AFFORDABILITY, QUALITY, AND EQUITY:
STATE INVESTMENTS IN HIGH QUALITY CREDENTIALS

THE NON-DEGREE CREDENTIAL QUALITY IMPERATIVE

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INTRODUCTION

Every day, in communities across the nation, workers seek out opportunities to ensure their families can thrive. At the same time, businesses want to hire skilled workers – people trained for jobs in growing industries. But without access to inclusive, high-quality skills training, many workers are locked out of opportunities to succeed, and local businesses cannot expand.

Postsecondary education and training have become essential to economic mobility, especially for adults of color. They are also critical to building an inclusive economy – one where workers and businesses who are most impacted by economic shifts, as well as workers who face structural barriers of discrimination or lack of opportunity, are empowered to equitably participate in – and benefit from – a growing economy.

A significant portion of good jobs in the United States require training beyond high school, but not a four-year degree.[1] High-quality, short-term credentials can help workers advance to higher-paying, in-demand jobs while meeting local employer needs. To achieve an inclusive economy, we must increase the number of *and* diversity of working people earning quality credentials in workforce education and training programs.

Quality non-degree credentials (QNDCs), which serve either as a supplement or an alternative to a traditional degree, can offer workers a streamlined pathway to good jobs and family-sustaining wages. The prevalence of non-degree credentials (NDCs) in the U.S. workforce is growing, as more business look to skills-based hiring and more education and training programs emerge to meet those needs.[2] NDCs increase the number of skilled workers and allow them to demonstrate learned competencies and skills.[3] NDCs tend to be specialized and lead to a specific occupation or career, making it easier for employers to discern competencies mastered by an NDC holder. NDCs are also generally more affordable and take less time to complete than a traditional degree, meeting many workers' demands for streamlined and flexible education and training programs.

However, not all NDCs lead to good outcomes – like good jobs with high wages and prospects for career mobility. Those that do not lead to good outcomes further entrench the economic inequities that already impact Black, Indigenous, and other people of color, women, and people who sit at the intersection of these and other marginalized identities. Identifying and communicating which NDCs are high-quality – meaning those that provide people with the means to equitably achieve their employment and educational goals – is essential to ensuring working people do not waste their time and money on credentials that do not help them achieve their aspirations.

To encourage policymakers to orient policy and investments toward *quality* NDCs, National Skills Coalition (NSC) embarked on a multiyear effort with eleven states to identify what makes an NDC high quality, determine how states can measure and track NDC quality, and implement these concepts in practice.

> **QUALITY NON-DEGREE CREDENTIALS, WHICH SERVE EITHER AS A SUPPLEMENT OR AN ALTERNATIVE TO A TRADITIONAL DEGREE, CAN OFFER WORKERS A STREAMLINED PATHWAY TO GOOD JOBS AND FAMILY SUSTAINING WAGES.**

This report shares reflections and outcomes of this work with **Alabama, Colorado, Louisiana, Minnesota, Missouri, Nevada, New Jersey, Ohio, Oregon, Tennessee,** and **Virginia**, as well as other national partners, in the context of existing research and policy efforts related to defining and improving the quality of the NDC landscape nationally. It makes the case for strategically aligning access, affordability, and attainment policies at the state level with quality assurance frameworks and policies to ensure investments in high-quality credentials result in positive and equitable returns for learners, workers, and employers.

It also offers key takeaways from NSC's state and national engagement for how state policy, agency, and system leaders; postsecondary education and workforce leaders and advocates; and others can advance quality assurance for NDCs so that policymakers feel confident in supporting these programs with public funds, students have confidence in selecting postsecondary

pathways, and employers understand which programs effectively prepare students for careers.

For states looking to invest in quality credentials that advance state economic, workforce, and equity goals, considering the following actions can increase their likelihood of success.

1. Ensuring a strong leadership commitment that creates a mandate for action and directs resources towards quality assurance will lead to greater cross-system collaboration around a shared goal.

2. Determining specific goals for, and the scope of, quality assurance frameworks and related policies increases the chances that this work will result in concrete progress.

3. Engaging a diverse group of stakeholders in the process to build buy-in and trust will more reliably produce a sustainable and equity-minded approach to quality assurance.

4. Investing time and resources into improved data collection, capacity, and reporting infrastructure is essential for quality assurance, accountability, and equitable policy design.

5. Enacting policies that prioritize funding for people pursuing QNDCs, along with other access and attainment policies, can advance progress towards equitable credential attainment.

6. Exploring how to leverage NDC quality assurance for racial and gender equity is critical to deliver on the promise of increasing NDC investments and programs.

THE QUALITY ASSURANCE EQUITY IMPERATIVE

The 2016 Adult Training and Education Survey (ATES) provides some of the only detailed, nationally representative data available on work-related credentials held by U.S. adults. NSC's analysis of these data finds that, on average, NDC holders of color tend to be less likely to hold a degree than their white counterparts. In addition, large shares of NDC holders of color are women. **Especially in the context of gender and racial pay gaps and occupational segregation, ensuring that NDCs are high quality and lead to mobility and family-sustaining wages is essential to promoting intersectional equity and an inclusive economy.**

According to analysis of the ATES data, among adults ages twenty-five to sixty-four (for figures associated with these data, see Appendix B): [4]

- One third hold NDCs – including sub-baccalaureate certificates, licenses or certifications, and apprenticeship credentials.

- Those without a high school diploma or equivalent are nearly five times less likely to hold an NDC than adults with some college experience, but no degree.

- Adults with some college experience along with associate and graduate/professional degree holders are more likely than other adults to have earned an NDC.

- Over a third of adults who identify as more than one race or who did not specify a race or ethnicity, white, and Black have attained an NDC compared with roughly a quarter of Asian, Native Hawaiian, or other Pacific Islander, American Indian or Alaska Native, and Hispanic or Latino adults, respectively. [5]

- With the exception of Asian, Native Hawaiian, or other Pacific Islander adults, NDC holders identifying as American Indian or Alaska Native, Black, Hispanic or Latino, and those who identify as more than one race or did not specify a race or ethnicity, rely on that credential alone for the purposes of employment.

- The majority of white and Asian, Native Hawaiian, or other Pacific Islander adults with NDCs hold degrees as their highest level of educational attainment.

- Overall and across races and ethnicities, women are more likely to hold NDCs than men.

- Women of color are overrepresented among NDC holders: between roughly sixty and seventy percent of Black, Asian, Native Hawaiian, or other Pacific Islander, Hispanic or Latino, and American Indian or Alaska Native NDC holders are women, while just over half of white NDC holders and those who identify as multiple races or do not specify a race or ethnicity are women.

PROMOTING EQUITABLE OPPORTUNITIES TO EARN HIGH-QUALITY CREDENTIALS THAT ENABLE ONE TO THRIVE IN AN INCLUSIVE ECONOMY IS ESPECIALLY VITAL FOR PEOPLE OF COLOR AND WOMEN WHO ARE ACTIVELY PURSUING NON-DEGREE CREDENTIALS AS A ROUTE TO A MEANINGFUL CAREER

THE IMPORTANCE OF QUALITY ASSURANCE FOR NON-DEGREE CREDENTIALS

Many workers are seeking streamlined pathways to good jobs with family-sustaining wages. And, employers are seeking workers with specific competencies and credentials that can meet their immediate workforce demands. NDCs can help meet both of those needs, but while some NDCs lead to good jobs and career pathway opportunities, others have little economic benefit and can reproduce occupational segregation and systemic inequities in the labor market. Promoting equitable opportunities to earn high-quality credentials that enable one to thrive in an inclusive economy is especially vital for people of color and women who are actively pursuing NDCs as a route to a meaningful career. In addition, the existing postsecondary accountability landscape does not sufficiently provide quality assurance for NDCs in ways that are helpful for students, workers, and businesses. A new, transparent approach to ensuring credential quality and value is required given the wide range of NDCs that exist, the variability in outcomes, and the growing investment in and demand for these credentials among policymakers and employers.

DEFINING NON-DEGREE CREDENTIALS

In its most basic form, an NDC is any postsecondary credential beyond a high school diploma (or its equivalent) that falls outside of the parameters of a degree program. NDCs can vary in programmatic length, credits earned, and postsecondary provider. They are conferred after successful completion of one or more academic or training courses or an evaluation of skills.[6] Generally, NDCs validate that a certain set of competencies or skills have been adequately mastered by the credential holder.[7] They are important not only for workers wishing to demonstrate their experience and knowledge, but for employers looking to assess the competencies and skills of current and potential employees. NDCs generally include the following credential categories:

- **CERTIFICATES,** which are 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;[8]

- **INDUSTRY CERTIFICATIONS,** which are awarded by a certification body (not a school or government agency) based on an individual demonstrating, through an examination process, that they have 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;[9]

- **APPRENTICESHIP CERTIFICATES,** which are earned through work-based learning and postsecondary earn-and-learn models. They are applicable to industry trades and professions. Registered apprenticeship certificates meet defined national standards;[10]

- **OCCUPATIONAL LICENSES,** which 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;[11] and

- **BADGES AND MICROCREDENTIALS,** which are an emerging category of credentials that validate the mastery of a skill or competency. They are offered through shorter-term learning programs, are linked to in-demand skills, and can often be aggregated or stacked with similar badges or microcredentials.[12]

Facilitating Informed Decision Making

There are thousands of NDC options offered by hundreds of different training providers in every state and across many local areas.[13] Transparent evaluation and reporting of the quality and value of NDCs is important for workers, students, businesses, policymakers, as well as education and training providers. While these stakeholders have different reasons for wanting to understand the quality and value of NDCs, they all share a desire to make sure these credentials lead to good jobs and help develop the competencies that businesses need. When developing a quality assurance framework, the needs of these stakeholders must be incorporated into evaluations, reporting, and data collection so that they can access and leverage accurate and transparent consumer information.

UNEVEN OUTCOMES FOR NON-DEGREE CREDENTIAL HOLDERS

NDCs matter to workers and jobseekers because they are understood by many to have value in the labor market. But the reality is more uneven and depends on a range of factors.

Research finds that, while earnings for people with degrees outpace those of NDC holders, attaining an NDC can lead to important employment and earnings gains, particularly for adults who have no other post-secondary experience. Employment rates of NDC holders are generally higher than for comparable adults without an NDC.[14] Adults with an NDC whose highest educational attainment is a GED or a certificate are also more likely to be employed than adults with a high school diploma alone or those who do not have one.[15] In addition, studies show that holding an NDC leads to a ten to twenty percent increase in annual earnings over the earnings of a high school graduate who does not hold a similar credential.[16]

Wage outcomes associated with NDCs, however, vary for different people and different fields. In general, the economic outcomes associated with certificates and other NDCs reflect overarching labor market trends of occupational segregation and gender and racial pay inequity. For example, while both men and women with an NDC earn more than their counterparts whose highest level of education is a high school diploma, the earnings gain experienced by male NDC holders is larger than the gain women NDC holders experience.[17] This is due in part to field of occupation. Men are concentrated in technical and mechanical sectors, such as construction or IT, which see stronger average earnings compared with NDC holders working in sectors where women are concentrated, such as health care, education, and liberal arts.[18]

Limited studies examine NDC holder outcomes by race and ethnicity, but among the studies that do, they find that white NDC holders tend to out-earn NDC holders who are Black and Hispanic or Latino.[19] Black certificate holders experience the lowest earnings and smallest wage premium to earning a certificate compared with men and women of other racial and ethnic backgrounds, while Hispanic or Latino adults with certificates see the greatest earnings gain — likely due to the fact that they earn the least without any credential compared with adults of other backgrounds.[20]

- **Workers and Students** – Workers and students need accurate, accessible data and information to determine which postsecondary pathways align with their educational and career goals. Consumer information and quality assurance is particularly important for Black, Indigenous, immigrant, and other communities of color. A well-designed quality assurance framework can help provide essential consumer information while highlighting and expanding the availability of QNDCs and programs.

- **Policymakers** – Whether providing funding, amending an existing policy, or creating a new policy or program for NDCs, a quality assurance framework can help policymakers in their consideration of a number of factors, such as whether the policy or investment is a good use of resources; whether it has public support; whether it helps or harms any groups or populations; and whether there will be a positive return on investment.

- **Businesses** – Employers need ways to assess the quality of credentials when hiring and investing in workers. Businesses also play an important role in helping define QNDCs by providing feedback on which competencies and skills are needed for in-demand, quality jobs in a state or region and sharing insight into future demand as the economy shifts and technology is further integrated into many workplaces.

- **Education and Training Providers** – Quality assurance frameworks help education and training providers better assess and make decisions about the types of programs offered to students. Many community and technical colleges consider whether a program or credential leads to a quality job when determining what to offer.[21] Some are eliminating or forgoing programs with poor return on investment for students, while others are considering ways to incorporate NDCs as part of career pathways or ladders to additional credentials and better paying opportunities. Education and training providers are also using quality frameworks to determine the demand for a credential and if the competencies associated with the program and credential match the needs of employers.

STATE APPROACHES TO ASSESSING QUALITY FOR CREDENTIALS, PROGRAMS, AND PROVIDERS

While building frameworks and policies for assessing credential quality is one important element of closing the accountability gap for people who pursue short-term workforce training and education, elements of quality related to programs and providers are also critical. One state – **Minnesota** – oriented its quality framework around these components, allowing for better alignment and streamlining of the state's accountability system.

Minnesota's P-20 Education Partnership Credentials of Value work group developed a quality framework for both degrees and NDCs, to ensure both sets of credentials are held to the same standards. To avoid duplicating existing postsecondary quality assurance processes, such as accreditation for institutions of higher education or the requirements associated with the Eligible Training Provider List (ETPL), the state's quality assurance rubric defines a set of distinct elements of quality for credentials, programs, and providers within its quality assurance rubric. This distinction also allows for easier adaptation to different applications between the higher education and workforce systems.

For example, the rubric requires that credentials and programs both meet certain demand, wage, and knowledge and competency criteria, but the evidence used to measure quality for each differs depending on whether it is being measured for credentials or programs. Providers are assessed according to criteria that include, for example, accreditation status or approval by Minnesota's Office of Higher Education or another third-party vetting authority and whether they provide wraparound supports for student success. Ultimately, the state work group intends to develop specific thresholds for assessing elements outlined in the rubric, which will vary according to specific policy goals and applications.

Responding to Gaps in Federal Postsecondary Accountability

Historically, postsecondary accountability has focused on the institutional or provider level. The federal Higher Education Act established the triad – gatekeepers consisting of the U.S. Department of Education (the Department), the state, and accrediting agencies – to determine eligibility for an institution to participate in federal financial aid programs. The Department ensures that the institution is complying with requirements under the Higher Education Act, the state authorizes or recognizes whether an institution is permitted to operate in a state, and the accreditor evaluates institutional and academic quality as well as financial sustainability.[22]

Other than the triad system of accountability for education and training providers, there is no federal accountability framework to evaluate all postsecondary programs, and in many instances, a lack of data prevents even attempting a large-scale programmatic accountability system. The lack of information on some NDCs is particularly acute given the dearth of federal data for programs that do not participate in Title IV. For over a decade, the Department has waged political ping-pong over regulations that would evaluate degree and certificate programs at for-profit institutions and certificate programs at non-profit institutions based on whether the program leads to gainful employment (GE) – or whether student debt was deemed manageable relative to future earnings. If it was not, the program could lose eligibility for federal financial aid.[23] While not currently enforced, the Department is working to reinstate these or similar metrics through negotiated rulemaking.

Additionally, education and training providers that offer programs eligible for assistance under Title I (adult, dislocated worker, and youth programs) of the Workforce Innovation and Opportunity Act (WIOA) are evaluated on outcomes based on six primary indicators of performance. The indicators are focused on earnings, job placement, credential attainment, measurable skills gain, and employer satisfaction. As part of the required Unified State Plans under WIOA, states must set goals connected with the performance indicators, whose thresholds are negotiated between the state and U.S. Department of Labor. Programs and providers seeking inclusion on a state's ETPL may be required to meet certain outcome standards to be eligible, including demonstrating outcomes related to the primary indicators.[24] There have also been increasing efforts to link federal workforce funding to support credentials that lead to quality jobs.[25]

With both GE and reporting under Title I of WIOA, however, there are significant limitations in the ability to evaluate the full array of programs available to workers and students. Both have restrictions on data availability and only apply to programs that receive federal assistance. In the case of GE, metrics focus on outcomes for students receiving direct loans – a group which represents just fifteen percent of students attending community and technical colleges.[26] These limitations leave the current accountability system insufficient for assessing NDC value for students and workers. In addition, restrictions that prevent the Department from instituting a federal student unit record system create barriers to accessing the data necessary to evaluate outcomes for all students in NDC programs. So even if the federal government wanted to create a programmatic accountability framework for NDCs, it would face significant challenges.

ADVANCING A QUALITY IMPERATIVE FOR NON-DEGREE CREDENTIALS IN STATES

Gaps in the federal postsecondary accountability system create an imperative for states to develop frameworks for ensuring the quality of NDCs in which they are investing public dollars. Over the past couple of decades, many states have expanded their state longitudinal data systems, allowing them to link, in many cases, data collected on people as they move through the educational system, starting in pre-kindergarten through to postsecondary education and the workforce.[27] This capability creates greater opportunities for states to assess outcomes and value for students and other stakeholders at the programmatic level.

However, even for states, there are limitations in their ability to assess NDCs. That's why it is important for state policymakers to establish a system to identify and expand programs of value so that students have the access and information necessary to pursue

> **GAPS IN THE FEDERAL POSTSECONDARY ACCOUNTABILITY SYSTEM CREATE AN IMPERATIVE FOR STATES TO DEVELOP FRAMEWORKS FOR ENSURING THE QUALITY OF NON-DEGREE CREDENTIALS IN WHICH THEY ARE INVESTING PUBLIC DOLLARS.**

postsecondary options that align with their educational and career goals. It may not be possible to control all bad actors, including education and training providers who misrepresent student outcomes and offer credentials that provide little-to-no value in the labor market. However, it is possible to support and expand good postsecondary options for students and workers.

NATIONAL EFFORTS TO UNDERSTAND NON-DEGREE CREDENTIAL HOLDERS

In recent years, a number of national research groups have attempted to compile the evidence and collect new data on NDCs to start to build a solid evidence base describing these credentials and the outcomes of people who hold them.

For example, with support from Lumina Foundation and based at George Washington University, the Non-Degree Credential Research Network (NCRN) has published reviews of the literature on NDCs, and convened researchers focused on these credentials, to summarize what the research says — and where the gaps are — related to NDC prevalence, labor market outcomes, and popularity and demand among learners and employers.[28] The Education and Employment Research Center at Rutgers University has also published a review of the NDC landscape, focusing on the organizations working in the NDC quality space and mapping the credential marketplace as well as additional study of noncredit programs and related credentials.[29]

Additional information describing NDCs and NDC holders comes from non-governmental polling and private surveys. For example, the 2020 Strada-Gallup Education Survey of nearly 14,000 U.S. adults explored the prevalence of NDCs, overall and by type, and perceptions of the value of and return to those credentials among NDC holders.[30] NORC at the University of Chicago has also fielded surveys that provide insight into the population of adults holding NDCs. NORC's 2017 and 2019 National Education and Attainment Surveys (NEAS) surveyed roughly 6,000 people in each year, exploring experiences with certifications and licenses, certificates, apprenticeships, and employment.[31] These data inform Lumina Foundation's Stronger Nation reports, which track progress towards its sixty percent attainment goal.[32]

National Work to Advance Non-Degree Credential Quality, Transparency, and Equity

Several national postsecondary organizations have focused on developing a set of quality assurance standards, systems, and tools to advance credential quality, transparency, and equity. Much of this work centers on identifying quality standards and increasing the transparent reporting of education and training program outcomes at the federal, state, and institutional levels. For example:

- **Education Quality Outcomes Standards (EQOS)** provides a student outcomes-based framework for quality assurance, looking particularly at outcomes related to learning, completion, placement, earnings, and satisfaction.[33]

- **Education Strategy Group (ESG)** has developed a framework to guide states in identifying high-value credentials using real-time labor market information, vetting them with employers, and incentivizing and reporting on their attainment.[34] ESG has also been leading, alongside the Office of Community College Research and Leadership at the University of Illinois, an initiative to increase alignment of NDCs of value with associate degrees, to improve credential attainment and economic mobility among students of color in six states.[35]

- **National Skills Coalition (NSC)** collaborated with a set of twelve states to develop consensus quality criteria for NDCs that can be used to develop metrics for assessing credential quality, identifying equity gaps, and guiding state policy and investments.

- **New America** has highlighted that quality non-degree programs at community colleges include positive labor market outcomes, equity, stackability, affordability, and respectable completion and certification/licensure pass rates.[36]

- The **Postsecondary Value Commission** has developed tools to identify, measure, and address inequities in college access, completion, and labor market outcomes, including a definition of and framework for postsecondary value.[37]

- **Rutgers Education and Employment Research Center** has identified existing and potential measures to advance quality at the institutional level, including credential design, competencies, market processes, and outcomes.[38]

Across all these frameworks a similar set of quality standards or criteria have emerged:

- **Market alignment**: Is the credential relied upon or prioritized by employers hiring for in-demand, high-wage roles? Is it an industry-recognized credential?

- **Equity**: Are there gaps in credential attainment or other outcomes by race, gender, or other student characteristics?

- **Outcomes**: Are employment, earnings, and pathway progression outcomes connected to a specific credential comparable and reliable? Are the data related to credentials around job placement and earnings defined using the same metrics and consistent definitions? Are the credential attainment data reported reliable? Valid? Audited by a third party?

- **Stackability**: Can the credential be stacked to additional education or training to help people advance in their educational, training, or employment pathway?

- **Learning and Competencies**: Does the credential serve as an appropriate marker for the mastery of competencies that are valued by employers; is it aligned with industry or sector standards; and does it provide the credential holder with the tools to achieve their related career goals?

NSC's Work with States to Define and Implement Non-Degree Credential Quality Assurance

Alongside the work of these organizations, NSC has been listening to and learning from a diverse mix of partners in states across the country who are focused on expanding access to affordable, supportive, and high-quality post-secondary credentials and career pathways. Through our state policy technical assistance initiatives, SkillSPAN network, and Business Leaders United, NSC has worked with nearly 20 states to advance the building of an equity-oriented QNDC ecosystem that has led to new policy and investment in quality assurance and financial assistance for QNDCs, including policies that increase financial and other resources for adults and students of color pursuing QNDCs.[39] Starting in 2018, NSC engaged with a set of states that had already begun to establish quality assurance criteria and processes for NDCs (**Alabama, Iowa, New Jersey, Tennessee, Virginia,** and **Washington**) or were in the process of developing them (**Colorado, Florida, Louisiana, Oregon, Rhode Island,** and **West Virginia**). NSC also sought feedback from a range of national and state higher education and workforce development officials and local practitioners. Specifically, NSC considered how states are using employment, earnings, and competencies to set quality standards for credentials. The criteria are intended to reflect standards for NDCs that are most valuable for workers and businesses, and to enable the evaluation of whether credential seekers experience equitable outcomes.

ESTABLISHING QUALITY CRITERIA FOR NDCS

NSC defines a quality non-degree credential (QNDC) as one that provides people with the means to equitably achieve their informed employment and educational goals, as demonstrated by valid, reliable, and transparent evidence that the credential satisfies criteria constituting quality, including:

- **SUBSTANTIAL JOB OPPORTUNITIES** - While the definition of substantial may vary, it should include current labor market data, future projections, as well as economic development opportunities. Evidence must include quantitative data and input from employers.

- **COMPETENCIES MASTERED BY CREDENTIAL HOLDERS** - The education and training program associated with the NDC must include clearly defined competencies that align with expected job opportunities and employer needs.

- **EMPLOYMENT AND EARNINGS OUTCOMES OF PEOPLE AFTER OBTAINING THE CREDENTIAL** - Evaluation of earnings, employment, and job quality associated with a credential are essential in determining its value. This evaluation should include the disaggregation of employment and earnings data by race, ethnicity, gender, disability status, and other characteristics to measure equitable progress. States may also consider an evaluation of job quality associated with NDCs, such as the availability of health benefits, sick leave, retirement benefits, and regular and sustainable hours. In addition to helping policymakers, postsecondary leaders, and institutions make decisions about credential design, investments, and offerings, information on how people fare in the labor market after earning specific credentials should be made readily available to consumers so they can make informed choices regarding their education and training options.

- **STACKABILITY TO ADDITIONAL EDUCATION OR TRAINING** - QNDCs that are directly aligned with education and training pathways, especially for NDCs associated with low-earnings potential, increase the likelihood that credential holders gain access to stronger wage opportunities and better employment outcomes. This can include the creation of career pathway programs, credit articulation and direct transfer agreements, credit for prior learning, as well as consumer information tools to promote these opportunities.

- **PORTABLE TO A RANGE OF JOB OPPORTUNITIES AND EMPLOYERS** - An important indication of NDC quality is whether the credential is industry recognized across multiple employers and regions, providing the NDC holder multiple job opportunities and the ability to advance their career goals.[40]

Since then, NSC has focused on working with states to define QNDCs and advance a state policy agenda that utilizes quality assurance frameworks to increase QNDC access and attainment, improve equity in access and outcomes for students – particularly students of color – and enhance state capacity to measure and report on NDC outcomes. Between 2020-2022, NSC engaged with two cohorts of states through the Quality Postsecondary Credential Policy Academy (also referred to as the Policy Academy). A total of eleven states participated including: **Alabama, Colorado, Louisiana, New Jersey, Oregon,** and **Virginia** in the first cohort; and **Minnesota, Missouri, Nevada, Ohio,** and **Tennessee** in the second. NSC helped states develop frameworks for assessing the quality of NDCs, using NSC's consensus quality criteria as a foundation, and identify and act on policy goals and applications that will increase equitable access to and outcomes from QNDC attainment (see Appendices C and D for more information on states' quality criteria).

NSC helped state teams, which included a range of stakeholders across state offices, systems, and agencies, build action plans to develop and adopt quality criteria and frameworks. NSC also helped state teams to achieve policy change that improves access, affordability, equity, and data transparency and reporting related to high-quality NDCs. To advance those plans, NSC provided technical assistance for quality criteria

and framework development, including tailored support navigating technical questions, building consensus, identifying policy applications, sharing relevant state examples, curating resources, connecting teams with state and national experts, and identifying opportunities to deepen and expand states' work on quality assurance.

NSC, in partnership with Education Strategy Group, also organized cross-state peer learning opportunities to share information and promising practices for defining and operationalizing QNDC frameworks, including how to integrate and center equity, identify key elements of quality assurance definitions, understand stackability and its importance for quality, and leverage data to identify credentials according to quality criteria.

NSC partnered with Credential Engine in helping states to utilize their credential registry to measure the value of NDCs and develop relevant data policies more effectively. In collaboration with Credential Engine and other organizations, NSC published a brief on the importance of credential transparency and developed a state policy toolkit that illustrates how states can use QNDC frameworks and the linked open data network, common description language, and publishing platform created by Credential Engine to improve credential quality and transparency.[41]

STATE PROGRESS ON QUALITY ASSURANCE FOR NON-DEGREE CREDENTIALS

The eleven states that participated in NSC's Policy Academy made significant progress toward defining and operationalizing frameworks for quality NDCs. Many states now have a working definition or framework to guide policy and program design and implementation.

Development and Adoption of State Quality Frameworks

While discussions of state quality assurance often conceive of a statewide framework, applied across agencies and systems, in practice, most states adopt quality criteria and frameworks in the context of specific policy contexts or applications. This happens typically through mandates written into statutory language for policies or programs or in practice as directed through the governor's office or other authoritative body, such as a community college system board or higher education commission. Seven states have developed and adopted quality frameworks in the context of specific policies or programs, with at least one additional state in the process of doing so (Table 1).

One state has plans to codify its quality criteria in the coming years. **Tennessee's** Higher Education Commission (THEC) is developing legislation that would codify state quality criteria, with the aim to provide a statewide standard for NDCs that will ensure Tennesseans receive quality credentials which provide a living wage, are stackable, and are portable. THEC has been working in conjunction with the state's access and attainment initiative, Momentum Year 2023, to raise awareness of the importance of QNDCs.[42] Proposed legislation is tentatively expected in 2024.

Three states – **Alabama**, **Louisiana,** and **Minnesota** – have adopted or have plans to adopt a set of quality criteria and a related framework through the authority of an official body, sometimes established for the purpose of overseeing or in relationship to the development of the quality assurance framework.

- **Alabama's** quality criteria and framework were developed and are administered by the Alabama Committee on Credentialing and Career Pathways (ACCCP) – a joint committee comprised of sixteen sectoral partnerships of business and industry

TABLE 1. STATUS OF STATE QUALITY ASSURANCE CRITERIA/FRAMEWORK DEVELOPMENT AND ADOPTION

State	In development	Developed but not adopted	Adopted for specific policies or programs	Statewide adoption (not codified)	Statewide adoption (codified)
Alabama				✓	Anticipated
Colorado		✓	✓		
Louisiana			✓	✓	
Minnesota		✓	In process	Anticipated	
Missouri	✓				
Nevada	✓		✓*		
New Jersey			✓		
Ohio			✓†		
Oregon		✓			
Tennessee		✓	✓*		Anticipated
Virginia			✓		

Notes: *States' work did not take place in conjunction with NSC's Policy Academy; † State uses criteria for in-demand job list; "Anticipated" means adoption is expected to happen; "In process" means the state is actively advancing towards this goal.

leaders supported by a cadre of subject-matter experts from higher and secondary education and workforce development policy leaders, as well as the governor's office.[43] The ACCCP publishes the Compendia of Valuable Credentials at four prestige levels, identifying credentials on the state's registry that have broad industry appeal as well as specific industry specialization. HB109, active in the 2023 legislative session, would codify the Alabama Committee on Non-Degree Credential Quality and Transparency, which would serve as a committee of the Alabama Workforce Council and would be responsible for compiling the Compendium of Valuable Credentials.

- **Louisiana's** quality definition was formally adopted and is governed by the Louisiana Board of Regents.[44] The fact that the Board can maintain and/or modify the existing definition as desired or needed, without having to propose changes to the legislature, is seen as a benefit to the framework not living in legislation.

- **Minnesota's** quality rubric developed during the 2021-22 Policy Academy has been presented to the Credentials of Value work group for for consideration and next steps, such as approval of resources to support its implementation. The work group,

which includes representation from secondary and postsecondary education and workforce development systems, as well as employer representatives, was set up and charged by the P-20 Education Partnership with developing "a shared definition of a high-quality credential that builds upon the state's existing efforts to define college and career readiness and to reinforce the need of credentials to be stackable, recognizable, and leading to a family-sustaining wage." [45]

Establishment of Quality Assurance Governance Policies and Practices

States must make choices in adopting a quality NDC framework, including the process for developing the definition and the stakeholders responsible for shaping and administering it. In six states, the higher education agency or commission is leading the quality framework development: **Colorado, Louisiana, Minnesota, Ohio, Tennessee,** and **Virginia** (Table 2). **Nevada's** Governor's Office of Workforce Innovation leads the work in that state. In another three states – **Alabama, Missouri,** and **Oregon** – quality efforts are being advanced through cross-agency collaboration.

TABLE 2. GOVERNANCE OF STATE QUALITY FRAMEWORK DEVELOPMENT AND APPLICATION

State	Higher education	Workforce development	Secondary education	Agency or System
Alabama	✓	✓	✓	Alabama Committee on Credentialing and Career Pathways
Colorado	✓			Colorado Department of Higher Education
Louisiana	✓			Louisiana Board of Regents
Minnesota	✓			Minnesota Office of Higher Education
Missouri	✓	✓		Missouri Department of Higher Education and Workforce Development
Nevada		✓		Governor's Office of Workforce Innovation
New Jersey	✓*†	✓		New Jersey Department of Labor and Workforce Development
Ohio	✓			Ohio Department of Higher Education
Oregon	✓	✓		Oregon Higher Education Coordinating Commission and Oregon Workforce and Talent Development Board
Tennessee	✓		✓*	Tennessee Higher Education Commission; Tennessee Department of Education
Virginia	✓			Virginia Community College System and State Board for Community Colleges

Notes: * States' work did not take place in conjunction with NSC's Policy Academy; † State uses criteria for in-demand job list.

Two states have seen quality assurance efforts emerge separately in both the higher education and workforce systems:

- In **New Jersey**, the Department of Labor and Workforce Development developed its own quality criteria and framework for the ETPL while the Office of the Secretary of Higher Education has defined quality with a focus on degrees.

- **Tennessee's** Department of Education developed and is implementing quality criteria for career and technical education related to Perkins V, while the Higher Education Commission worked with NSC to develop quality criteria for NDCs.

Engagement of Key Stakeholders in Quality Assurance Development

State-level stakeholders who took part in their state's Policy Academy work and are engaged in state-level quality assurance efforts include representatives from state departments and offices of higher education, workforce and economic development, and K-12 education; governors' workforce development boards and offices of workforce transformation/innovation; and community college systems. In a few cases, state teams also included stakeholders from individual community and technical college institutions and community-based organizations. Many states recognized the importance of having a diverse set of stakeholders among these teams to support a broad base of perspectives.

In general, state teams included:

- **Executive leadership level of relevant state agencies and/or the governor's office** – These leaders' participation is important for case making, buy-in, and spurring action and decision making related to quality framework development and policy goals and applications.

- **Staff or leadership in a state data-focused role** – While not all states had representation from someone in this position, those which did were better able to envision and test which data the state had or needed to quantitatively track and assess credential quality according to specific criteria. These people are critical leaders for ensuring states have the capacity to operationalize their quality assurance frameworks in the context of policy and accountability.

- **Stakeholders from academic and workforce offices within higher education or community college systems** – These voices are important to identifying policy objectives and for determining approaches to implementation of quality frameworks, especially when working together to identify opportunities to leverage quality assurance for the creation of sustainable bridges between systems that lead to additional opportunities for quality education and training.

- **Program administrators and leaders** – Involvement of people in charge of the administration of higher education or workforce development funding, including state financial aid and workforce training grants, including WIOA, can help build the case at levels that are essential for regulation and accountability related to quality frameworks.

Alignment of State Policy Goals with Quality Frameworks

As they develop quality assurance frameworks, states must also decide how those frameworks will be applied to state policies and investments. NSC encouraged Policy Academy states to focus on policy applications that seek to increase equitable QNDC access and attainment and achieve other key goals related to their overall educational attainment and economic development strategies.

Integrating Quality Non-Degree Credentials into Credential Attainment Goals

State leaders have recognized the critical importance of postsecondary attainment in meeting equity and economic goals. Nearly every state has a postsecondary attainment goal that includes increasing the percentage of workers that have a postsecondary credential.[46] The vast majority of these states include NDCs in their attainment goals, recognizing the importance of such credentials for workers, business, and the state's economy.[47] Three Policy Academy states are thinking about their quality criteria in the context of state postsecondary attainment goals:

- **Louisiana's** quality criteria, adopted by the Board of Regents, regulate which NDCs can be counted towards their state attainment goal, which aims to reach sixty percent degree or credential of value attainment among working adults by 2030.[48]

- **Colorado** is considering their quality assurance framework in the context of determining credential eligibility for state attainment goal of sixty-six percent attainment of a degree or certificate among adults ages twenty-five to thirty-four by 2025.[49]

- In May 2023, **Minnesota** passed legislation that make NDCs eligible to count towards the state educational attainment goal of seventy percent of adults ages twenty-five to forty-four by 2025.[50] While this would not require alignment with the state's quality assurance framework, it will coincide with the implementation of the state's quality assurance framework according to a series of state policy applications and objectives.

Leveraging In-Demand Job Lists

Many states working to define quality for NDCs are aligning these frameworks with existing definitions of in-demand occupations. In-demand job lists often apply criteria measuring demand by number of job openings or projected annual growth and some include wage thresholds. Some states (**Alabama, Louisiana, Ohio,** and **Virginia**) are using these in-demand job criteria and associated lists as a proxy for or complement to determining quality for credentials and/or programs.

- **Alabama's** Compendium of Valuable Credentials includes credentials mapped to regional and state-wide in-demand occupation lists as a first step in identifying credentials of value. Technical Advisory Committees (TACs) vet credentials associated with in-demand occupations according to a set of quality criteria; credentials that meet those criteria are then approved for the Compendia by the ACCCP.[51]

- **Ohio's** Top Jobs List is informed by state labor statistics and projections and the state's In-Demand Job Survey of businesses. The list includes the in-demand occupations in the state that meet a set of criteria for wages and demand – specifically, paying wages equal to or higher than the state median wage and either exceeding the state average for annual job growth or demonstrating more than 620 total annual job openings.[52] The Policy Academy state team landed on using the Top Jobs List and criteria to centralize and align an understanding of "quality" across multiple existing statewide credential lists that operate independently and have different goals and criteria for identifying high-quality credentials and programs. Alignment with occupations on the

Top Jobs List is also a requirement for inclusion on the state list of industry-recognized credentials.[53]

- In **Louisiana**, the state's quality criteria have been leveraged in conjunction with high-priority occupation lists and direct industry and employer engagement to guide postsecondary policy and investments.[54] For example, "Reboot Your Career" was launched by the Louisiana Community and Technical College System (LCTCS) in 2020 with funding from the Coronavirus Aid, Relief, and Economic Security Act and revived in 2022 with state funding to support people interested in pursuing short-term (eight to twelve week) programs at reduced tuition rates.[55]

LCTCS worked in partnership with workforce, economic development, industry, and other partners to identify the short-term credentials that would make a difference for workers' labor market outcomes and have a significant economic impact for the state. The list developed from this effort took into account the state quality criteria for NDCs and focused on additional considerations of economic development, as identified by the stakeholders engaged by LCTCS.[56] This process allowed the state to include a few very short-term credentials that were significantly undersupplied at the time of the analysis that may not have met the formal requirements for quality credentials. The state followed a similar process of engaging economic developers and other stakeholders when developing the list of eligible credentials for state financial aid programs such as the M.J. Foster Promise Program, which provides financial aid for students pursuing short-term programs, as well as longer-term degree programs aligned to high-priority jobs in growing industry sectors.

- The **Virginia** Demand Occupations List was created and is annually updated by the Virginia Board of Workforce Development (VBWD) as directed by the legislation (§ 23.1-627.5) that created the New Economy Workforce Credential Grant Program in 2016. The VBWD Demand Occupation Task Force identifies high-demand fields and occupations, and the noncredit training and credentials that align to those occupations and publishes those lists to its website. The list serves as a resource providing recommendations to eligible institutions seeking to align their training programs. Institutions also have the ability to request approval of additional occupations for the list if those occupations meet local or regional demand.

Development of Policy Applications for Quality Criteria

QNDC definitions and frameworks can support performance accountability, continuous improvement, and other goals across different education, workforce, and human services programs. Most Policy Academy states are still evolving in their application of quality criteria and frameworks, with some actively applying quality assurance to different policies or programs and others in the planning or exploration stages.

Expanding Financial Aid for Quality Non-Degree Credentials

Funding for NDCs can come from a variety of sources including federal and state government. In many instances, funding is provided directly to the student via financial aid or other student supports. In other cases, funding can be used to support and scale non-degree programs, including state formula funds and federal grant programs such as Perkins Career and Technical Education. This funding can effectively lower tuition at public institutions by supplementing the overall cost of operating many non-degree programs. However, in many states, limitations exist on the application of state formula funding for students in noncredit programs.[57]

FINANCIAL AID FOR NON-DEGREE CREDENTIALS SHOULD BE DIRECTED TOWARD CREDENTIALS THAT ARE KNOWN TO BE HIGH QUALITY TO ENSURE THAT THEY LEAD TO STRONG POSITIVE RETURNS FOR LEARNERS, EMPLOYERS, AND STATE RESIDENTS.

While financial aid for students pursuing NDCs can technically come from a number of sources, including the federal Pell grant, short-term NDCs are often not eligible for these sources of support. This gap in reliable access to financial aid for students in short-term NDC programs disproportionately burdens the students of color and women, especially those with lower levels of overall educational attainment, who are actively working to earn credentials that will advance their careers and improve their earning potential. In response, many states are establishing financial aid programs to serve students enrolled in NDC programs. Financial aid for NDCs should be directed toward credentials that are known to be high quality to ensure that they lead to strong positive returns for learners, employers, and state residents.

GAPS IN FINANCIAL AID FOR NON-DEGREE CREDENTIALS

In general, short-term NDCs are often excluded from traditional student financial aid programs.[58, 59] The Pell Grant program, the primary federal student aid grant program designed to assist students with low incomes access postsecondary education and training, limits eligibility to programs that are at least 600 clock hours and 15 weeks in length, excluding many shorter-term programs which lead to NDCs.[60]

Many traditional state financial aid programs mirror the federal Pell grant definition for programmatic eligibility, leaving students enrolled in short-term programs ineligible for that aid as well. While financial aid directors often work to cobble together assistance for NDC students, blending and braiding from a number of different sources, this process is far more complex and aid much less predictable than the financial aid packages for students enrolled in degree programs.

State financial aid programs also tend to provide aid only towards tuition and mandatory fees, meaning many students are left to cover the costs of required supplies and books, as well as other nontuition and basic needs expenses, out of pocket. This leaves a significant gap for students who may not otherwise qualify for traditional financial aid.

Two Policy Academy states are actively applying (**Virginia**) or preparing to apply (**Minnesota**) quality assurance frameworks to state financial aid programs to support learners pursuing NDCs. **Louisiana** indirectly leverages its credentials of value definition and criteria to inform the eligible program list for state financial aid programs, such as the M.J. Foster Promise Program.

- **Virginia's** FastForward Program, officially known as the New Economy Workforce Credential Grant, provides financial aid to students enrolled in eligible noncredit, short-term training programs that lead to credentials in a high-demand field, as defined and identified by the Virginia Board for Workforce Development. For specific training programs to get approval for FastForward eligibility, institutions submit applications to the Virginia Community College System (VCCS), which vets them according to a set of quality criteria, including whether they are industry recognized, portable, competency-based, third-party validated, and stackable. Programs that meet these criteria are then advanced for final approval by the chancellor and community college board. VCCS conducts a review of eligible programs every three years.

- **Minnesota's** Office of Higher Education (OHE) intends to use the state's quality assurance rubric to create opportunities for non-Title IV postsecondary education and training providers who are not eligible for the Minnesota State Grant Program to become so. Currently, many students pursuing noncredit and very short-term education and training (less than 300 clock hours or eight weeks) are not eligible for this state financial aid program.[61] Non-Title IV providers and programs that are currently ineligible for the Minnesota State Grant Program would be approved for participation based on meeting a set of to-be-determined thresholds aligned with the state's quality rubric, which outlines metrics separately for credentials, programs, and providers. Next steps for OHE and the other members of the P-20 Education Partnership Credentials of Value work group will be to determine the quality thresholds and whether additional criteria are needed; work with programs/providers to identify barriers and meet the thresholds; and make a legislative proposal for enactment, including resources for implementation and administration.

Ensuring the Quality of WIOA Eligible Training Providers Lists

The ETPL is a list of training providers and their programs that have met the federal and state requirements for serving people using a WIOA Title I Individual Training Account voucher. Three states are considering (**Colorado**) or preparing (**Alabama** and **New Jersey**) to apply quality criteria to the ETPL.

- **Alabama** intends to codify a requirement that credentials must be registered to the state's credential registry and either on the Compendium of Eligible Credentials and/or be aligned with the ACCCP lists of in-demand occupations and career pathways to be eligible for receiving federal dollars, such as WIOA or Perkins funding. This requirement has already been adopted by Alabama's State Workforce Development Board.

- **Colorado's** Department of Higher Education and Department of Labor and Employment are working together towards leveraging the provider, program, and student-level data collected for ETPL programs to apply towards a set of quality criteria developed as part of the Policy Academy. They are also integrating their ETPL data with the Credential Transparency Description Language and publishing to the credential registry in order to facilitate better connection of credential data to national best practices and definitions.

- In **New Jersey,** statutes provide the authority for the New Jersey Department of Labor and Workforce Development (NJDOL) to require all providers on the ETPL to report participant information, including social security numbers and other demographic information. As such, the quality assurance framework not only includes programs listed on the ETPL whose participants receive WIOA Title I funds, but private pay program participants, as well. The NJDOL has developed a statistically adjusted model for assessing ETPL program outcomes relative to a set of quality criteria oriented towards consumer protection, accountability, and continuous program improvement. The model considers the composition of and barriers facing people enrolled in each program to produce reasonable estimates of key outcome measures, including labor market demand, employment and wage outcomes, educational outcomes, financial impact, and equity in outcomes for historically underserved groups. Programs with results that fall below expectations will have two years to improve their status or be removed from the ETPL.

INTEGRAL TO ANY QUALITY ASSURANCE FRAMEWORK – AND WHY HAVING ROBUST DATA COLLECTION, SHARING, ANALYSIS CAPABILITIES ARE SO IMPORTANT – IS HOW ASSESSMENTS OF QUALITY INTEGRATE MEASURES AND CHECKS RELATED TO EQUITY, PARTICULARLY RACIAL EQUITY.

Supporting and Expanding Quality Non-Degree Credential Programs

Additional investment in skills training has significant support, with ninety-three percent of voters backing further investments in job training.[62] As policymakers respond to this demand and invest more in the expansion of NDC programs, it is essential that those investments support NDCs with evidence of a strong return for workers, businesses, and taxpayers. In a few Policy Academy states, quality assurance criteria have influenced how the state is thinking about participation in new state programs intended to expand access to and attainment of quality credentials.

For example, **Colorado** has passed multiple pieces of legislation that incorporate considerations of quality and require development and implementation of programs in conjunction with quality criteria. SB22-192 Opportunities for Credential Attainment, which was signed into law in May 2022, requires that quality criteria be applied to the development of stackable credential pathways across high-value industries in the state. Another Colorado law passed in 2020, HB20-1002 College Credit for Work Experience, was also informed by the quality criteria

the state developed as part of the Policy Academy and requires the state to develop a process for identifying minimum standards for awarding academic credit for prior learning.

Promoting and Assessing Equity

Integral to any quality assurance framework – and why having robust data collection, sharing, analysis capabilities are so important – is how assessments of quality integrate measures and checks related to equity, particularly racial equity. Integrating an equity lens into quality frameworks is important for protecting against harmful tracking practices, which were historically used to steer students of color into vocational educational programs that did not connect them to jobs in high-demand fields or provide them with an on-ramp to a college credential. It is also important for advancing goals of educational and economic equity and mobility for Black, Indigenous, and other people of color.[63]

Quality frameworks should apply an equity lens to all aspects of credential quality, including equity in access to high-quality credentials (e.g., are quality credentials

offered equitably across geographies?; are there financial aid and other nontuition supports available to help learners from low-income backgrounds enroll in quality credential programs?), equity across credential sectors and types (e.g., do the credentials that lead to the highest paying occupations see equitable enrollment levels by race, ethnicity, gender, and other variables, as well as people sitting at the intersection of those characteristics?), and equity in program completion and credential attainment (e.g., are Black, Latinx, Indigenous, and other students of color completing high-quality credential programs and attaining high-quality credentials at equitable rates to white students?; how does attainment of high-quality credentials compare across women and men of different racial and ethnic backgrounds?).

Two states have intentionally integrated considerations of equity into their quality assurance frameworks:

- The **New Jersey** Department of Labor and Workforce Development, in partnership with the Heldrich Center for Workforce Development at Rutgers University, and the state's Credential Review Board, developed and adopted a quality assurance model that considers indicators of labor market demand, employment and wage outcomes, educational outcomes, financial impact, and equity in outcomes for historically underserved sub-groups.[64] Specifically, the statistical model to assess quality includes program composition, or the characteristics of program participants, into how it assesses outcomes relative to quality criteria, to avoid

unintentionally encouraging "creaming," or the practice of providers seeking to enroll students who are perceived to be easiest to serve.

To do this, the model assesses the enrollment makeup of every program/provider combination, looking at the distribution of participants by race, ethnicity, gender, single parent status, disability status, among others. Based on up to five years of performance data for these participant groups, the model estimates an adjusted outcomes measure to which the program/provider is compared. An ultimate score measures the difference between the predicted outcomes for that program/provider's specific makeup of participants and its actual outcomes. Programs in the bottom tenth percentile which find themselves below the predicted benchmark must develop and have two years to meet a corrective action plan to improve outcomes; if they are unable to improve on their score by at least ten percent, they will be removed from the ETPL, with the option to reapply in the future.

- **Minnesota's** state team, in conjunction with their broader Credentials of Value work group, developed a rubric for measuring quality credentials, programs, and providers. In each category, they included measures that are intended to account for equity in quality determinations, specifically to ensure equitable access to and success in quality postsecondary opportunities for students who may face marginalization related to race, ethnicity, disability status, or

other characteristics. In addition to requiring disag-gregation by race and ethnicity in data submissions, the rubric requires a review of whether:

» education and training providers have a statement of intention and resources to address diversity, equity and inclusion;

» providers offer wraparound services for student success;

» programs demonstrate that entry requirements do not result in bias/inequitable access;

» assessments and examinations associated with the credential provide appropriate accommoda-tions for people with need, including learners of English; and

» programs prioritize culturally inclusive practices.

Enhancement of Data Policies, Infrastructure, and Capacity

Robust data policies, systems, practices, and reporting requirements are critical for transparent assessments of NDC quality. They enable state policymakers, agencies, education and training providers, and consumers to see how learners fare in the labor market and/or in addi-tional education and training. They also identify areas of needed program improvement and equity gaps by race, ethnicity, gender, geography, or other key and inter-secting characteristics. States with the infrastructure needed to match data between education and workforce systems and unemployment insurance (UI) wage records are especially well-situated to formulate and implement NDC quality measures.

GAPS IN DATA TO DESCRIBE NON-DEGREE CREDENTIALS

As an umbrella category of postsecondary credentials, few administrative data sources are available to describe NDC holders and their outcomes.

FEDERAL DATA GAPS
Federal postsecondary data sources only describe certificates that are Title IV-eligible. Other federal sources, such as the Survey of Income and Program Participation, National Longitudinal Survey of Youth, and Current Population Survey, have limited information on NDC holders, while the American Community Survey does not collect data on credentials below associate degrees. The NCES Adult Training and Education Survey (ATES), fielded in 2016 and released in 2018, provides some of the only detailed, nationally representative data available on work-related credentials held by U.S. adults, but it will not be conducted again.[65] Workforce data associated with NDCs includes the U.S. Department of Labor's TrainingProviderResults.gov website, which provides information from all states' Eligible Training Provider Performance Reports and includes information related to NDC attainment. [66]

STATE AND INSTITUTIONAL DATA GAPS
States and individual institutions do collect some data related to NDCs, yet these data mostly describe credit-bearing certificates, which are frequently eligible for Title IV federal aid and therefore fall under federal reporting requirements. Data are generally not available for programs and credentials offered by education and training providers that do not receive state or federal funding. Additionally, for programs and credentials which are not eligible for federal aid, including noncredit programs and industry certifications, robust data on enrollment, attainment, and educational and labor market outcomes are lacking.[67]

These gaps in data and reporting on the full range of NDCs limit the ability to identify high-impact creden-tials that benefit both credential seekers and employers.

Policy Academy states vary in their ability to analyze and report on NDC quality and equity. Three states — **Louisiana**, **Minnesota**, and **Virginia** — are building this capacity through the enhancement and integration of key data and data systems.

- In 2020, the **Louisiana** Community and Technical College System (LCTCS) began to integrate non-credit data into the LCTCS's main student information system to solve a number of problems. This integration is intended to, among other things, simplify data entry for students who move between noncredit and credit-bearing programs; create a shared pool of student data for recruiting and eligibility for financial aid; remove siloes in data collection and reporting across departments; and improve and streamline the use of data to inform decision making. This work has been important for the launch of the M.J. Foster Promise Program in 2022, which was created to provide student financial aid for the pursuit of both credit-bearing and noncredit short-term programs. To be able to track and report on grant recipients' credential attainment and earnings, as required by legislation, LCTCS needs a data system for both program types. The integrated system will also ultimately allow for more detailed reporting on student outcomes such as credit awarded for prior learning, transition from noncredit to credit, and completion rates.

- In 2022, **Minnesota's** Office of Higher Education (OHE) launched new data collection from ETPL programs, including eligible noncredit programs at community colleges, to comply with new WIOA reporting requirements. OHE is now collecting and integrating data on all ETPL programs into the State Longitudinal Education Data System (SLEDS) which will allow it to assess labor market outcomes for all participants enrolled in ETPL programs regardless of their receipt of Individual Training Accounts (ITAs). As more data are collected and reported by providers, the state's ability to understand the educational and labor market outcomes of skills training participants, identify equity gaps and poor performing providers, and build insight around areas for enhancement of services and connections to additional education and training opportunities will grow dramatically. In addition, a new student record system launched in 2021, which integrates data for students in for-credit and noncredit education pathways, meaning eventually the system will have the same data on noncredit students enrolled in programs on the ETPL as it does on students pursuing for-credit programs.

- Institutions participating in **Virginia's** FastForward state financial aid program must comply with mandatory reporting requirements, which include providing student-level data to the State Higher Education Commission of Virginia (SCHEV; § 23.1-627.7). Data reported to SCHEV include student enrollment, program completion, and credential attainment numbers for students receiving the FastForward grant, including by industry sector and credential name. Student-level data also include demographics, allowing the state to report on outcomes measures by race, ethnicity, gender, and other variables. SCHEV annually reports to the General Assembly on program outcomes, including students' labor market outcomes.[68] SCHEV matches data on FastForward participants with Virginia Employment Commission wage records, which are shared directly with SCHEV through the Virginia Longitudinal Data System. SCHEV's annual reports provide breakdowns of enrollment and success rates, as well as average and median wages and pre- and post-program wage comparisons overall, by industry, by race/ethnicity, and by income bracket.[69]

REFLECTIONS ON STATE QUALITY ASSURANCE EFFORTS

While every state NSC worked with in the Policy Academy faced challenges in their efforts to define and implement quality criteria, a few themes emerged in how states gained traction and made progress in their development of a quality assurance framework. This section provides insight into where and how policy and agency leaders and advocates can increase the chances of advancing progress towards quality assurance in states where this work is new or in early stages. It also shares the common roadblocks that states faced when these factors were not in place, and the capacity and buy-in needed to move quality assurance frameworks forward.

Key Ingredients for Advancing Quality Assurance

Establishing a Compelling Policy Mandate

A clear legislative mandate or executive authority from the governor's office is instrumental for state progress on developing and implementing quality assurance for NDCs. Strong leadership that prioritizes quality assurance and resources efforts to develop and implement a framework helps galvanize key stakeholders to work together towards the development of a streamlined quality framework and propels collaboration across systems and agencies where there might be reluctance to do so otherwise.

States where mandates included the establishment of a centralized group to lead the development of a quality assurance framework and own the process of implementation were more likely to make concrete progress than states without such established bodies. Legislation that directs state leaders to develop and establish a quality assurance framework can also be a powerful tool, particularly when it appropriately resources quality assurance efforts and allows for sufficient flexibility to ensure that states can adjust criteria to respond to changing demographic or economic conditions.

- In 2019, the **Alabama** legislature passed the Alabama Industry Recognized and Registered Apprenticeship Program Act (Act 2019-506) which

> **A CLEAR LEGISLATIVE MANDATE OR EXECUTIVE AUTHORITY FROM THE GOVERNOR'S OFFICE IS INSTRUMENTAL FOR STATE PROGRESS ON DEVELOPING AND IMPLEMENTING QUALITY ASSURANCE FOR NON-DEGREE CREDENTIALS.**

created the Alabama Committee on Credentialing and Career Pathways (ACCCP). The ACCCP, a committee of the Alabama Workforce Council, is co-chaired by the Alabama State Superintendent of Education and the Chancellor of the Alabama Community College System. Other members include the governor, the leadership of state higher education and workforce development agencies and systems, the Deputy Secretary of Commerce, and seven regional gubernatorial appointees. The ACCCP also includes sixteen Technical Advisory Committees (TACs), composed of gubernatorially appointed members from business and industry who also represent each workforce development region.

The ACCCP is responsible for creating a list of in-demand occupations regionally and statewide, including identifying competency models and career pathways linked to those in-demand occupations. The Committee is also tasked with creating an annual Compendium of Valuable Credentials which lists credentials of value mapped to regional and state lists of in-demand occupations.[70]

Leadership from the governor's office has been critical to empowering and bringing focus to the work of the ACCCP to coordinate across agencies and systems. Early codification of the ACCCP and its mission provided an essential backbone for the state's work to engage employers in developing a sector- and competency-based hiring ecosystem.

- The **Minnesota** P-20 Education Partnership was established in 2009 via legislation with a goal of streamlining education systems in the state to maximize student achievement from early childhood

through postsecondary education and promote efficient use of resources.[71] The Partnership's 2022 annual report to the legislature shared recommendations for improving transitions for students between high school and postsecondary education, including through the development of a single, shared definition for and identification of credentials of value.

Short-term recommended actions included convening a work group across Pre-K-12, postsecondary education, and workforce to develop that definition, with a long-term goal of codifying it into legislation to incentivize providers to focus on credentials of value. This work group formed the backdrop for the Policy Academy team's work, creating a space for engaging key stakeholders, sharing insight and expertise from the Academy's technical assistance and peer learning activities, and providing feedback and input into draft quality criteria and frameworks.

- Chapter 665 of **Virginia's** 2015 Appropriation Act (HB 1400) directed the Virginia Community College System (VCCS) to develop a specific plan for increasing attainment of workforce training credentials and certifications to meet employer demands. A subsequent VCCS report published in 2015 articulated the demand for postsecondary credentials below a bachelor's degree and a plan for meeting workforce demands in the state, including expanding need-based aid for people pursuing in-demand and high-demand credentials.[72] The recommendations proposed in the report directly led to the development of the FastForward program, which provides financial aid to students pursuing eligible noncredit training programs that lead to careers in in-demand occupations in the state.

Developing Clear Policy Goals and Uses for the Criteria

Similarly, having clarity around how quality criteria will be used in tandem with new or existing policy or programs can bring coherence and purpose to state efforts. All the states that participated in NSC's academies understood the importance of ensuring the quality of NDCs, but many found it difficult to imagine specific policy objectives or applications, particularly when considering how quality assurance could work across systems. For some state teams, narrowing their scope to a specific scenario or goal was necessary for moving conversations forward.

While settling on a specific policy application to set the stage for criteria development could mean efforts are focused within one agency or policy, such as a financial assistance program within higher education or the ETPL within workforce development, doing so can create momentum that overcomes hesitancy around a statewide definition – even if it could result in a siloed process within that state.

- In 2022, **Colorado's** state legislature passed the Opportunities for Credential Attainment (SB22-192), which requires the Colorado Department of Higher Education (CDHE) to work with higher education institutions and industry representatives to identify opportunities for and build stackable credential pathways that lead to employment and/or additional education. As part of the legislation, signed into law in May 2022, CDHE is required to evaluate the quality of NDCs that lead to in-demand living wage jobs as identified the Colorado Talent Report, with the quality framework and process being informed by standards developed by national organizations.[73] To fulfill this requirement, the state has established a Stackable Credentials Taskforce which will review the Colorado state team's draft quality definition from the Policy Academy, NSC's consensus quality standards, and other guidance to develop a quality assurance framework that can be used to identify quality stackable credential pathways.

- **New Jersey's** DOL sought participation in NSC's Policy Academy to support their exploration of how to strengthen state-level oversight of the ETPL. NJDOL's work to enhance quality assurance was complemented by other statewide initiatives focused on expanding consumer access to education and career data and improved postsecondary outcomes for students. The New Jersey state team, led by NJDOL Office of Research and Information, developed an assessment model that builds on NSC's consensus quality criteria and engaged a set of stakeholders, including eligible training providers and workforce development board directors, for input and feedback. The Office of Research and Information is now developing an assessment form and process for implementation of the quality assurance model, as well as resources and tools that can support quality improvement among providers.

Leveraging Quality Assurance to Advance Racial Equity

Leveraging quality assurance frameworks explicitly to advance racial and intersectional equity is imperative given that many NDC holders of color, a large share of whom are women, rely on these credentials to help them secure good jobs and build bridges to further opportunities for advancement. While state motivations for establishing quality assurance often include promoting greater equity in educational attainment and economic mobility, more work is needed to understand how states can leverage quality assurance frameworks for this purpose.

As states consider whether and how to establish quality frameworks for policies governing and investing in NDCs, they should apply an equity-minded approach to policy design that promotes intentional, data-driven, and transparent assessments of progress and gaps related to equitable access to and attainment of QNDCs. A few opportunities to leverage quality assurance for equity include:

- Implementing quality assurance policies to measure and evaluate the educational and labor market outcomes of financial aid recipients pursuing and earning QNDCs, using ongoing assessments of progress or deficiencies related to equity to inform policy design and implementation.

- Investing in new or expanded initiatives designed to promote QNDC access and attainment among people of color and women – such as, for example, the Illinois Workforce Equity Initiative – using quality frameworks to guide program design, monitor and evaluate student educational and employment outcomes, and provide transparency and accountability.[74]

- Setting, tracking, and publicly reporting on progress towards attainment goals for increasing the share and number of people of color and women attaining QNDCs, as informed by a quality assurance framework, in addition to other credential types.

- Conducting proactive outreach to students pursuing QNDCs, particularly students of color and women, to share information about additional education and training (including opportunities for stacking and credit for prior learning); information about nontraditional career options with wage and other return on investment considerations; and information about available supports, such as coaching, career navigation, basic needs supports (such as transportation, food, child care, among others), and other academic and holistic services.

Intentionally Engaging Diverse Stakeholders

Engaging key stakeholders throughout the process of developing quality criteria and a vision for implementing them in policy and practice is a crucial step for states to build buy-in and trust. Leaders and staff from within state postsecondary education, workforce development, and human service agencies hold expertise, resources, and perspectives that must be leveraged to address potential challenges and meet the opportunities for increasing equitable access to and outcomes for QNDCs. States must build a culture that encourages all parts of government – along with employers, education and training providers, and other community-based actors – to work together to ensure the state is investing financial resources in high quality credentials, education and training programs, and career pathways.

Policy Academy states that brought in representatives across state agencies, community college system and institutional leaders, and community-based stakeholders saw the benefits of initiating and sustaining communication and input into their work to develop quality criteria. Diverse stakeholders can hold up a mirror to blind spots in planning, suggest alternative approaches that may work better for different contexts, and reexamine language so that it resonates with key audiences, including students.

- **New Jersey's** DOL conducted focus groups of Eligible Training Providers and workforce boards to gauge their openness to and get their feedback on the proposed quality assurance model and process. Focus groups explored reactions to the proposed quality measures and statistical model, changes to reporting procedures and data requirements, the timeline for implementation, and new user-centered consumer-facing online tools that would share training program performance data and other information.[75] Conversations sought to identify potential roadblocks, unintended consequences, and concerns, as well as expected benefits and levels of openness to quality assurance.

  Focus groups elicited critical information and recommendations for implementing the quality assurance framework, including the need for ongoing communication and feedback loops between the Department and providers; guidance, resources, and support around on the new framework, data requirements, and reporting expectations; and specific information and assistance to virtual and hybrid training

programs and to programs which serve historically underserved groups. Focus groups also helped socialize the idea of quality assurance and build buy in among providers, maximizing the likelihood that the new framework will have the desired impact.

Since the July 1, 2022 implementation, NJDOL has continued to engage training providers by offering individualized technical assistance to help providers comply with the new quality assurance data requirements; facilitating a bi-monthly provider working group that offers providers a platform for continued and open communication; and incorporating feedback and input into the development of quality assurance resources and toolkit that will benefit the broader training provider community.

- **Nevada's** state team worked with NSC to establish an advisory committee of diverse community stakeholders who could inform the state's strategy to expand access to and increase attainment of quality NDCs by identifying barriers and providing input on how to effectively engage stakeholders in this work. The advisory committee included members from the University of Nevada system, Asian Chamber of Commerce, City of Las Vegas, a nonprofit that assists formerly incarcerated people with re-entry, and the Governor's Office of Economic Development, Nevada Department of Education; Department of Employment, Training, and Rehabilitation; and Vegas PBS.

  Meetings sought to understand how members get information about postsecondary opportunities and what other information they want and need. It also explored members reactions to and questions about the state team's work to define "quality" overall, how a quality definition could be used by/useful for learners – especially adult and learners of color, people

> **POLICY ACADEMY STATES THAT BROUGHT IN REPRESENTATIVES ACROSS STATE AGENCIES, COMMUNITY COLLEGE SYSTEM AND INSTITUTIONAL LEADERS, AND COMMUNITY-BASED STAKEHOLDERS SAW THE BENEFITS OF INITIATING AND SUSTAINING COMMUNICATION AND INPUT INTO THEIR WORK TO DEVELOP QUALITY CRITERIA.**

who are justice-impacted, among other underserved groups – and who else should be at the table in this process.

The advisory committee also brought community partners focused on diversity and equity to the table, including partners from the University of Nevada system, Asian Chamber of Commerce, City of Las Vegas, Hope for Prisoners, and the Governor's Office of New Americans. These discussions raised a number of important considerations, such as ensuring content related to quality assurance would be accessible to communities for whom English is not a first language, how to address the need for employers to be willing to hire workers who are justice-impacted as a part of defining quality, and the need for accessible, non-technical language about quality for learners and other key stakeholders.

- **Minnesota** has been engaging in a multiyear process to define quality for credentials of all types, including degree and NDCs, and determine how such a definition can be operationalized across state systems, programs, and investments to amplify high-quality and equitable outcomes for learners. The cross-system P-20 Education Credentials of Value work group was established to build buy-in and consensus around how Minnesota should define credential value. The work group includes stakeholders from Minnesota Office of Higher Education and Department of Employment and Economic Development, Minnesota State and University of Minnesota systems, representatives from individual colleges and universities, employer and industry association representatives, and others.

A subset of this group made up the state team for NSC's Policy Academy, and contributed learning, issue-area guidance, and draft quality criteria for the work group's feedback, input, and eventual adoption of a finalized quality assurance framework. The engagement of the broader, multistakeholder work group allowed them the ability to explore a range of options for quality assurance across degree types, consider how quality assurance would affect different systems and programs, brainstorm potential objectives and applications, and build consensus around recommendations to leadership for eventual statewide adoption.

Common Roadblocks

State and System Capacity and Will

Staff turnover and limited capacity were common themes for many state teams, underscoring the importance of dedicated staff with a mandate to develop and implement quality assurance frameworks. Staffing instability made it hard for states to build relationships across offices, agencies, and systems and to rally collective action around quality assurance. Changing roles and onboarding new staff also contributed to the loss of institutional knowledge around efforts to develop quality criteria, or existing cross-agency/system relationships.

Capacity challenges were also common. Many staff faced with competing responsibilities and demands made it hard to devote any significant amount of time to one project – especially if it was not the central focus of their "day job." Where governors' offices clearly prioritized quality assurance, or there was a specific legislative mandate to develop quality criteria, agency staff were better able to justify time spent on this work. In other cases, states developed a plan and methodology for implementing a quality assurance process but lacked the necessary capacity to implement it. Especially for processes that involve complex, labor-intensive data analysis, states often lacked sufficient staff and/or staff with the right expertise and skills to sustainably institutionalize the work.

Some state teams had trouble either making concrete progress on a definition or operationalizing it in a systematic way. Whether because they could not get leadership buy-in or they lacked alignment across agencies and systems, movement towards development and adoption stagnated. One roadblock was a focus on compliance among key stakeholders worried about the implications of implementing a quality assurance framework for "status quo approaches" to administering and reporting on state programs.

In some cases, outside stakeholders and advocates have begun to recognize that progress towards quality assurance has stalled and are contemplating how to galvanize political will, external pressure, and a sense of urgency from the field to stimulate forward action. Yet lackluster interest from policy leaders, including around devoting targeted resources for this work, remains problematic for broader quality assurance goals in certain state contexts.

State Capacity for Measuring and Reporting on Non-Degree Credential Quality and Outcomes

Technical barriers also exist to full implementation of NDC quality assurance. Having the right data — including the systems infrastructure, data sharing agreements, reporting mechanisms, in addition to data collection — is essential to implementing quality assurance and, at the same time, represents one of the biggest hurdles states faced to understanding the elements of quality for NDCs, establishing criteria that could be measured and tracked, and identifying whether learner outcomes are equitable.

States have some ability to track and report on NDCs, yet capacity, infrastructure, and collection vary widely from state to state, and system to system within states. In general, states collect and report on participation and outcomes related to participants of programs which receive funds from WIOA.[76] Many of these programs offer NDCs. Beyond this, states can only report on enrollment, completion, and labor market outcomes associated with credit-bearing short-term programs provided by public community and technical colleges and universities participating in Title IV federal financial aid.

While states are increasingly considering, and in some cases taking action to, collect better data on noncredit programming, this is still a work in progress.[77] Because noncredit education is funded at a low level, data on noncredit courses and programs offered either by public institutions or private providers are not regularly or

consistently collected or reported across all states (unless those programs are on the ETPL).[78] States working to rectify this gap are doing so through integrating noncredit data into systems housing data on credit-bearing programs; new system level requirements to collect the same or similar data for noncredit programs as for credit-bearing programs; the incorporation of noncredit program data into state longitudinal data systems; and collection and reporting requirements tied to specific state investments in quality NDCs, including both credit and noncredit programs depending on the context.

Public reporting on NDC outcomes also varies widely. States which invest in financial aid or other policies related to NDC attainment often also have required annual reports on the outcomes of those investments, meaning they are more likely to collect, track, and report publicly on program outcomes for students or employers (in the case of workforce investments related to employer-provided up/reskilling training) — though this is not always the case. Many states use web-based dashboards to provide the public with information about training and education pathways and programs, including information that ties programs/credentials to labor market outcomes, such as employment rates and median wages, and demand. These dashboards tend to provide data on sub-baccalaureate college certificates and higher, however, leaving a gap in public information related to other types of NDCs.

KEY TAKEAWAYS FOR STATE ACTION

Demand for short-term opportunities to earn credentials that lead to good jobs is growing among students and workers, employers, and policymakers and these credentials are an essential component to building an inclusive economy. Ensuring that policy and investments to meet this demand are guided by a framework and related policies for ensuring quality is essential. Quality assurance must consider the return on investment for all stakeholders – meaning credential earners gain the skills and competencies needed to find employment with opportunities for mobility, employers can identify and hire the workers that meet their workforce demands, and policymakers have, use, and share transparent information about the outcomes associated with the credentials in which they are investing.

Quality assurance must also incorporate an equity lens to ensure that people and groups that have been historically marginalized are able to overcome systematic barriers and benefit from opportunities to access meaningful career pathways.

The states working to establish and implement quality assurance for NDCs in partnership with NSC have made concrete progress and learned important lessons that can inform and guide others which are interested in expanding investments into quality credentials. These examples provide a blueprint on which new states can build, adapt, and scale for their own contexts. For states looking to invest in quality credentials that advance state economic, workforce, and equity goals, we offer six steps states can take to increase their likelihood of success:

1. **Ensuring a strong leadership commitment that creates a mandate for action and directs resources towards quality assurance will lead to greater cross-system collaboration around a shared goal.**

   Governors, legislators, agency leaders, employers, and education and training providers play an essential role in efforts to increase credential quality, transparency, and equity. Support from and collaboration between all these leaders is critical in a climate of competing priorities, agendas, and budgets – particularly as states continue to recover from the pandemic and address emerging labor market opportunities and challenges.

   Legislating the establishment of a quality assurance framework can also help ensure that it is sustained as gubernatorial administrations change and can serve as an important signal to state agencies and other stakeholders about the importance of quality assurance as part of the state's education policy framework. Legislation should provide adequate resources for development and implementation, including for work that must be done to build state capacity for necessary data collection, analysis, and reporting.

2. **Determining specific goals for, and the scope of, quality assurance frameworks and related policies increases the chances that this work will result in concrete progress.**

   While states must make numerous policy choices in developing, adopting, and operationalizing quality assurance frameworks, states should begin with some consideration of what programs and policies the quality assurance framework will be used to support. Adopting a framework 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.

3. **Engaging a diverse group of stakeholders in the process to build buy-in and trust will more reliably produce a sustainable and equity-minded approach to quality assurance.**

   States that wish to establish quality assurance criteria and policies for NDCs should take steps to create an inclusive process to ensure that key stakeholders are at the table to define QNDCs for their state or local region. While the appropriate lead entity for convening a group of stakeholders who will develop and adopt a quality framework may differ from state to state, it 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. It should also prioritize the participation of industry leaders who represent both employers and workers in the state's major industries, and/or economic development associations which can bring the voice and credentialing needs of businesses to the discussion.

   These cross-system and cross-agency partnerships ensure that equity is at the center of the work, prioritize the in-demand skill needs of businesses, and guarantee that adult learners and workers have access to consistent information when setting their education and employment goals. States should also take steps to ensure the development and implementation of the quality assurance framework is transparent to stakeholders, including education and training providers, consumers, and the public.

4. Investing time and resources into improved data collection, capacity, and reporting infrastructure is essential for quality assurance and for equitable policy design.

Data are essential to determine the quality of NDCs and to evaluate the employment and earnings outcomes of people after obtaining the credential. By leveraging existing data systems to collect better data on NDCs and analyze their outcomes, states can begin to streamline interoperability – or how data systems talk to each other – across education and workforce systems. This is also necessary for the ability of states as well as outside researchers to assess the impact of quality assurance frameworks on key state outcome priorities.

Data systems should collect and link demographic information for people pursuing NDCs with their education and employment records. Disaggregating employment and earnings outcomes by race, ethnicity, gender, disability, age, low-income status, and veteran status, for example, is necessary to see if postsecondary opportunities and career success are available to all residents. If outcomes are not equitable, states can then use these data to find the appropriate policy levers to fix the inequities present.

States must also share outcomes data through customer-facing tools that are built for learners. State data systems can be used as a bridge to make information on QNDCs available to people trying to decide which training program will help them meet their career goals. Publishing details about all NDCs as linked open data will guarantee that everyone has current and complete information.

5. Enacting policies that prioritize funding for people pursuing QNDCs, along with other access and attainment policies, can advance progress towards equitable credential attainment.

One common use of quality assurance frameworks for NDCs is to guide decisions around eligibility for tuition assistance and other public funding for skills training. This can be particularly important for students and programs that might otherwise be excluded from such assistance. States that adopt quality assurance frameworks should consider how they might create or expand state tuition assistance programs to align with quality standards, with a focus on addressing attainment and equity gaps. There are also a range of policy considerations to help increase attainment of these credentials such as expanding non-tuition supportive services and career pathway navigation assistance.

6. Exploring how to leverage NDC quality assurance for racial and gender equity is essential to deliver on the promise of increasing NDC investments and programs.

Integral to any quality assurance framework – and why having robust data collection, sharing, analysis capabilities are so important – is how assessments of quality integrate measures and checks related to equity, particularly racial equity. Integrating an equity lens into quality frameworks is important for protecting against harmful tracking practices and for advancing goals of educational and economic equity and mobility for Black, Indigenous, and other people of color.

Equity should be considered in every element of credential quality assessments, including in access to high-quality credentials, equity across credential sectors and types, and equity in program completion and credential attainment. Wherever possible, evaluations of intersectional equity – meaning the presence of equity for people who sit at the intersection of two or more identities that are traditionally marginalized, such as race and gender – should accompany quality assurance equity assessments to identify gaps that may be harder to identify. Frameworks and policies related to quality assurance should incorporate equity checks into their foundation, making them inherent to how people think about quality assurance and how it operates in practice.

APPENDIX

Appendix A. Methods

This report is informed by a NSC review of literature describing NDCs and original analysis of data from the National Center for Education Statistics' 2016 Adult Training and Education Survey. It also draws heavily from NSC's engagement with the eleven states that participated in the 2020-21 and 2021-22 Quality Postsecondary Credential Policy Academy cohorts, including conversations with state team leads and members, review of unpublished reports and memos shared with NSC, and qualitative interviews conducted with a subset of state team representatives in conjunction with the development of this report.

Representatives from each state reviewed and approved content regarding their state. These state reviewers include:

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# Appendix B. A Snapshot of NDC Holders

FIGURE 1. SHARE OF ADULTS AGES 25-64 WHO HOLD AT LEAST ONE NON-DEGREE CREDENTIAL, BY HIGHEST EDUCATIONAL ATTAINMENT, 2016
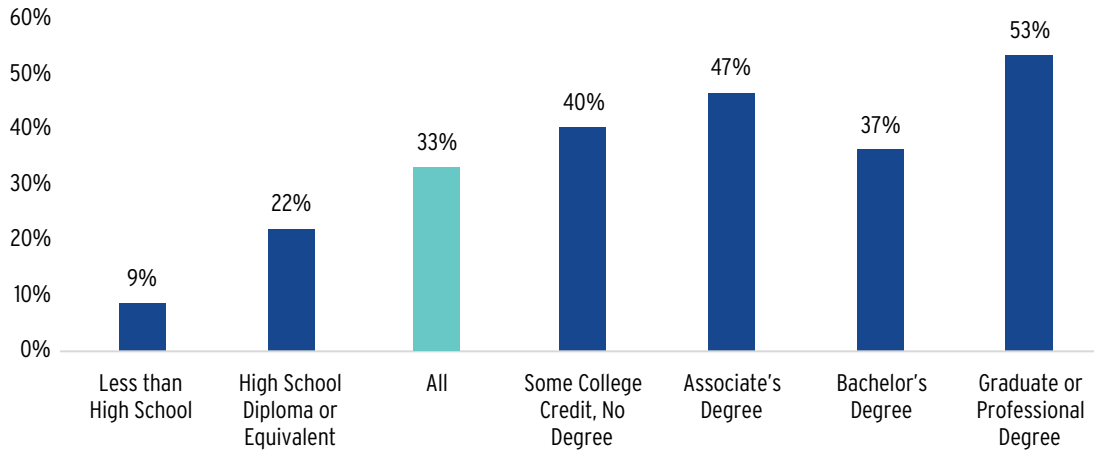
Note: Non-degree credentials include postsecondary certificates, licenses, certifications, and apprenticeship completion credentials.

Source: NSC analysis of data from U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) of the National Household Education Surveys Program, 2016.
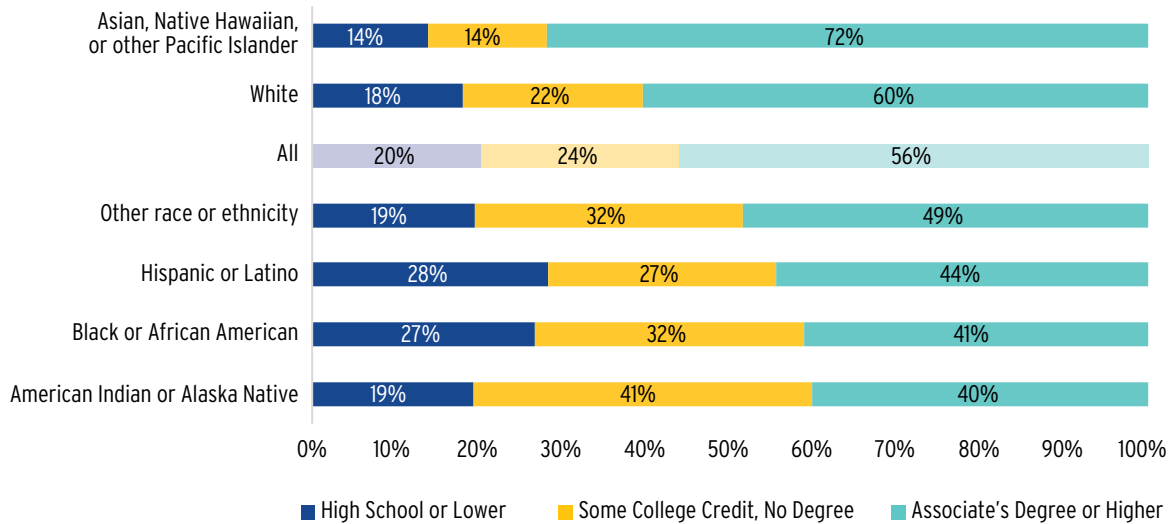
FIGURE 2. SHARE OF ADULTS AGES 25-64 WHO HOLD AT LEAST ONE NON-DEGREE CREDENTIAL, BY RACE/ ETHNICITY, 2016
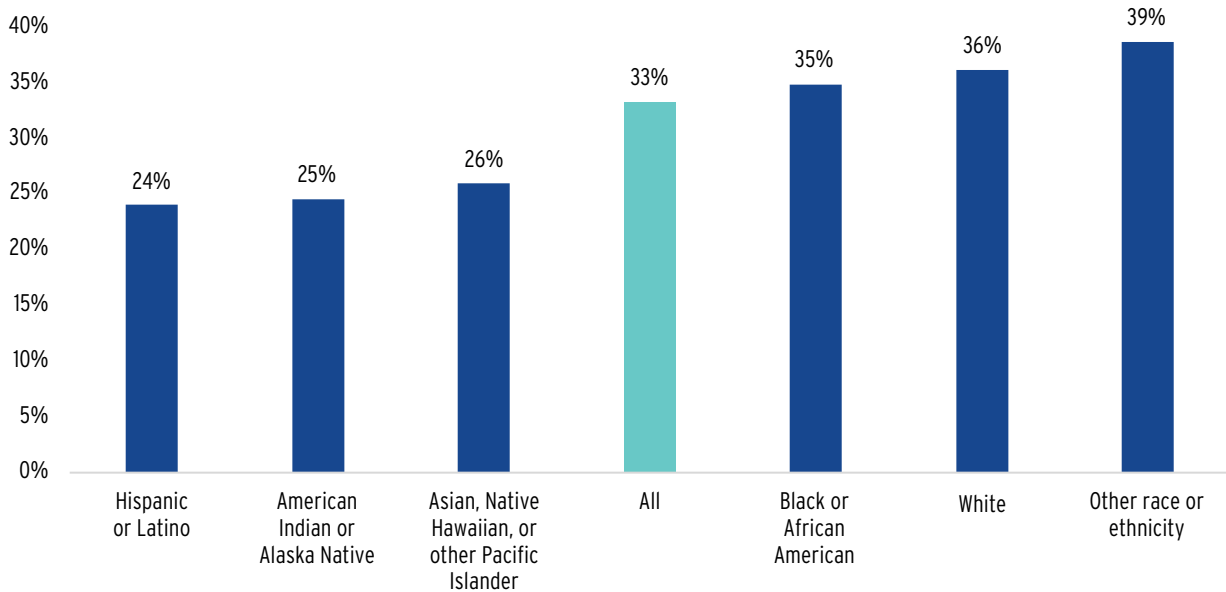
Note: 'Other race or ethnicity' includes adults who reported more than one race and adults with an unspecified race/ethnicity. 'Hispanic or Latino' is mutually exclusive and includes all people that indicated that they are of Hispanic, Latino, or Spanish origin.

Source: NSC analysis of data from U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) of the National Household Education Surveys Program, 2016.

FIGURE 3. SHARE OF ADULTS 25-64 BY RACE/ETHNICITY WHO HOLD AT LEAST ONE NDC BY HIGHEST EDUCATIONAL ATTAINMENT, 2016

Note: 'Other race or ethnicity' includes adults who reported more than one race and adults with an unspecified race/ethnicity. 'Hispanic or Latino' is mutually exclusive and includes all people that indicated that they are of Hispanic, Latino, or Spanish origin.

Source: NSC analysis of data from U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) of the National Household Education Surveys Program, 2016.
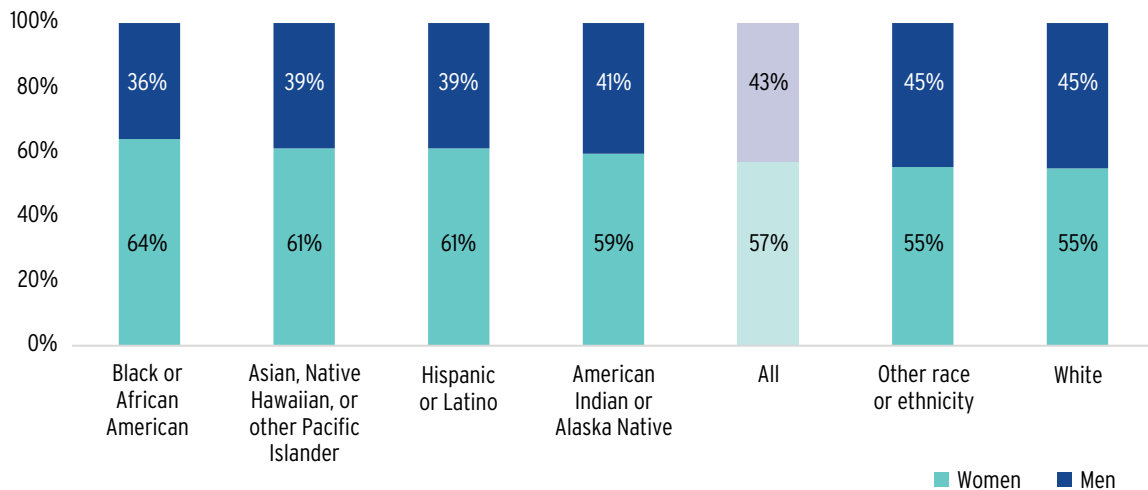
FIGURE 4. SHARE OF ADULTS AGES 25-64 WHO HOLD AT LEAST ONE NON-DEGREE CREDENTIAL, BY RACE/ETHNICITY AND GENDER, 2016

Note: 'Other race or ethnicity' includes adults who reported more than one race and adults with an unspecified race/ethnicity. 'Hispanic or Latino' is mutually exclusive and includes all people that indicated that they are of Hispanic, Latino, or Spanish origin.

Source: NSC analysis of data from U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) of the National Household Education Surveys Program, 2016.

Appendix C. Policy Academy State Quality Criteria

	Evidence of substantial job opportunities	Evidence that competencies are mastered	Evidence of employment and earnings outcomes	Stackability to additional education or training	Portability across employers and geographies	Additional criteria
Alabama	Denotes mastery of one or more competencies required for one or more occupations on one or more regional or the statewide list of in-demand occupations.	Credential is accredited, recognized, or sponsored by an Alabama employer, and awarded after passing a proctored exam, as determined by the sponsoring industry sector.	Valuable as determined by leading to an occupation with a median wage above the Lower Living Standard Income Level guidelines for two people.	Stackable in a sequence of aligned competencies that progress along with the rigor of advanced training programs (though stackability is not required for stand-alone credentials of value, such as apprenticeship completion credentials).	Portable across or within an industry sector to establish the qualifications of people in multiple geographic areas, among multiple education and training institutions, and by diverse employers (though portability is not required).	Mandated by industry, required by law, or preferred by industry. Required to obtain a job. Accredited or recognized by a statewide or national industry-recognized accrediting body, such as a sector or industry association. Trackable by the ATLAS on Career Pathways and registered on the Credential Registry.
Colorado	Aligned to an occupation (whether directly or as a prerequisite) on a regional (Local area WF center lists) or statewide (Talent Pipeline Report top jobs) list of in-demand occupations, or critical occupations identified by CWDC's Career Pathways Team *(required)*.	Accredited or recognized by a statewide or national industry-recognized accredited body *(one of four criteria; must meet at least two)*	Directly leading to, or a prerequisite for a credential that leads to, at least the living wage threshold as defined by the MIT living wage calculator for each county (Tier 1 & Tier 2 as defined in the Colorado Talent Pipeline Report) *(required)*.	Stackable in a sequence of aligned competencies or credentials (one of four criteria; must meet at least two). Traceable and trackable on Career Pathways *(one of four criteria; must meet at least two)*.	Portable across or within an industry sector *(one of four criteria; must meet at least two)*.	*On-ramp credentials:* Prerequisite to a credential required by industry or law; Prerequisite to a credential or apprenticeship preferred by industry.
Louisiana	Directly aligns to an occupation that has a 3-, 4-, or 5-star rating as defined by the Louisiana Workforce Commission based on long- and short-term annual demand; long- and short-term percent growth; total prior-year recorded openings; and a weighted measure of median wages for each occupation.	Provides valid, reliable, and transparent evidence of the competencies mastered by credential holders and is conferred by an entity recognized by business and industry and/or the State of Louisiana. Evidence can be provided for employment and wage outcomes.	Leads directly to an occupation that, at a minimum, maintains a 20% wage premium over a high school diploma in Louisiana.	N/A	N/A	Meets these criteria as a stand-alone credential, independent of another credential. *On-ramp credentials:* 1) provides specific skills mapped to higher-level credentials of value; 2) provides specific skills recognized by industry and/or lead to predetermined standards; 3) pre-determined standards are assessed to award an industry-based certification, state licensure or state-recognized certification, and/or a degree or diploma from an entity recognized by business/industry and/or the State.

	Evidence of substantial job opportunities	Evidence that competencies are mastered	Evidence of employment and earnings outcomes	Stackability to additional education or training	Portability across employers and geographies	Additional criteria
Minnesota	*Must meet one or more of the following:* a) aligned to occupations in demand statewide or regionally, as verified by job posting data, employer engagement, or other evidence; b) represents completion of a program that prepares people for a range of employment opportunities and represents the attainment of essential learning outcomes valued across employers; and c) is associated with strong self-employment outcomes for credential holders.	Knowledge and competencies are demonstrated/ assessed and aligned with demand.	Aligned to occupations that provide a family-sustaining wage either regionally or statewide, opportunity for economic mobility, or meet essential community needs. Wage outcomes should be demonstrated through job posting data, historic employment outcomes for people with this credential, or provider-demonstrated evidence.	Stackable to additional training or upward career mobility (academic ladder and/or enhanced career path) (encouraged).	N/A	Assessments and examinations required to obtain the credential provide appropriate accommodations for people with need, including learners of English
Missouri	Credentials are aligned with eleven targeted industry occupational groups, which were identified by employers.	Not currently defined	Not currently defined	Not currently defined	Approval through the Missouri Office of Apprenticeship's Business and Industry Council.	N/A
New Jersey	Program must be associated with in-demand occupation.	Competencies determined by comparing credentials to other lists and getting feedback from employers.	Percent employed post-training, median change in earnings post-training, annual wage as a percent of living wage post-training.	N/A	N/A	Program completion rates Return on investment in first year earnings gains, tuition costs compared to median reported earnings for relevant occupation. Equitable outcomes by gender; Black, Latinx, White, and Asian people; people with disabilities; people who were formerly incarcerated; and other underserved groups.
Nevada	Must be in one of Nevada's 8 high-demand, high-growth industries as determined by the Governor's Workforce Development Board and have at least 5 Nevada employers who endorse the credential for hiring.	N/A	N/A	N/A	N/A	The institution providing the credential is in good standing; meets national quality standards; and is third-party validated.

	Evidence of substantial job opportunities	Evidence that competencies are mastered	Evidence of employment and earnings outcomes	Stackability to additional education or training	Portability across employers and geographies	Additional criteria
Ohio	Aligned with occupations with annual growth in the number of jobs higher than the statewide average of twenty; or annual job openings greater than 620.	Not currently defined	Aligned with jobs that pay 80% of state median wage, $14.90 per hour, or more.	Not currently defined	Not currently defined	N/A
Oregon	Uses the Oregon Employment Department's Demand Factor Rating for an occupation divided by fifteen, which is the highest rating possible. Each occupation was compared to the occupation in the highest demand, with a resulting score of 0 to 1.0. Result is multiplied by three to add weight.	Competency-based is a point awarded if the credential is tied to mastery of skills, knowledge, and abilities.	Occupational wage score calculated by dividing median wage for the relevant occupation associated with the credential by Oregon's Self-Sufficiency Wage (i.e., $31.57/hour) updated annually. Median wages calculated and compared by county.	Points awarded if the credential leads to others, i.e., the sufficiency of a credential to lead to a specific occupation or to lead to a substantive education or training effort that enables entry into more advanced or complex jobs.	Portability was added as a criterion but is under development.	Bonus points awarded if a credential aligns with the education level required for an occupation. If a credential was considered "competitive education" for the occupation, it was awarded three points. If the credential was considered "entry-level education," it was awarded two points.
Tennessee	Aligned with in-demand/opportunity occupations as defined by future job projections, current job openings, and hires.[79]	Evidence as provided by industry and employers, higher education institutions, and certifying organizations.	Evidence as provided by TN Dept. of Labor and Workforce Development, including Jobs4TN, and the statewide longitudinal data system.	Included in defined pathways for existing and future postsecondary pathways; eligible for prior learning credit; has existing articulation agreements.	Portability through the awarding of a credential in the form of industry certification, registered apprenticeship, occupational licensure, or certificate.	N/A[79]
Virginia	Aligned with the Virginia Demand Occupations list, which uses three criteria: occupational relevance to the State's economic dev. strategy, 2) the degree to which advanced skills are required for entry into an occupation, and 3) the projected statewide demand for an occupation.	Awarded upon successful completion of unbiased assessment, and contains a process for determining workplace validity, relevance, and continuous improvement.	N/A	Articulated credit and credit for prior learning where appropriate, and part of a career pathways framework leading to additional competencies, where possible.	Widely recognized by multiple employers, educational institutions, and across geographic areas.	Skills are necessary for performing work functions according to employer standards (industry recognized).

Appendix D. Quality Criteria Governance and Application

	What credentials or policies/ programs does this definition apply to?	How often and by whom are credentials reviewed according to the criteria?	Who owns the quality assurance criteria or process?	Through what mechanism are these criteria adopted?	Are there equity considerations embedded in the criteria or framework?	What accountability mechanisms exist?	Other relevant factors/notes
Alabama	Credentials are referred to the ACCCP by specific state or industry stakeholders for review for inclusion on the regional or statewide Compendium of Valuable Credentials. To count towards the state attainment goal, credentials must be rated as "advanced" on the Compendium of Valuable Credentials.	TACs accept credentials for review and submit recommendations for regional and statewide compendia for approval by the ACCCP on an annual basis.	Alabama Committee on Credentialing and Career Pathways (ACCCP)	Executive order, with intention to pass a bill to codify their quality and transparency system into law.	The framework considers the role of credentials in closing gaps between subgroups and helping people overcome benefits cliffs to reach self-sufficiency.	N/A	Credentials are classified as either advanced (required for inclusion towards the state attainment goal) or basic; they can be further classified as regional (aligned with the regional list of in-demand career pathways), statewide, or complementary (valuable across sectors, such as First Aid).
Colorado	Intention to use criteria to determine which credentials count towards state attainment goal calculation (to count, credentials would be required to be required by law and required and/or preferred by industry (on-ramp credentials would not count). Quality criteria referred to and intended for use via SB 192 (Opportunities For Credential Attainment), HB 1002 (College Credit for Work Experience), and the Career Development Incentive Program.	N/A	Colorado Department of Higher Education	N/A	N/A	Individual statutes referring to quality credentials may require data collection and reporting.	N/A
Louisiana	To count towards state attainment goal calculation, the credential met these criteria.	Credentials of value are included, in addition to degrees, in the Board of Regent's postsecondary completers calculations used to track progress toward Master Plan goals. Regular reports are provided to the Board regarding the completion of on-ramp credentials.	Board of Regents	Board of Regents-adopted policy	N/A	N/A	N/A

	What credentials or policies/ programs does this definition apply to?	How often and by whom are credentials reviewed according to the criteria?	Who owns the quality assurance criteria or process?	Through what mechanism are these criteria adopted?	Are there equity considerations embedded in the criteria or framework?	What accountability mechanisms exist?	Other relevant factors/notes
Minnesota	Degrees and NDCs Expected to be used for determining eligibility for state financial aid	Not currently defined	Not currently defined; Minnesota Office of Higher Education expected.	Minnesota P-20 Education Partnership (expected)	Quality rubric assesses presence of inclusive and equitable access policies and practices for credentials, programs, and providers. Data submissions required include the ability to disaggregate by race/ethnicity.	TBD but planning to use quality rubric to establish eligibility for credentials/programs/providers to be eligible for state financial aid.	Quality rubric includes criteria outlining quality for programs and providers, which would be assessed in conjunction with credential quality.
Missouri	Identified industry cluster related occupations, including Agribusiness, Biosciences, Construction, Education, Energy Solutions, Financial Solutions, Health Sciences and Services, Hospitality, Information Technology, Manufacturing, Transportation and Logistics	Not currently defined	Not currently defined	N/A	Not currently defined	Not currently defined	Not currently defined
New Jersey	Programs on the Eligible Training Provider List	Annually, by the New Jersey Department of Labor and Workforce Development	New Jersey Department of Labor and Workforce Development	Credential Review Board approval	To prioritize equity but avoid penalizing providers for serving people facing structural barriers to program completion and employment, the statistical model for assessing program quality compares predicted outcomes, using up to 5 years of performance data, to actual program outcomes, based on each individual program's composition of participants, including percentages by race and ethnicity and the percent who are women, have less than high school or high school diploma only, have a disability, are a single parent, or come from a displaced home.	Programs with quality scores that fall below the predicted average will receive a "warning" or "probation" designation; those who are on probation have two years to improve the score by ten percent above the predicted average.	N/A

	What credentials or policies/ programs does this definition apply to?	How often and by whom are credentials reviewed according to the criteria?	Who owns the quality assurance criteria or process?	Through what mechanism are these criteria adopted?	Are there equity considerations embedded in the criteria or framework?	What accountability mechanisms exist?	Other relevant factors/notes
Nevada	Entry-level certifications and certificates within Nevada's eight targeted statewide industries	Not currently defined	Governor's Office of Workforce Innovation for a New Nevada (GOWINN) and Governor's Workforce Development Board	GOWINN practice, according to direction in SB 516 (2017)	N/A	If the credential: 1) meets the quality criteria guidelines AND requirements for workforce and econ. dev. alignment, the credential is automatically approved for the industry-recognized credential list; 2) meets the quality criteria guideline but does not meet the workforce and econ. dev. alignment guidelines, the applicant must present the credential at an Industry Sector Council meeting or Governor's Workforce Development Board meeting; or 3) does not meet the quality criteria guideline then it will be rejected.	N/A
Ohio	N/A	N/A	Governor's Office of Workforce Transformation	Ohio Department of Jobs and Family Services under the guidance of the Governor's Office of Workforce Transformation determine and adopt for the in-demand jobs criteria.	In programs where data is available, such as ITAGS, demographic data information is used in the selection of credentials to be evaluated to ensure access to students from populations underrepresented in higher education.	N/A	There are additional lists of credentials, the attainment of which is supported by state programs, such as Tech-Cred and Short-Term Certificate grants.
Oregon	NDCs, including non-credit, and certain two-year degrees.	N/A	Higher Education Coordinating Commission Office of Workforce Investments	N/A	Wage threshold calculated using the Self-Sufficiency Wage for Oregon.	N/A	N/A

	What credentials or policies/ programs does this definition apply to?	How often and by whom are credentials reviewed according to the criteria?	Who owns the quality assurance criteria or process?	Through what mechanism are these criteria adopted?	Are there equity considerations embedded in the criteria or framework?	What accountability mechanisms exist?	Other relevant factors/notes
Tennessee	Industry certifications, certificates, occupational licenses, registered apprenticeships, micro-credentials	Not currently defined	Tennessee Higher Education Commission (THEC)	N/A; THEC is hoping to codify the criteria in legislation in future years	Not currently defined	Not currently defined	Working with P20 Connect TN to determine feasibility of linking quality criteria to the student longitudinal data system
Virginia	Noncredit workforce training programs and credentials seeking eligibility for the New Economy Workforce Credential Grant Program (also known as the FastForward program).	Every three years	Virginia Community College System (VCCS)	New Economy Workforce Credential Grant Program regulations (8VAC40-160-10).	N/A	VCCS vets credentials submitted by institutions according to the quality criteria; credentials that meet the criteria move onto the Chancellor's office for official approval for eligibility for participation in the New Economy Workforce Grant Program (i.e., FastForward).	N/A

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