³ If America wants to build an inclusive economy where all workers and all businesses have the skills they need to stay competitive in a rapidly changing global marketplace, everyone must work together to expand access to and attainment of degrees and credentials of value.

State leaders have recognized the critical importance of postsecondary attainment in meeting economic and equity goals. Nearly every state has or is considering a postsecondary education attainment goal, which sets a threshold for the number of people within that state who hold some type of postsecondary credential at 55 percent or higher. These goals can drive policies that help more individuals attain postsecondary degrees and credentials that attract business and lead residents to good jobs.⁴ And states are increasingly recognizing that they will be unable to achieve these goals without focusing on student populations that have traditionally been underserved by higher education and other training strategies. Thirty states have set goals to close racial equity gaps or increase attainment for people of color,⁵ and a number of states have developed policies to expand access to degrees and credentials for adult learners and other non-traditional students.

Non-degree credentials (NDCs), such as certificates, industry certifications, apprenticeship certificates, and occupational licenses are a key component of state credential attainment goals, helping workers obtain better jobs and serving to reconnect them to further postsecondary education and training opportunities. NDCs are already a significant part of the education and training landscape. In 2016, the Adult Training and Education Survey (ATES) found that 27 percent of adults held a NDC, with 18 percent holding licenses, 8 percent holding postsecondary certificates, and 6 percent holding certifications.⁶ The percentage of individuals reporting a postsecondary certificate as their highest educational attainment increased from less than 2 percent in 1984 to nearly 12 percent in 2009.⁷ The number of workers participating in registered apprenticeship programs increased by 56 percent between 2013 and 2018 — from 375,000 participants to 585,000 participants — and nearly 300,000 individuals completed apprenticeship programs over that timeframe.

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While non-degree credentials generally do not have the same payoff as more traditional bachelor's degrees, they do represent a crucial opportunity for millions of U.S. workers to increase their earnings and economic opportunities.

NDCs matter to workers and jobseekers because they have value in the labor market. Postsecondary certificate holders earn 30 percent more than individuals with a high school diploma alone, on average, and the wage premium for short-term programs in certain fields is often comparable to or higher than associate's degrees and even some bachelor's degrees.⁸ According to a Strada-Gallup Education Consumer Survey, among adults without a postsecondary degree, certificate/certification holders enjoy an income premium compared to those who do not hold a certificate or certification (\$45,000 median annual income versus \$30,000). This income advantage exists at the top and bottom of the income distribution as well.⁹ Individuals who complete a registered apprenticeship program earn more than \$300,000 in additional wages and benefits than non-participants on average over their lifetimes, and have an employment rate 8.6 percent higher than non-participants.¹⁰ While non-degree credentials

generally do not have the same payoff as more traditional bachelor's degrees, they do represent a crucial opportunity for millions of U.S. workers to increase their earnings and economic opportunities.

Yet, not all non-degree credentials are created equal. Some are higher quality than others, meaning they lead to further education and employment. Some connect individuals to good careers, while others have little or no economic payoff. It is essential that states have criteria to assess the quality of non-degree credentials in order to make sensible budget and policy decisions, advance equity, and put students on a path to success.

Quality assurance is particularly important given the role that NDCs play in providing opportunities for people of color and other underrepresented groups who have been historically underserved by postsecondary education and training. For example, Black Americans are more likely than their White counterparts to report certificates as their highest level of education. This reality reflects inequities in access to more advanced postsecondary education, but also the fact that shorter-term NDCs can be a valuable option for people who face financial or other barriers in accessing education and

A NOTE ON NON-DEGREE CREDENTIALS AND THE FUTURE OF WORK

Workers and companies face an unprecedented acceleration of workplace technologies, with broad implications for the “future of work” in America. By most estimates, at least 60 percent of today's jobs will be impacted by digitalization, automation, and/or artificial intelligence. That means over ninety million working Americans may have to acquire new skills just to stay in their jobs, let alone to advance in their industries. An additional 10-20 percent of jobs are likely to be eliminated and replaced with new types of higher-skilled positions, requiring broad-based reskilling support for millions of impacted workers as they develop new careers.¹² Increasing access to and support of NDCs will build ladders to greater opportunity as the workplace changes.

A state quality NDC definition can assist state policymakers in identifying and investing in new and emerging credentials that can help workers upskill quickly in response to technological changes and can help displaced workers figure out the right next steps as they transition to new occupations or industries. The quality NDC definition and the process of industry validation may be of particular value with newer credentialing options, where there may not yet be broad understanding or acceptance by employers within that industry.



training. Across American society, people of color are disproportionately likely to face such barriers, while also contending with broader racial inequities in educational attainment, employment, and income. These disparities result from decades of structurally racist policies, including those that have shaped postsecondary education and training. Addressing these disparities requires a multi-pronged strategy, potentially including setting credential attainment goals that specifically target racial gaps in education and employment and increased access for workers of color to particular types of quality non-degree credentials (quality NDCs) that they have historically had less opportunity to pursue (e.g. apprenticeships). While these approaches can help counter years of racist policies and decrease gaps in attainment, employment, and income, they are insufficient on their own. Other policies — such as those that promote access to jobs that pay a family supporting wage — are also necessary to ultimately overcome wage and employment disparities.

In this paper, National Skills Coalition (NSC) lays out the importance of building robust quality assurance systems for NDCs. The paper proposes a consensus definition of quality

It is essential that states have criteria to assess the quality of non-degree credentials in order to make sensible budget and policy decisions, advance equity, and put students on a path to success.

NDCs and criteria developed in consultation with twelve leading states, that states can adopt for their own quality assurance systems. These criteria should allow policymakers to be comfortable supporting these programs with public funds, students to be confident about selecting high-quality training, and employers to understand which programs are effectively preparing students for careers. The quality NDC criteria can also help states address racial and other equity gaps by providing more pathways into quality postsecondary education and training and good jobs for people of color. In conclusion, NSC provides a range of policy recommendations for states to consider to support increased attainment of quality NDCs.

What are non-degree credentials?

Credentials and programs

Before turning to a discussion of quality assurance and NDCs, it is important to distinguish between *types* of credentials and how they are awarded, and whether we are focusing on the quality of credentials or the quality of programs.

NSC considered four **types** of non-degree credentials in developing the definition of quality: certificates, industry certifications, occupational licenses, and apprenticeship certificates.

Each **specific** credential (as opposed to type of credential) is awarded by a specific entity. For example, a certificate is awarded by an education institution and a license is awarded by a state licensing agency. For instance, Virginia and Iowa plumber licenses are different credentials, and their quality must be separately analyzed because their quality may not be the same. This paper is about the quality of specific credentials.

In addition, for **certificates** a credential signifies the completion of a specific educational program, meaning the certificate and program are tied together. To receive an education or apprenticeship certificate, an individual must complete a specific program. For example, a graduate receives a Clover Park Technical College Pharmacy Technician Certificate. For the purpose of this paper, analyzing the quality of a specific certificate and an individual educational program is one and the same.

In contrast, **licenses and certifications** are not tied to an individual educational program. A licensing body may well require applicants to complete a type of program. There could be multiple individual programs in a state that meet the licensing or certification requirements. Individuals may complete any of these programs in preparation for a license or a certification, receive a certificate, but never receive the license or certification for one reason or another. For analyzing quality, a license or certification is different than a program.

TYPES OF NON-DEGREE CREDENTIALS

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

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

Industry certifications are credentials awarded by a certification body (not a school or government agency) based on an individual demonstrating, through an examination process, that he or she has acquired the designated knowledge, skills, and abilities to perform a specific occupation or skill. It is time-limited and may be renewed through a re-certification process.

Licenses are credentials that permit the holder to practice in a specified field. An occupational license is awarded by a government licensing agency based on pre-determined criteria. The criteria may include some combination of degree attainment, certifications, certificates, assessment, apprenticeship programs, or work experience. Licenses are time-limited and must be renewed periodically.

Why quality assurance systems matter

While NDCs can and should be an important element of any state's credential attainment goals, it is important for states to have clear processes and criteria in place for determining which NDCs provide value to workers, businesses, and other stakeholders.

For **workers**, a quality NDC definition and a quality assurance system can help save time and money. One estimate suggests that there are more than 330,000 unique credentials in the U.S., and it can be difficult for working adults and other non-traditional students to understand their options and the likely employment and earnings outcomes associated with specific programs.¹² Workers also need to evaluate how well a given program will meet their career goals while also balancing work, family, and other obligations. In some instances, a shorter program with an immediate labor market payoff may work better for that individual, but in other instances a longer program — including a program with opportunities to learn and earn — may be more appropriate. In all cases, workers need to know if a given program or credential is unlikely to deliver desired results. A well-designed quality assurance system can help individuals identify the right program and credential for their circumstances while avoiding low-quality or ineffective options, protecting students from being the victims of fraud and abuse. It can also help overcome the negative associations that employers may have regarding individuals with NDCs, making it easier for disadvantaged worker populations to enter and advance in employment.

For **businesses**, a quality NDC definition and quality assurance system can make it easier to identify talent and address emerging skill needs. Businesses can play a critical role in the development of a quality NDC definition, identifying the competencies and skills that they need to get the job done, and the credentials that they view as effectively communicating mastery of those competencies. As skill requirements change in response to technological or economic shifts, employers can help to determine whether current quality NDCs still have value and can help credential providers refine curricula and program delivery to ensure continued alignment with evolving demands. A well-designed quality assurance system can help reduce the costs of hiring for businesses by clarifying which applicants have the necessary skills to be

successful from day one, and can help businesses plan for future talent development needs by identifying where credentialing gaps may exist within their industry or their region.

For **education and training providers**, a quality NDC definition and quality assurance system provides clear guidance on which credentials they should offer and how to think about designing new credentials or program offerings with an eye to both return on investment from program participants and maximizing alignment with labor market needs. Where current credentialing options do not meet the criteria established under the state's definition, providers have a framework for updating and improving those programs — or discontinuing if necessary.

For **state policymakers**, a quality NDC definition and quality assurance system provide a range of options for improving economic opportunities for citizens and businesses alike. Policymakers can use the definition to set clear targets for NDC attainment, with a focus on increasing attainment of credentials where demand outstrips supply, supporting business growth, and expanding the state's tax base by helping unemployed or underemployed workers fill in-demand jobs. A clear quality NDC definition can ensure that underrepresented worker populations are able to access credentials that prepare them for emerging career pathways. Policymakers can adopt a range of policies to boost attainment of quality NDCs (see policy recommendations) and can transfer resources away from programs that aren't providing good consumer or taxpayer value towards credentials that matter. By adopting a quality NDC definition, states can protect against increasing equity gaps by ensuring people of color, women, those with disabilities, and other underserved populations are not steered toward low-quality NDCs.

A state quality NDC definition can also help state policymakers identify and invest in new and emerging credentials that can help workers upskill quickly in response to technological changes and can help displaced workers figure out the right next steps as they transition to new occupations or industries. The quality NDC definition and the process of industry validation may be of particular value with newer credentialing options, where there may not yet be broad understanding or acceptance by employers within that industry.



Establishing a definition of quality NDCs can help **align and support performance accountability** under federal workforce and education laws. Under the Workforce Innovation and Opportunity Act (WIOA), states are required to set performance levels for the percentage of individuals receiving a “recognized postsecondary credential” during participation or within one year of completing a funded program. A recognized postsecondary credential under WIOA is defined as a “credential consisting of an industry-recognized certificate or certification, a certificate of completion of an apprenticeship, a license recognized by the state involved or Federal Government, or an associate or baccalaureate degree.”¹³ The quality NDC definition can help states in defining which non-degree credentials they will consider as meeting this definition, and ensure that programs funded under WIOA are supporting attainment of these credentials. The WIOA definition of recognized postsecondary credential has been adopted in other federal laws — most notably in the recent reauthorization of the Carl D. Perkins Career and Technical Education Act (Perkins Act) and the Trade Adjustment Assistance (TAA) program — and so states can utilize the quality NDC definition for evaluating performance and guiding programmatic and policy choices under those laws as well.

Developing the criteria

In developing the criteria included in the quality NDC definition, NSC specifically looked at how states are using employment, earnings, and competencies to set quality standards for credentials, as NSC believes that these criteria likely most accurately reflect what jobseekers and businesses are seeking from NDCs and programs. However, one question states may wish to consider is whether they will apply these criteria to all NDCs offered within the state, or just certain kinds. Several types of NDCs do have specific quality assurance processes in place; for example, for-credit programs offered at institutions of higher education are generally subject to state and regional accreditation requirements, while apprenticeship programs are usually registered through either the U.S. Department of Labor or a designated state agency or council, and state licensing requirements are set by state agencies or other bodies. States may decide that by meeting these requirements, the credentials received through successful completion of these programs should be deemed “quality” credentials without necessarily applying the criteria laid out in this paper. In practice, this would limit application of the criteria to non-credit programs offered through institutions of

higher education, industry certifications, and non-registered apprenticeships. However, because most of these other quality assurance systems do not measure employment and earnings outcomes for participants — and may not measure specific competencies or “stack” well with other programs and credentials — states could also opt to require both compliance with the existing program approval requirements and the criteria in order to be counted towards overall credential attainment goals.

While the definition laid out in this paper is specifically intended to measure non-degree programs, it is worth noting that many individuals in degree programs are also interested in making sure that their program will support better employment and earnings outcomes. States adopting the quality NDC definition may also wish to consider whether degree programs in the state are meeting the needs of both jobseekers and businesses and ensure that state investments are supporting degree attainment in ways that align with overall labor market demands.

While stakeholders within any given state can reap the rewards of a good quality NDC definition at the individual state level, there would be even greater value if all states adopted consistent definitions of quality NDCs. A consistent nationwide definition (or at least adoption of the criteria identified in the next section) would make it easier for workers and jobseekers to find and sustain employment, by ensuring that credentials of value in one state are also recognized in other states. This can be particularly true where differing occupational licensing or similar requirements create barriers for workers moving from one state to another. A consistent nationwide definition would also be of value to businesses operating in multiple states, as they could rely on some level of uniformity in hiring and talent development strategies across state lines. Finally, a consistent nationwide definition would support investments in quality NDCs by federal and state policymakers, providing assurances that those investments were leading to credentials with value for workers, businesses, and taxpayers.

To achieve the goal of developing a consensus definition of quality NDCs, NSC engaged with states that had already established or were in the process of developing quality assurance criteria and processes for NDCs, and sought feedback from a range of national and state higher education and

workforce development officials and local practitioners. Initially, NSC conducted a literature review of existing state quality assurance criteria and processes for NDCs and interviewed leaders from states that had already implemented such quality assurance processes. These Round 1 states were Alabama, Iowa, New Jersey, Tennessee, Virginia, and Washington and included leaders and staff from state departments of education, higher education, labor, and workforce development, as well as governors' staff overseeing these policy areas. This part of the process culminated in a one-day meeting where leading states provided feedback on an initial definition, and discussed related issues, including racial equity and the future of work. This revised quality NDC

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definition and criteria were vetted with a second round of state leaders from Colorado, Florida, Louisiana, Oregon, Rhode Island, and West Virginia. These states were either developing a framework for identifying quality NDCs or had already done so, in a more limited fashion than the Round 1 states. NSC also sought feedback from a set of key national research and advocacy organizations with expertise in higher education and workforce policy, as well as local practitioners, including those with a racial equity mission.

In developing the consensus definition of quality NDCs, NSC chose to focus on individual economic outcomes, including employment and wage gains, and employer needs for a more skilled and diverse workforce. These were the principal goals state leaders cited for a desire to increase the number of individuals with quality NDCs and reflect what students themselves identify as a key purpose for enrolling in postsecondary education and training.¹⁴

Summary of state quality assurance processes - Round one states

In developing the quality NDC definition, NSC began by consulting with six states who had undertaken significant policy efforts around defining or supporting quality standards for non-degree programs:



Alabama

To make progress against Alabama's postsecondary education attainment goal of adding 500,000 credential holders to the workforce by 2025, Alabama is establishing a committee of the Alabama Workforce Council (Alabama's business investment council) called the Alabama Committee on Credentialing and Career Pathways (ACCCP). The ACCCP and technical advisory committees composed of business and industry members representing each sector will be responsible for evaluating credentials and determining if they should be placed on the Alabama Compendium of Valuable Credentials—Alabama's list of credentials of value. Eligible credentials must be (1) a. required by law, b. mandated by industry, or c. preferred by industry; (2) a. required to obtain a job (counts toward attainment goal and is an advanced credential on the compendium of valuable credentials); b. part of stackable sequence leading to a credential that is required for employment (included on the compendium of valuable credentials as a basic credential, but these credentials do not count towards the attainment goal); c. complementary credentials with skills that are affiliated with the career pathway but are not directly aligned to the credential sequence (can be included on the compendium of valuable credentials as a complementary credential but are not included in credential sequences and do not count towards the attainment goal); 3) aligned to a career pathway on the ACCCP's regional or state lists of in-demand career pathways; 4) sector or industry endorsed nationally or recognized by the foremost state sector or industry association (credentials that are either developed or endorsed by a nationally recognized industry association or organization and are sought or accepted by local companies within the sector for purposes of recruitment or hiring); (5) achievable by students in a secondary or postsecondary level of study; (6) earned after at least 130 hours of instruction time and are offered through a proctored examination; (7) stackable in a sequence of aligned competencies that progress along with the rigor of advanced training programs (A credential that is part of a sequence of credentials that can be accumulated over time to build up an individual's qualifications is considered stackable.); (8) valuable by leading to at least a 20-percent wage premium over a high school diploma; (9) trackable by the ATLAS on Career Pathways; and (10) portable across or within an industry sector (credentials that are recognized and accepted as verifying the qualifications of an individual in other settings—either in other geographic areas, at other educational institutions, or by other industries or employing companies—are considered portable).

Iowa

The Iowa Department of Education's GAP Tuition Assistance Program provides need-based tuition assistance to applicants that complete non-credit postsecondary credentials tied to in-demand occupations. Applicants must have an income between 150 and 250 percent of the federal poverty line to qualify. The Iowa Department of Education has created a list of programs that students receiving GAP tuition assistance may enroll in using the grants, and the community colleges and industry partners will evaluate whether programs fit with evaluation criteria. Non-credit in-demand programs that meet the following criteria are eligible for assistance: (1) aligned with for-credit certificates, diplomas, or degrees; (2) offers training in an in-demand occupation; and (3) either results in a state, national, or locally recognized credential; prepares students for professional exams or licensure; provides endorsement for existing credentials or licenses; represents the achievement of skills defined by industry; or offers similar credentials or training as a for-credit program.



New Jersey

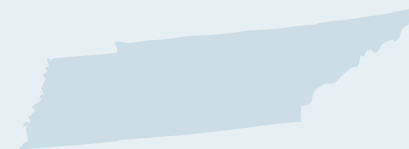
New Jersey wants to increase the number of residents with a postsecondary credential or degree and hopes to advance this goal by guiding the state's investments towards effective job training programs that are aligned with industry demand. By 2021, the state hopes to dedicate at least 80 percent of its state funding to programs resulting in industry-valued credentials. To determine what credentials were industry valued, the New Jersey Department of Labor and Workforce Development created an industry-valued credentials list by conducting labor market research and surveying employers. To be included on the list, credentials must: (1) be valued by employers; (2) teach transferable skills; (3) potentially lead to opportunities for continued education and training; and (4) lead to higher wages, career advancement, and/or increased job security. Moving forward, the state plans to reconsider this process and criteria for identifying certifications valued by industry.




Tennessee

As a part of its Every Student Succeeds Act (ESSA) district and school accountability framework, Tennessee has a "Ready Graduate Indicator" on which districts and schools are measured. A "ready graduate" is a student who is prepared to succeed after high school as demonstrated by either: (1) scoring a 21 or higher on the ACT; (2) completing four early postsecondary opportunities; (3) completing two early postsecondary opportunities and earning an industry certification; or (4) completing two early postsecondary opportunities and achieving a designated score on a military readiness exam.

In order to gauge which industry certifications should count towards being ready to succeed after high school, the Tennessee Department of Education created a list of promoted industry certifications. Stakeholders, such as district and employer leaders, submit industry certifications for potential inclusion. In order to be included on the list, the Department of Education must determine that the industry certification is: (1) industry recognized and valued (as determined through a relevant career cluster industry advisory council); (2) aligned to a state-promoted career and technical education program of study; (3) stackable through articulated credit or hours at Tennessee Colleges of Applied Technology and/or Community Colleges; and (4) lead to high quality (beyond entry level) employment based on industry input and review of available labor data. Tennessee is considering revising this process.




Virginia



Through the *New Economy Workforce Credential Grant Program*, Virginia's General Assembly has made available \$13.5 million dollars that allow individuals to take short-term, non-credit training courses offered through Virginia's community colleges, in high-demand industries that can help the state create and sustain a middle skills pipeline. In particular, FastForward programs focus on training Virginians for high-demand industries with skills gaps. FastForward programs require the student to pay one-third of the tuition for the program. The state will pay an additional one-third upon program completion and the remainder upon certification or licensing.

The Virginia Community College System (VCCS) has created a process and identified criteria to determine what credentials associated with programs are eligible for FastForward funds. Eligible credentials must be: (1) based on standards developed or endorsed by employers; (2) portable across multiple employers, educational institutions, and geographic areas; (3) competency based; (4) third-party validated; (5) show evidence of being in-demand through labor market information; and (6) through direct employer engagement show evidence that employers are hiring credential holders. Credentials are reviewed according to these criteria by VCCS staff, and the VCCS chancellor and State Board for Community Colleges must provide final approval for those credentials that meet the criteria to be eligible for state funding.

Washington



On behalf of Washington State's Governor, the Workforce Training and Education Coordinating Board (WTECB) maintains a policy to determine program eligibility for the state's Eligible Training Provider List (ETPL). A training program must be on the ETPL to serve students/participants using a Workforce Innovation and Opportunity Act Title I Individual Training Account voucher, or a student receiving extended unemployment insurance benefits while they are in training through the state's Training Benefits Program. The ETPL also serves as a guide to training under the state's workers compensation program. Providers that want one or more of their programs to be on the ETPL must submit an application to the WTECB. Providers include community and technical colleges, four-year colleges and universities, private vocational schools, and apprenticeship programs.

Providers that are operating consistent with state laws and regulations may have their program(s) listed initially if they agree to provide the WTECB with required data about their program(s), including student-level records (they provide student level name, enrollment, completion, and SSN which the state matches to outcomes). There is an exception for registered apprenticeship programs which are all automatically eligible under WIOA. For programs other than registered apprenticeships, subsequent eligibility is based on meeting program performance thresholds on three measures: (1) completion rate; (2) post-program employment rate; and (3) earnings. In setting the thresholds, the WTECB takes into account student access to fields of study in each area of the state and student characteristics. WTECB periodically updates the thresholds, and program eligibility is determined annually. For WIOA, local workforce boards have the prerogative of limiting ETP-eligible programs.



Definition of a quality non-degree credential

General principles

Underlying the definition and criteria for a quality NDC are five general principles.

1. The definition should be **student-focused**.¹⁵ It should be designed around the education and employment individuals are trying to achieve, and individuals should be provided sufficient information to make informed decisions about their education and employment goals. While this principle focuses on individuals, individuals cannot achieve their employment goals without meeting the needs of employers.
2. The definition should **support equitable credential attainment**. This is a moral imperative and states will not achieve their attainment goals unless they enable more people of color, people with disabilities, low-income individuals, and other additional traditionally underserved populations to obtain quality credentials.
3. Information about credentials should be **valid, reliable, and transparent**. Without sound, transparent information individuals and others do not know if credentials are enabling individuals to achieve their goals.
4. States should have **flexibility in operationalizing the definition, while still safeguarding quality**. States should have discretion in making certain decisions, such as whether to combine the criteria in a composite rating. The decisions may vary depending on the purpose for which a state is using the definition of quality. For example, a state might choose to operationalize the definition one way for counting credential attainment and in a somewhat different way to determine program eligibility for a state financial aid program. Moreover, the best way to implement the definition may vary from state to state due to such factors as the state's system of governance for higher education.
5. States should have a **public process** to determine which credentials are quality credentials, a process that ensures integrity, and includes input from key stakeholders, and the ability for credential providers to appeal decisions. The process is discussed in the next section of the paper on state policies.

Definition

A **quality non-degree credential** is: one that provides individuals with the means to equitably achieve their informed employment and educational goals. There must be valid, reliable, and transparent evidence that the credential satisfies the criteria that constitute quality.

Criteria

There are four criteria that should be considered for a credential to be identified as a quality credential. NSC recommends three criteria that should be required. NSC also recommends one criterion that is strongly preferred but need not always be in place. Each criterion stands not alone but as part of a package. As discussed below, the criteria interact with one another. Additionally, it may be challenging for some credential providers to offer immediately all the information the criteria require, so states may want to consider aspects of the criteria as goals and allow time for implementation.

1. Required: Substantial job opportunities

There must be evidence of substantial job opportunities associated with the credential. Evidence must include quantitative data and direct communication with employers.

Quantitative data should show that a substantial number of job openings are expected for the occupation(s) that the credential is associated with. Sources of these data include but are not limited to: occupational employment projections developed by the U.S. Bureau of Labor Statistics and state labor market information offices, projections and job postings data from private organizations, and state job vacancy surveys. It's important to include data on both current labor market demand and future projections since, for among other reasons, individuals at different ages have different time horizons for entering the labor market. States should have discretion to define "substantial," since what is "substantial" may vary from one state to another and from one area of a state to another. Other factors beyond the sheer number of jobs may define "substantial." States may want to consider economic development strategies, whether openings are due to employment growth or job turnover, creating opportunities for people of color and other underemployed populations, or expected occupational demand exceeding supply. Demand may be measured for the state, a labor market area, or a region. Consid-

eration should be given to demand in the catchment area of the provider and where individuals live or plan to live.

To identify the credentials associated with occupations, states may find information at the U.S. Department of Labor's "Certification Finder," and the U.S. Bureau of Labor Statistics' "Occupational Outlook Handbook," job posting data, or through employer focus groups or surveys, among other sources.

Information on expected job openings and the credentials associated with occupations should be substantiated through direct communication with employers. Among other things, employers may identify emerging job opportunities that are not yet reflected in quantitative labor market information. Sources of employer information include, but are not limited to trade associations, sector partnerships, other business associations, and regional or state career and technical education advisory councils. States should include information from minority and women-owned businesses. States should have some discretion as to how they obtain employer information so long as the employers are in position to confirm that there are substantial job opportunities associated with the credential. The information should be more than anecdotal. The best sources of information may vary from one state to another. Employers must confirm that the credential is used in hiring, retention, or promotion decisions.

States should periodically update information on job opportunities associated with credentials since labor market demand changes over time.

2. Required: Transparent evidence of the competencies mastered by credential holders

There must be transparent evidence of the competencies mastered by credential holders; competencies that align with expected job opportunities.

Competencies are closely tied to the first criterion. A credential is valued by employers when it signifies the competencies that employers need employees to have. Similarly, a credential is associated with an occupation when the credential signifies the competencies required to perform the occupation. The certificate program, apprenticeship, industry certification, or licensure must specify the competencies mastered by an individual who receives the credential, and there must be a process by which the individual demonstrates that mastery. That process may be determined by a state body, the certifying organization, or by a higher education institution. For example, a state licensing body establishes how an indi-

vidual demonstrates the competencies required for a license. The state apprenticeship agency may approve how an individual demonstrates the competencies required for an apprenticeship certificate. The process may include an exam or other demonstration of mastery. There may be a requirement that the demonstration is conducted or verified by a third party. These decisions are left to state discretion and may vary for different credentials. In line with this emphasis on competencies, the definition of a quality credential need not include any standard regarding length of time, such as clock hours, credit hours, "seat time," or other calendar days that must be met. The appropriate length of time is how long it takes to master the competencies. Regardless, states and other authorized actors should exercise due diligence to ensure that methods for demonstrating competencies do not result in racial or other biases.

The range of competencies, including general workplace skills that should be included, are beyond the scope of this paper and the subject of other national initiatives.¹⁶ But the range should be sufficient for employers, workers, and others to know whether or not the credential signifies the competencies employers require to hire, retain, or promote individuals for an occupation(s). Mastery of a single competency or general workplace skills, while useful, should not count unless by itself that mastery is sufficient for substantial employment opportunities.

It should be acknowledged that this requirement can be a heavy lift for education and training providers and for employers. (A requirement that is made more challenging because competencies should be kept up to date). It requires the supply and demand sides to delineate the competencies they supply and demand. Some providers and employers have already done so, but many have not. Again, this is the subject of other national initiatives. But this criterion is critical and goes back to the underlying principles, including that a quality credential enables individuals to achieve their education goals. Individuals should be able to expect that a quality credential is not an empty shell, but means they have learned competencies demanded in the labor market.

Someday, our labor market information and exchange systems may be based on competencies (or skills, knowledge, and abilities) rather than credentials or occupations. There are major national efforts underway to build that future.¹⁷ Until then, as credentials continue to be the proxy for competencies, employers, workers, education institutions, and others must know the competencies that are associated with credentials to know if credentials are of value.

3. Required: Evidence of the employment and earnings outcomes of individuals after obtaining the credential

Perhaps the ultimate test of whether a NDC is of value is whether credential holders obtain employment and how much they earn. This is not to say that economic value is the only value that matters. But improving one's employment and earnings is the most common reason individuals enroll in postsecondary education or training, and this is particularly true of NDCs (other than personal enrichment classes). This criterion goes back to the underlying principle that a quality credential provides individuals with the means to achieve their employment goal. Unless there is evidence of the employment and earnings outcomes associated with a credential, individuals and others are not in position to know if a credential provides the means to achieve their goal.

Job quality beyond earnings is also an important part of individuals' employment goals. Whether a job provides health benefits, retirement benefits, paid sick leave, suitable and dependable hours, among other elements of job quality are important. Unfortunately, there is no economic method for states to measure these employment outcomes at the individual-credential level.

There must be transparent evidence of the actual employment and earnings outcomes of individuals after obtaining a credential and the data should be updated annually. The employment and earnings data should be disaggregated by race, ethnicity, gender, disability status, and other characteristics in order to measure equitable progress. This paper does not discuss specific metrics; however, there are statutory required metrics of employment and earnings in the WIOA and the Perkins Act. Evidence must meet standards of validity and reliability, be auditable, and be provided through ad-

Perhaps the ultimate test of whether a non-degree credential is of value is whether credential holders obtain employment and how much they earn, as improving one's employment and earnings is the most common reason individuals enroll in postsecondary education or training.



ministrative data (such as unemployment insurance wage records and tax records), surveys administered by third parties, or employer records.¹⁸ The evidence must be at the individual credential level, since the value of a certificate, for example, from a program of study at one institution may be very different than the value of a certificate in the same program of study at another institution.

The information on employment and earnings outcomes should be accompanied by contextual information that helps individuals and other stakeholders understand if the outcomes are equitable. Critical information includes the demographic characteristics of individuals obtaining the credentials, including race, ethnicity, gender, disability status, and age. Other information includes the industry in which individuals are employed. It would also be useful to know whether individuals are employed in an occupation related to their education or training, but unfortunately, there is currently no practical and economic data source for that information on a wide scale.¹⁹

Brand new credentials obviously do not have a track record of employment and earnings outcomes. States should establish a process, such as the initial eligibility

process for WIOA training providers, to classify credentials as quality on an interim basis until there has been enough time to measure actual labor market outcomes, between one and two years of when individuals first complete the credential. During the period of interim eligibility, the state process should include posting information on the typical earnings of workers in the credential's related occupation(s). Finally, as discussed in the next section of the paper, states should widely provide the information on employment and earnings outcomes through multiple channels to reach individuals, which includes publishing online, creating student portals, and through career counselors and case managers who are well trained in how to understand and use the information.

States vary in their ability to measure and report employment and earnings at the individual credential level, however the tools to do so are available. Robust state longitudinal data systems are very useful for this purpose. It's mostly a matter of making the necessary policy decisions and taking action, such as adopting data sharing agreements. It will take some time for all credentials to satisfy this criterion.

Setting performance standards for earnings

States may want to set performance standards for the earnings level associated with quality credentials. Before deciding to set a threshold for earnings, states should consider the following questions.

What is an appropriate performance standard for earnings?

Some thresholds are based on the principle that a quality postsecondary credential should provide earnings above the earnings typically achieved by individuals with a high school diploma as their highest level of educational attainment.²⁰ The U.S. Department of Education estimates this is \$28,000 per year among twenty-five to thirty-four year olds. The methodology used for Lumina Foundation's "A Stronger Nation" report that tracks credential and degree attainment is in part based on a premium of 20 percent above the earnings of those at the high school diploma level, so approximately \$33,600.²¹

Thresholds at these levels rule out credentials for many occupations that are paid relatively poorly in the labor market. There is limited ability for credentials to overcome labor market pricing. The lower threshold would usually rule out credentials for child care workers, teaching assistants, and home health aides, among other occupations.²² The higher threshold would also usually rule out credentials for pre-school teachers, pharmacy technicians, nursing assistants, and medical assistants. If the thresholds were expected to be achieved shortly after individuals completed their credential, credentials for many additional occupations would be ruled out. Credential holders in these fields might achieve earnings that are normal, even good for their field, but the credential would not be considered a quality credential. Individuals might achieve their education and employment goals, but a higher threshold would negate the principle of focusing on the goals of individuals, which may, at times, include lower-paying jobs.

Is a threshold based on the average earnings achieved by those with a high school diploma the right way to think about this?

Individuals in non-degree credential programs are typically not 19-year-olds who just graduated from high school. They are more likely to be older, working adults who earn very low incomes, if they have any earnings. The median age of students at public community and technical colleges is twenty-eight.²³ While there is no national data source for pre-enrollment earnings of students in non-degree programs, one can look at state data. For example, two years after completion the median earnings of graduates from a California community college with a certificate in Administrative Medical Assisting is \$25,606 per year, considerably below the above thresholds. But their median earnings two years prior to enrollment was \$14,894.²⁴ The students experienced a very large gain in earnings, but the credential would not be considered a quality credential by a threshold based on achieving or exceeding what a typical high school graduate earns.

A credential should enable the credential holder to receive earnings that meet their economic needs, or stack to a credential that does. But it is challenging to use this principle to set an earnings threshold other than what is needed by a single individual in the local area. Economic needs of credential holders depend on their number of dependents, the number of wage earners in their household, and the cost of living in the local area, among other factors. A certificate program with ten students may have ten different levels of need. There are many tools available to help individuals assess how much income they need in their local area. States, institutions, and other providers should make these tools widely available and help individuals use these tools to make informed choices about their education and employment goals.

To protect individuals from “bad actors,” including some for-profit/proprietary institutions that offer low-quality credentials, states may want to set earnings thresholds below which there is obviously something wrong with the credential. To do so, states could analyze the earnings outcomes of credentials to find a threshold that identifies outlying performers. This could be done for credentials in the aggregate or by field of study.

Before deciding to set a performance standard for earnings, there are other factors that should be considered. What is the return on investment? For instance, how do post-program earnings compare to costs, both the financial costs and amount of time that individuals invest in a credential? How will a state account for the fact that some programs serve large percentages of students with barriers to employment? Does the threshold acknowledge that labor markets within and between states vary in the earnings paid for occupations, with occupations in rural areas typically paying less? How will the threshold acknowledge there are fewer providers and program offerings in rural areas? Earnings thresholds might prevent access to any program for a field of study in a region of a state. What role does stackability play? A credential for a low-paying occupation might articulate with or otherwise lead to another credential for a higher-paying occupation, or commonly combine with other credentials in a valuable package.



SETTING PERFORMANCE STANDARDS FOR EARNINGS

NSC recommends that if a state establishes standards for the earnings level of quality credentials, the state should consider the following factors, and in some cases grant adjustments to the performance standards for individual credentials.

- Return on investment of money and time
- Appropriate earnings for the field of study
- Prior earnings of students
- Student characteristics
- Regional wage differences
- Regional access to education/training for the field of study
- Stackability with higher paying credentials

4. Strongly preferred: Stackability to additional education or training

The gold standard is that credentials stack to additional education or training, and state and institutional policies should support stackability. States should consider requiring that credentials associated with low earnings stack to further education and higher paying credentials. While states clearly see the value of stackability to further education and training, there is not a universal pathway to reach that standard and states agreed that it should not be an overarching required criterion in defining a quality credential. This is complicated work involving the agreement of government, academia, and employers.

It is preferable that all credentials articulate with or otherwise provide credit towards another postsecondary credential. The credential does not have to be in a sequence of credentials in a given industry, but rather, it is preferable that all credentials articulate with or otherwise provide credit toward another postsecondary credentials. Examples of such stackability include, but are not limited to articulation agreements, direct transfer agreements, credit for prior learning, career pathways, and data demonstrating that a credential leads to continued education. Section 6 of this paper includes recommended policies to support stackability.

The gold standard is that credentials stack to additional education or training, and state and institutional policies should support stackability.

Stackable credentials can help individuals advance in education and employment and can be particularly important for people of color and others who have been traditionally underserved by higher education. Stackability can also be important for workers who return to education after experiencing unemployment due to declining demand for their skills. States should support policies such as credit for prior learning and widely provide information about these policies so that individuals, institutions, and others can navigate the options for stackability.

While stackability is the desired outcome, the states agreed that stackability, however, should not be a universally required criterion in defining a quality credential as there are currently limitations in implementation. Not all quality cre-

denials align directly with longer-term educational pathways. For example, a registered apprenticeship certificate is likely to be associated with substantial employment opportunities, clear competencies mastered by the certificate holder, and strong employment and earnings outcomes, each of which is evidence of a quality credential. Most states, however, do not have a policy in place of stacking apprenticeships with additional education or training. The same can be said of many industry certifications and occupational licenses. These credentials may well satisfy the other criteria, but a state may have no provision for their stackability to additional education or training. *States should have such policies*, but the lack of such policies does not by itself mean that these credentials are not quality credentials.

The concept of stackability is also evolving. While early models about stackable credentials assumed there was a specific sequence to earning credentials along a career ladder, most individuals have more distinctive pathways through the labor market, therefore requiring flexible credentials as they move between industries. For instance, many individuals may move in between retail and hospitality or do not follow established pathways from certified nursing assistant to licensed practical nurse.

There are also limitations in the data available to understand what credentials do result in recognition toward another postsecondary credential. Even in states where there are policies that either require or incentivize stackability, most states do not collect information from education providers to understand if credentials did indeed stack, or if stackability led to more equitable outcomes for individuals.

The states agreed there are too many questions and obvious exceptions (such as registered apprenticeships) to have the quality definition require stackability of all credentials. For credentials that satisfy the first three criteria—substantial employment opportunities, transparent competencies, and reported employment and earnings—but the earnings are low, states should consider requiring that the credentials stack to credentials associated with higher earnings in order to be identified as quality credentials. States should consider the appropriate earnings thresholds and take into account the factors discussed in the previous section. States will also need to determine acceptable evidence of stackability.

Implementing the criteria using a composite rating

As states consider implementing these criteria to determine quality NDCs, they may want to consider including the four criteria in a qualitative or quantitative composite rating. States could establish some way of quantifying a score on



each criterion and then combine the scores to create a composite rating. Or states might qualitatively consider the criteria and a credential's strength in each before determining whether it is a quality credential. The rating might be expressed by a number of stars, or some other type of qualitative description. The state should make transparent the rating on each criterion as well as the composite rating.

Composite ratings are useful when there are multiple related factors that each contribute to something having value. The four criteria are related to one another. For example, the earnings associated with a credential are also associated with the extent to which it signifies competencies that are in demand by employers. And each criterion contributes to a credential having value.

States may combine the criteria in a composite rating in a way that a weakness in one criterion might be offset by

strength in another. For example, there might be a relatively low number of employment opportunities expected for the holders of a credential, but the job opportunities pay quite well. Looking just at the demand numbers, a state might determine a credential is not quality, but when considering the earnings level, the state might decide to count it as a quality credential. In another example, a credential might be associated with a low paying occupation, but perhaps it stacks to a credential associated with good earnings.

A state might also decide to weight the four criteria differently, depending on the state's policy preferences and the purpose for which the definition of quality is being used. A state might want to emphasize certain criteria, for example, when determining eligibility for a state financial aid program, and emphasize other criteria when considering the state's credential attainment goal.

Quality NDC attainment state policy recommendations

Establishing a state definition for quality NDCs can lead to a range of benefits for states, students, and other stakeholders. However, as noted in the previous section, states must make policy choices in adopting this definition, including the process to be used for setting the definition and the stakeholders responsible for shaping and administering the definition. States must also decide the purposes for which the definition will be used. While states may choose to utilize the definition simply to help identify credentials that count towards their state postsecondary attainment goals, the definition can also be used to support performance accountability and other goals across different education, workforce, and human services programs. For example, the definition can help to inform racial equity goals that seek to ensure that all students have equitable access and the supports needed to earn high-quality credentials. States must also decide if they will adopt policies that seek affirmatively to **increase** attainment of quality NDCs as part of their overall educational attainment and economic development strategies.

A. Codifying or regulating quality criteria.

One key set of policy decisions facing states is determining which programs or policies will be covered by the criteria, the entities within the state that are responsible for developing and implementing the criteria, and the process by which the criteria will be established.

States should begin with some consideration of what programs and policies the criteria will be used to support. Round 1 states developed their quality criteria for a range of different purposes, including eligibility for federal or state training funds, support for programmatic accountability systems, and for evaluating overall progress towards state attainment goals. However, in most cases these criteria are not being used to support multiple state policies or priorities. Adopting criteria that can be applied across multiple programs and systems can support greater alignment between education, workforce, and human services investments, and can create efficiencies by reducing duplicative and sometimes burdensome reporting and compliance requirements for education and training providers participating in multiple programs. It can also ensure consistency for jobseekers and employers as they evaluate different education and training opportunities. Without consistency, states will have lists of quality credentials that vary from one purpose to another. States should weigh the confusion this could create with the benefits of tailoring criteria for different purposes.

Once the determination has been made about which programs will be covered by the criteria, a critical next step is determining which entity or entities within the states will be responsible for developing, implementing, and revising the criteria. For the Round 1 states, primary responsibility for establishing criteria generally rests either with a state educational agency or a state workforce agency. However, Round 1 states drew on expertise from a range of stakeholders, including partner agencies and employers in key industries. While the appropriate lead entity for development of the criteria may differ from state to state depending on intended uses for the criteria, it is strongly suggested that states adopt an inclusive process for the development and review of criteria. This process should include a significant and meaningful role for organizations that represent underserved or underrepresented worker and student populations to ensure that the criteria support broader equity and attainment goals. The governor's office should also be engaged in the development of the criteria to ensure consistency with overall state educational and employment goals, and to facilitate discussions between both internal and external partners, where appropriate. States should take steps to ensure the development and implementation of the definition is transparent to stakeholders, including education and training providers, consumers, and the general public.

In developing quality criteria, states may wish to consider adopting legislation or regulations that specifically authorize the establishment of a definition and allocates appropriate resources to sup-

port the development process. Legislating the establishment of a definition can help ensure that the definition is sustained as gubernatorial administrations change and can serve as an important signal to state agencies and other stakeholders about the importance of the definition as part of the state's education policy framework.

Legislation to support the development and adoption of a quality NDC definition should provide adequate resources for implementation, including work that must be done to validate credentials and to track employment and earnings data, and ensure that data is collected in a way that allows for disaggregation by key demographic categories such as race and ethnicity. Legislation should also allow for sufficient flexibility to ensure that criteria can be utilized for the full range of programs, policies, and populations that a state seeks to cover through the criteria. For example, states should be cautious not to set requirements that may only apply to secondary school programs, or that may make it difficult for states to adjust criteria to respond to changing demographic or economic conditions. One option might be to require a periodic review of how the definition is implemented to ensure that it is keeping pace with changing labor market, demographic demands, and student protections.

B. State policies to support quality NDC attainment.

Once a state has elected to adopt a quality NDC definition, there are a range of programmatic and policy opportunities that may be pursued to help increase attainment of these credentials and strengthen alignment across federal and state programs operating under the definition. These policies are also necessary to ensure equitable access to and success in completing quality credentials.

1. Expanding state financial aid and other training funds.

One common use of quality NDC definitions is to guide decisions around institutional and programmatic eligibility for tuition assistance and other public funding for job training. This can be particularly important for students and programs that might otherwise be excluded from such assistance. For example, both Virginia and Iowa provide financial aid for certain programs that fall outside the boundaries of federal Pell Grants, and utilize their quality NDC definitions to ensure that state dollars are used for programs that meet local and regional labor market demands. States that adopt quality NDC definitions should consider how they might create or expand state tuition assistance programs to align with these definitions, with a focus on addressing attainment and equity gaps, as affordability barriers can perpetuate access gaps.

States should also consider applying their quality NDC definition as part of their programmatic eligibility requirements for other federal or state job training funds. This could include, but is not limited to, programs supported under WIOA, SNAP Employment & Training, and the Temporary Assistance for Needy Families (TANF) program. States could consider setting requirements that education or training programs that culminate in a NDC demonstrate that such credentials meet the state quality NDC definition in order to qualify for funding.

2. Expanding non-tuition supportive services.

NDC programs are often a good option for working adults and other non-traditional students, providing flexibility and value where participation in more traditional educational pathways may be challenging due to economic or other factors. State tuition assistance and other funding models can help ensure these students have meaningful access to quality programs, but in many cases tuition supports alone are not sufficient to ensure that participants can successfully complete their program.

Community college students, for example, often must juggle school with work and family obligations. Sixty-two percent of full-time community college students (and 72 percent of part-time students) also work on a full- or part-time basis and 15 percent are single parents. These students can also face other cultural or structural barriers: 29 percent of community college students are the first to attend college in their families, and 20 percent of students have disabilities.²⁵ In addition, the racial wealth gap has left many families of color with fewer resources to put toward educational attainment or related expenses, such as child care and transportation. Black and Latinx students spend a larger share of their income on college expenses, and non-White families are less able to financially invest in their children's postsecondary education.²⁶ Similarly, Black and Latinx students are more likely to take on student debt than White students and borrow greater sums than White borrowers.²⁷

In order for all students to succeed — whether as part of a traditional degree program or in a quality non-degree program — states should establish policies that provide necessary support services including, but not limited to, transportation, child care, and assistance in accessing nutrition, housing, or other benefits for which students may qualify. These supports are essential for states that want to close equity gaps.

Supportive services can be an equally critical component of success for apprenticeship programs and other training pathways. States should consider how to provide dedicated resources to help participants enter and complete quality programs, including through the establishment of “work-based learning support funds” that can cover both pre- and post-employment periods for apprentices experiencing barriers to successful employment.

3. Expanding career counseling capacity.

Career counseling and pathway navigation can be an effective tool for helping jobseekers and students identify and make informed decisions about their professional goals, and the educational pathways that will help them achieve those goals. However, career counselors at both the secondary and postsecondary levels are often stretched thin and under-resourced, and in many cases they themselves lack adequate information about how non-degree credentials offered through apprenticeships, community college certificate programs, and other training models can support career advancement.

State adoption of a quality NDC definition will allow counselors to provide students with critical and accurate information about employment and earnings opportunities associated with specific programs and, in those states that include a stackability criterion, will enable counselors and jobseekers to map out potential multi-step career pathways that can be pursued over time. It would be particularly beneficial for states to put information about programs, credentials, employment, and earnings in an easy-to-understand online format that counselors can use to guide students.

While having better information is critical, it is insufficient without qualified professionals who can work with jobseekers to weigh their education and employment options. States should consider additional funding at both the secondary and postsecondary levels to provide professional development and tools to current counselors, to recruit and train the next generation of counselors, and involve faculty, local employers, and others in providing career information. States should ensure that professional development opportunities are also made available to instructors on providing career information and to help align curriculum development and program delivery with industry demands. States can also support and encourage faculty and counselors to engage with local employers, through job shadowing and other strategies, to ensure that faculty and counselors are familiar with key industries in their local or regional economy.

Increased state investments in apprenticeship and similar models can support greater attainment of quality NDCs while also creating meaningful pathways into the labor market for a broad range of jobseekers.

4. Supporting development of industry partnerships.

Industry or sector partnerships bring together multiple employers in a single industry along with education providers and other stakeholders to develop short- and long-term talent development strategies. Long recognized as a best practice in workforce development, industry partnerships can play a vital role in the development and implementation of a state's quality NDC definition. Employers within industry partnerships can help to identify current and future demands — both in terms of emerging occupations and needed skill sets — and validate the effectiveness of specific quality NDCs in meeting hiring and advancement requirements within an industry. Industry partnerships are also an effective way of organizing public training investments to support industry growth, allowing small and mid-sized businesses to aggregate skill needs across their industry and allowing other partners (including labor organizations, postsecondary institutions, community-based organizations, and others) to develop and refine training strategies to help workers find and keep family-supporting jobs.

Industry partnerships can also help to close racial equity gaps, through strategies such as attracting partnership members who reflect the racial and ethnic communities that they serve; participating in diversity, equity, and inclusion training; modifying recruiting processes to attract and engage specific populations of color; and disaggregating performance data to better understand how effectively their partnerships are serving different populations.²⁸ Public investment in these partnerships can be used to help bring in expert advisors to deliver training, and to help implement and scale these equity-advancing practices.²⁹

Many federal policies, including WIOA and Perkins V, explicitly support the use of industry partnerships as an employer engagement strategy, and many states have adopted specific funding and policies to support the expansion of industry partnerships. States should consider how investments in industry partnerships could support both the evaluation of quality NDCs and increased attainment of quality NDCs in line with labor market demands.

5. Expanding apprenticeship and other work-based learning models.

Apprenticeship is one of the best-known workforce development strategies that culminates in a NDC, often referred to as a journey person's card or certificate. While apprenticeship in the United States has long been associated with the construction and manufacturing industries, a number of states and other stakeholders have been exploring innovative models to expand apprenticeship into newer industries — including health care, information technology, and financial services — and to diversify the pipeline of workers within apprenticeship pathways. Other work-based learning models, such as on-the-job training and paid internships, have also attracted significant policy attention in recent years.

Increased state investments in apprenticeship and similar models can support greater attainment of quality NDCs while also creating meaningful pathways into the labor market for a broad range of jobseekers. States should consider providing resources to labor-management partnerships, community colleges, and other stakeholders to work with businesses on the development and expansion of apprenticeship strategies. States should ensure that new and existing apprenticeship programs are recruiting from traditionally underserved populations (and collect data to assess their success in doing so), including people of color, to ensure equitable employment opportunities in target sectors. States should also make sure that program sponsors and partners have the resources necessary to support apprentices and other working learners throughout the course of their training. Tax incentives for employers who create work-based learning opportunities — particularly for worker populations that are underrepresented in their industry — may also be considered as a strategy for expanding economic opportunities.

6. Supporting stackable credentials.

States should support the stackability of credentials to facilitate education and economic mobility. States can consider:

- a. **Investing in the development of career pathway models**, with a focus on strategies that provide workers multiple entry and exit points to allow for flexibility in linking training opportunities with work experience, as needed.
- b. **Adopting statewide policies for credit articulation**, both within and between institutions, that can allow workers to keep the full value of prior educational or training experiences when they transfer into a new program or institution.
- c. **Establishing statewide policies requiring or incentivizing prior learning assessments and credit for prior learning** so students need not repeat what they have already learned, no matter where it was learned.
- d. **Adopting performance funding models that reward education and training providers** for helping individuals obtain additional credentials in the same field of study. However, steps should be taken to ensure that such policies do not create perverse incentives for institutions to redesign programs and credentials for purposes of artificially increasing completion rates (e.g., by breaking up existing programs into smaller modules solely for purposes of boosting overall attainment numbers).
- e. **States should also ensure that institutions do not direct students with real or perceived barriers to success into shorter-term programs in order to inflate performance outcomes and unintentionally perpetuate racial inequities.** Education tracking has been historically used to encourage students of color to enter occupational training programs that did not adequately connect them to jobs in high-demand fields or connect them to quality postsecondary credentials. Tracking has contributed to occupational segregation and racial income disparities. Career pathways, and related support services, can help address many challenges students of color face in completing postsecondary credentials. Disaggregating and analyzing data by program and race, which is discussed in the next section, is another way to combat tracking.

7. Investing in Integrated education and training (IET) programs.

According to recent Organisation for Economic Cooperation and Development data, 24 million U.S. workers currently in the labor market have limited foundational skills — that is, literacy, numeracy, digital, or English language skills — which restricts their ability to advance their careers or transition to new sectors. IET programs are a proven model for equipping these workers to build their foundational skills while also training for a new role in a particular occupation or industry. IET programs that result in a quality NDC provide a vital path to higher earnings.

Because IET models combine occupational instruction with foundational skills instruction, they accelerate the time to completion for a quality NDC. As a result, IET can be an effective alternative to the more traditional sequence where individuals with lower reading or math skills must first complete developmental or “remedial” courses before enrolling in their chosen program — a strategy that has long been shown to delay and hinder students’ success, and which has particularly regressive impacts for students of color.

IET strategies are authorized and encouraged under WIOA, but to date offerings have been uneven across states. State policies to expand adoption of these strategies can help ensure

that IET programs are prioritized. As states establish their credential attainment goals, they should analyze how many workers will need foundational skills assistance in order to obtain a postsecondary credential and provide adequate resources to ensure all eligible workers can access programming designed for their specific assets and needs.

C. State policies to improve data, determine quality, and measure credential attainment.

Data are essential for states to determine the quality of NDCs and measure credential attainment. This paper calls upon states to utilize labor market data to determine substantial job opportunities and to use credential and wage records to find the employment and earnings outcomes of individuals after obtaining credentials. In order to have the appropriate data and infrastructure to do this, states should:

1. Collect broad data about all postsecondary programs.

Data about all postsecondary programs is essential for understanding what credentials are of value. While most states already have data about some postsecondary programs, this data is not comprehensive. Many public institutions do not report information about their non-credit courses to the state. Most states lack data about industry certifications because they do not regulate industry certifiers and cannot compel industry certification providers to submit data to the state. States often lack data about certificates that are awarded by private institutions. Although states usually license private for-profit institutions, and private institutions may be eligible for state financial aid or other state funding, relatively few states mandate that private schools share student-level data in exchange for authorization or aid. Thirty-four states participate in the U.S. Department of Labor Registered Apprenticeship Partners Information Data System and can obtain individual-level data from the Department, but few states have done so. Only twenty-two states report they have individual-level data on most or all individuals who obtain an occupational license.³⁰

States must focus on getting better data about NDCs and employment in order to truly determine what credentials are of value in their states. Such data can also be used to weed out providers offering low-quality credentials with inadequate outcomes. To do this, states can consider providing technical assistance or staff capacity to institutions or other credential providers without the capacity to share data with their state's unemployment insurance agency. States can also mandate that any institution receiving state authorization to operate or receiving financial aid dollars share information with the state. States could operationalize this for industry certifiers by paying for the certification exam for students — thereby giving them leverage to require that certifier to share data. This approach also helps eliminate one of the barriers that faces low-income individuals seeking certifications. States could also require any entity seeking inclusion on the list of quality credentials to share data. Finally, states could seek voluntary data sharing agreements with each entity in the state, however, that process can be cumbersome.

2. Collect and use demographic data.

Credential attainment in the United States is not traditionally equitable, but demographic data can help policymakers to level the playing field. Thus, in addition to collecting data about programs, credentials, and employment, states should also collect demographic data about individuals, including race and ethnicity, gender, disability, age, low-income status, and veteran status. Collecting this information can help the state see if postsecondary attainment and career success are available to all residents. If education and career outcomes are not equitable, states can use these data to find the appropriate levers to fix inequities.

3. Match education and employment data across state lines.

Linking data about credential holders to employment information can help stakeholders understand the outcomes of individuals completing credentials, and in fact, states can do this for most credential holders. States have employment and wage information about the large majority of workers working within the state through their Unemployment Insurance (UI) wage records, although these records do not include the self-employed, federal workers, or those who work in a different state. To obtain employment and wage data from other states, states can participate in the Census Bureau's Postsecondary Employment Outcomes project and the DOL's [State Wage Interchange System \(SWIS\)](#). States can also seek to link information about credential-holders with their state's tax data in order to get information about the self-employed and others not included within UI wage records. Montana has successfully done this to measure the workforce outcomes of Montana's college graduates.³¹

4. Develop and/or utilize a state longitudinal data system.

States should also add all data collected to their state longitudinal data systems (SLDS), which link information from different programs across time. Utilizing SLDS can help states get an unduplicated count of credential attainment (since they can see if an individual has earned multiple credentials), understand the outcomes of individuals completing credentials by linking credential data with employment data, and understand individual's education and career pathways. States can also use their SLDS to answer questions about NDC attainment and employment outcomes for key demographics, including people of color, adult learners, veterans, and low-income individuals.

5. Produce a consumer information tool.

States should get data about credentials into the hands of consumers and other stakeholders in a format that is easy to understand. Consumer information tools ensure that individuals can understand the likely outcomes of a particular credential *before* enrolling. This can save individuals time and money, by steering them away from credentials whose outcomes do not align with their goals. It is essential that consumers, counselors, case managers, and others know that these tools exist, and can use them easily. Information should be distilled in a way that provides clear and relevant information to consumers and states should take care to advertise the existence of their consumer information tools.³²

Endnotes

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- 13 Workforce Innovation and Opportunity Act, 2014.
- 14 Kathy Wyer. "Survey: More Freshmen than Ever Say They Go to College to Get Better Jobs, Make More Money." January 23, 2013. UCLA Newswire. <http://newsroom.ucla.edu/releases/heri-freshman-survey-242619>.
- 15 In this paper, the words "student" and "individual" are used interchangeably to refer to participants or potential participants in education or training.
- 16 Such as Credential Engine and the T3 Project led by the U.S. Chamber of Commerce Foundation.

- 17 Such as the Competency Based Education Network.
- 18 States may obtain data on out-of-state employment through the Longitudinal Employer-Household Dynamics project at the U.S. Bureau of the Census and the State Wage Interchange System (SWIS) at the U.S. Department of Labor. To obtain information through SWIS, providers must apply to be on their state's Eligible Training Provider list under WIOA.
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