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# Building a System for Non-Degree Credential Quality: A Landscape Scan of National Influences on NDC Quality

Michelle Van Noy, Monica Reid Kerrigan, Genevive Bjorn

**JANUARY 2024**
(Updated February 2024)

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# Introduction

With rising interest in non-degree credentials (NDCs) as a means for helping people advance in their careers and succeed economically comes the pressing need to ensure their quality. Despite this increasing demand, and the fact that NDCs have been around for decades, however, there remains no widely accepted system for measuring NDC quality. Instead, an array of organizations and actors have developed their own unique approaches to ensuring quality across the various forms of NDCs. Inconsistent use of these diverse strategies to promote and influence NDC quality across national organizations, states, and local institutions raises the risk of introducing a new layer of confusion into the already crowded and confusing credential market. For this reason, many organizations—each from different perspectives and starting with varying approaches—are working toward building a shared system of quality.[1] These nascent efforts point to the possibility of a more unified system for NDC quality assurance in the future, but for now, what that system will look like is far from clear.

To help inform and advance those efforts, Rutgers' Education and Employment Research Center (EERC), building on our prior scan of the NDC quality market,[2] conducted a landscape scan of NDC quality efforts to document the organizations involved in promoting quality. By conducting further outreach with stakeholders, this research sets out to describe the existing approaches to NDC quality, their goals, and commonalities among them. Our goals are to build a unified approach to promoting NDC quality in which diverse perspectives can complement each other and to create opportunities for broader system building by fostering dialogue and promoting connection among those actors involved in NDC quality efforts.

Our examination focused on organizations that work at the national level, including those promoting transparency, quality-assurance bodies, professional associations, higher education accreditors, state government actors, and others. The landscape scan included 36 interviews with leaders from key organizations involved in NDC quality efforts as well as a review of websites and key documents associated with a total of 66 national organizations. We examined the efforts of these organizations in order to provide a more current mapping of the NDC quality landscape and to identify opportunities and gaps. While this review seeks to be as comprehensive as possible, there are likely additional organizations that can and should be included in this scan. As this project proceeds, we expect to identify additional organizations, and we will make our best attempts to include them in future efforts to map the landscape. For a full list of the organizations included in the research, see our supplemental document.

This paper begins by discussing NDC quality that includes a review of quality definitions and an exploration of the existing and emergent systems for measuring quality by NDC type. We then report on findings from our analysis and mapping of the organizational actors related to NDC quality that are operating at the national level. This analysis seeks to identify the national-level organizations involved in NDC quality and the ways they are involved

1 Van Noy and Michael, 2022.

2 Ibid.

in that process in order to uncover potential opportunities and gaps in the NDC quality ecosystem. The analysis is then followed by an examination of interviewees' reflections on opportunities and gaps in the NDC quality ecosystem. We conclude the paper with a final section summarizing recommendations for the field.

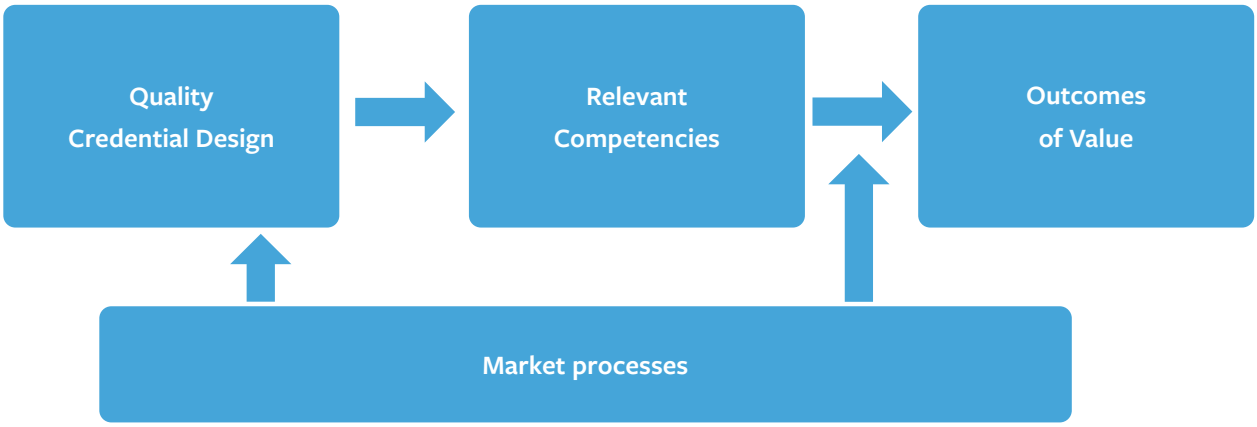
We hope this paper provides background for discussions around developing a coherent system for NDC quality assurance. We anticipate this research will provide the field with a more comprehensive understanding of NDC quality efforts, who conducts them and how, and why these efforts vary. Once stakeholders understand how variations serve certain goals and stakeholders, we can better understand how all our efforts may interact and complement each other to build a singular, more robust and effective system to promote quality. This report will inform other actors interested in NDC quality, including federal and state policymakers, educational institutions, industry groups, employers, unions, funders, and others. Our findings will help them not only to better understand the different approaches to NDC quality but also to determine how and when to use each one. Given the increased attention to funding NDCs (through both state initiatives and possibly federal funding via short-term Pell), it is imperative that this field understand and reach a consensus on how to build a more unified system to effectively promote quality. At the same time, this paper is a snapshot of a complex and rapidly evolving system. We have done our best to reflect the current system but recognize this paper may not capture all activity. We expect on-going tracking of this emerging field will be necessary to continue to understand the dynamics and need within the NDC quality ecosystem.

# I. Definitions and the Quality Ecosystem

## Definitions of Quality

There are many definitions of quality. To make sense of these definitions, we draw upon EERC's conceptual framework, shown in Figure 1, which includes four categories: quality credential design, relevant competencies, outcomes of value, and market processes.[3] Quality credential design refers to elements about the credential itself—its content, instruction, assessment, stackability,[4] transparency, and accessibility. Relevant competencies include the knowledge and skills that the credential represents. Market processes include the ways through which a credential comes to be recognized and have currency, e.g., endorsements, regulations, policies, and practices. Outcomes of value include positive effects on the individual, such as employment, earnings, continued education, and improved well-being; positive outcomes for employers, such as improved hiring and retention; and societal benefits.

**FIGURE 1. EERC's Conceptual Model for Non-degree Credential Quality**




## Stakeholders and Quality

While data based on existing research and practice are limited, we can nonetheless advance the discussion about NDCs, their measurement, their attainment, and the essential criteria for assessing their quality. Yet quality can mean different things to different stakeholders: Employers, educational institutions, policymakers, individuals, and other actors have distinct interests in being able to assess the quality of NDCs. Table 1 summarizes the key questions at hand for each stakeholder group in assessing NDC quality, noting that definitions of quality relate to stakeholder goals.

3 Van Noy, McKay, and Michael, 2019.

4 Stackable credentials allow the learner to accumulate shorter-term credentials such as certificates in a way that transitions into another credential such as a degree.

It is also important to note that although the motivations of each group to define and assess an NDC might align, their goals and interests may be at odds. For example, an employer may be primarily interested in finding an employee with a credential that signals a narrow skill set, tailored to their specific organization, that signals the employee will be both immediately ready to work and unlikely to leave for another position. By contrast, it would be in the individual's interest to have a broad credential that opens pathways to a range of employment options and/or further education or that allows for mobility to other employers.

**TABLE 1. Stakeholders Goals and Questions on NDC Quality**

| STAKEHOLDER | GOAL | KEY QUESTIONS TO CONSIDER IN RELATION TO THE STAKEHOLDER GROUP |
|---|---|---|
| Individuals | Informed decision-making | How do individuals know whether it is a good investment of their time and money to pursue an NDC? |
| Employer | Informed decision-making | How do employers know whether a given NDC is a useful indicator of skill and competency in hiring and advancement? |
| Policymakers | Accountability | How do policymakers know whether public funds should be used to support the attainment of NDCs? And which NDCs should be supported? How should support for NDCs be prioritized in relation to workforce and employer needs? |
| Credential Providers | Program improvement | How can NDCs be improved? How can such improvement support the quality of the practitioners in the profession as a whole? |

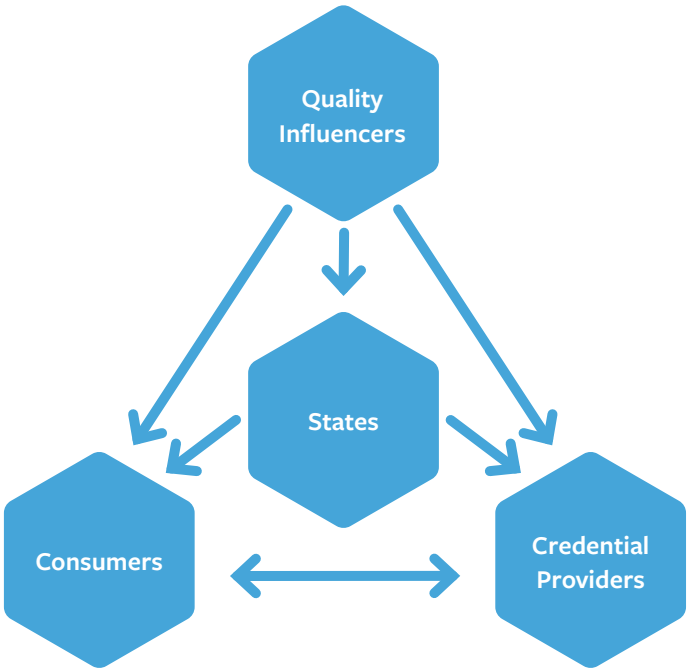
Quality systems involve multiple entities, including the consumers of credentials, the organizations that provide the credentials, and organizations that influence credential quality, as shown in Figure 2. While quality systems for NDCs are still emergent, we lay out some broad concepts to describe an aspirational view on how these systems ultimately might work. Consumers can include individuals who seek or hold credentials as well as employers who use credentials in hiring. Providers include a range of organizations that award or prepare individuals to earn credentials, including education institutions, private training providers, private companies, union training funds, professional and industry associations, and state governments. Quality influencers include a range of organizations, including those promoting transparency, quality-assurance bodies, professional associations, higher education accreditors, state government actors, and others, who seek to impact quality through several different but often related mechanisms:

- **Transparency,** both education-based transparency (designed to make information available to guide providers' actions) and disclosure-based transparency (designed to provide information to the public).[5]
- **Norm setting**, including the creation of new documented standards, frameworks, and best practices relating to quality, as well as new unwritten social rules.

5 Mitchell, 2011.

- **Policy**, including mandates, rules and regulations, or inducements in the form of funding.
- **Capacity building**, including infrastructure, knowledge, and networks.

**FIGURE 2. The NDC Quality Ecosystem**



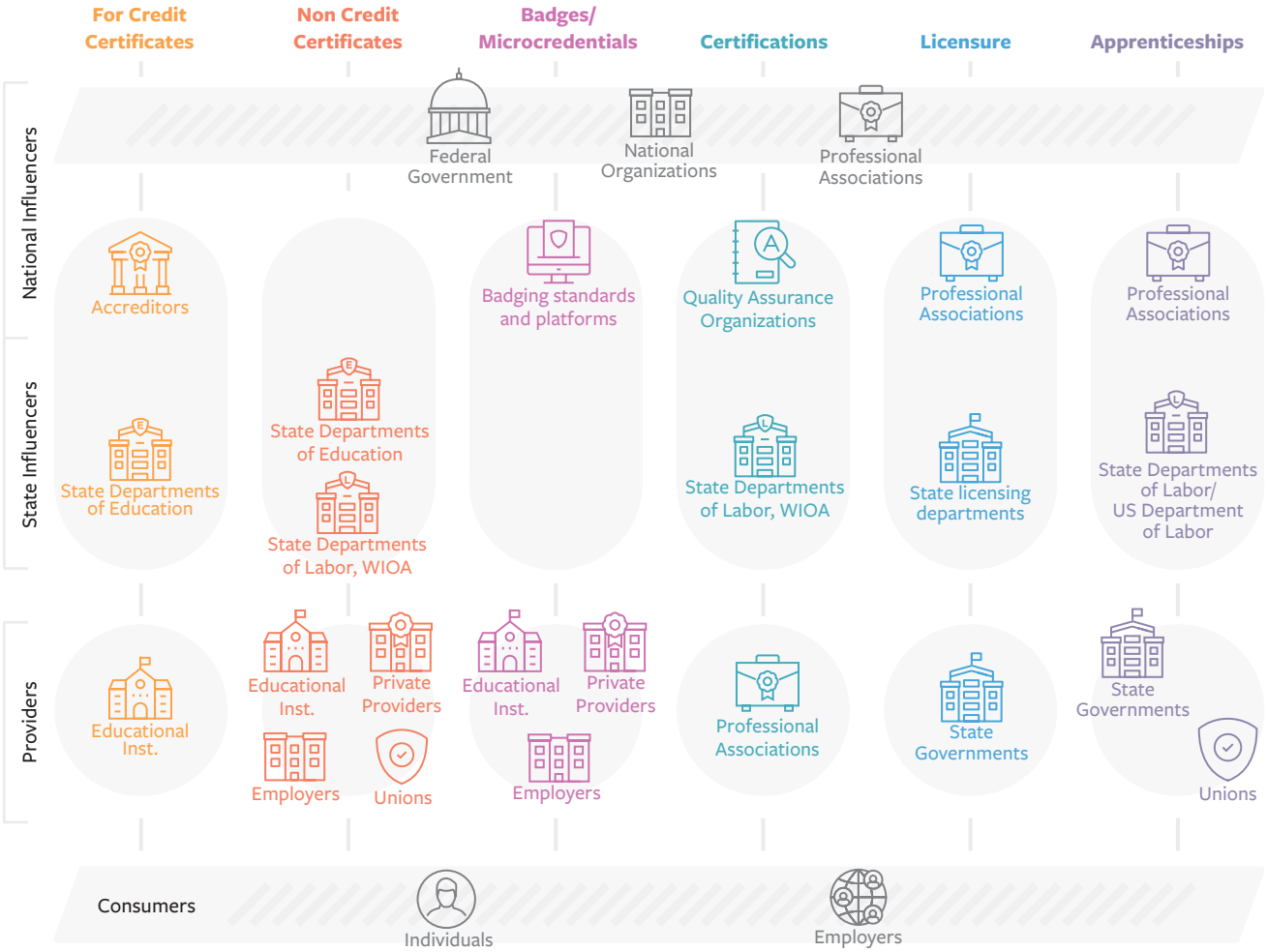

Quality influencers seek to directly inform consumers—both learners and employers—via transparency efforts. These kinds of transparency efforts can also be linked to norm-setting efforts by explicitly setting standards of quality in the information they convey. Influencer organizations tend to focus on those elements of quality most relevant to their stakeholder groups. For learners, those elements would be outcomes of value such as employment, earnings, and pathways for educational advancement. For employers, those outcomes of value are related to hiring and retention. Quality influencers also seek to impact providers via a range of other mechanisms including norm setting, policymaking, and capacity building. These efforts are often aimed at shaping elements of quality that pertain to norms related to credential design as well as outcomes of value.

Beyond the federal government, many quality influencer organizations operate at a national level, seeking to broadly influence the NDC quality landscape. They may provide information to consumers or work with providers to promote quality. At the same time, they may also exert indirect influence over the NDC quality ecosystem via their impact on state-level quality efforts. States have multiple roles in the NDC quality ecosystem. In addition to their role in awarding certain types of NDCs, states also can serve a role as influencer of quality. Many states have developed transparency efforts to inform consumers and help shape policies that can influence NDC quality. At the same time, states can also be a locus for broader systems of NDC quality; because of this, influencer organizations often focus their efforts on working with states to develop more coherent quality systems. States may also be influenced by the public through accountability measures to ensure that providers are not harming students. They may seek to ensure that NDCs serve the role of public protection when that is a goal. State entities that are focused on building systems for quality may bring together these multiple mechanisms for promoting quality to create an effective NDC quality ecosystem.

## NDC Quality by NDC Type

Some quality influencers have a broad impact on the quality ecosystem and apply their influence across all NDCs. Many other quality influencers, however, are focused on specific types of NDCs, as each NDC is associated with its own unique set of organizations. Because the various types of NDCs differ in origin, demand, and influences, each has its own quality ecosystem encompassing its own set of organizational influences and mechanisms. NDCs—and, therefore, the organizations that influence them—vary within types as well: Certifications vary by industry, for example, where industry and professional associations play a key role in influencing quality. Figure 3 illustrates the different but interrelated ecosystems for NDC quality by type. We review each of the NDCs types and provide an overview of the organizations involved in systems of quality most directly related to them. This includes organizations that award NDCs, not those that provide instruction to prepare people for NDCs but do not themselves award the credential. Organizations can be both providers and influencers - for example, industry associations can play a role in setting standards, as well as awarding certifications.

**FIGURE 3. NDC Quality Ecosystem by NDC Type**



*Certificates.*

US postsecondary institutions offer over 58,000 noncredit certificates and over 50,000 credit certificates.[6] For-credit certificates are awarded by educational institutions, often postsecondary institutions, for completion of an academic credit–based program that is usually less than one year in length. Noncredit certificates are awarded for completion of an educational program that does not count toward academic credit. These can include clock-hour programs that do not lead directly to academic credit but are time based, supported by federal financial aid, and offered by educational institutions. Both types of certificate programs vary substantially in duration and intensity, as well as in educational level. Key providers of noncredit certificates include postsecondary educational institutions, training providers, employers, labor unions, and industry associations. Both credit and noncredit programs can be influenced by state departments of education and labor, but only credit certificates are traditionally influenced by national accreditors. Noncredit certificates can be influenced by other national groups like the American National Standards Institute's (ANSI) National Accreditation Board (ANAB) (discussed further below) and the Institute for Credentialing Excellence's (ICE) 1100 Standards. They also may see more of an influence by accreditors that offer more resources in this area.

*Certifications.*

In contrast to program-based NDCs, other credentials are directly determined and awarded by industry. These include certifications and apprenticeships. Certifications can be earned in combination with a degree and can be associated with degree programs. Credential Engine (2022) estimates that U.S. educational institutions, workplaces, trade organizations, and other trainers offer preparation for over 7,000 certifications. Certifications are awarded for the demonstration of a specified set of skills, typically via examination based on industry or occupational standards. Their key providers are government agencies and industry certification bodies, with oversight by industry bodies and external quality organizations. Their key influencers include ANAB, the ICE, the National Commission for Certifying Agencies, and state departments of education and labor.

*Licenses.*

Licenses sometimes require the completion of an educational program and are awarded for the demonstration of skills in a specific occupation. Because licenses are awarded by a governmental agency—primarily state, some federal, and perhaps in some instances, local—individuals are legally required to hold them in order to practice in their desired profession; thus, licenses act as gatekeepers to their industries. This makes their value greater than other types of NDCs. Credential Engine (2022) estimates that governments issue over 12,000 licenses. While not awarded by industry, their standards are often heavily influenced by industry as well as professional associations and occupational groups.

6 Credential Engine, 2022.

*Apprenticeships.*

Apprenticeships, which may be registered or non-registered, are awarded after completion of a structured educational program and work-based learning experience based on industry and occupational standards. Registered apprenticeships are so named because they are registered by the U.S. Department of Labor or by state apprenticeship agencies. Their key providers (or sponsors) include employers in partnership with a union or local labor-management group and with local education providers. Like other NDCs, credit toward a degree can sometimes be earned alongside a apprenticeship credential. The registered apprenticeship process sets standards; non-registered apprenticeships are currently unregulated and non-standardized. Credential Engine (2022) estimates that over 27,000 apprenticeships are offered in the United States each year. Their key influences include government agencies, industry and occupational groups, unions, and professional associations.

*Badges and microcredentials.*

Badges and microcredentials are a newly emerging category of NDC; as such, their definitions remain under development. Generally, they include a digital component, and they are awarded for completion of a short program of study or demonstration of a targeted set of skills. Thus, except for the digital format, they are similar to other types of NDCs and sometimes can be used as an encompassing term to refer to other types of NDCs.[7] Because colleges and universities are still developing policies and standards with regard to badges and microcredentials, there is a great deal of variation in these awards in terms of content—and quality. Despite this, it is estimated that over 430,000 digital badges are already available in the credential marketplace.[8] Their key providers include postsecondary educational institutions, training providers, employers, labor unions, and industry associations. Their key quality influencers include badging platforms and state departments of education and labor.

## Summary

This ecosystem map attempts to depict the many types of organizations that operate in the NDC quality ecosystem. This ecosystem is broad and can operate on many levels. Among the organizations in this ecosystem map, some operate at a national level, others operate at the state level, and still others operate at both levels. This report focuses on describing organizations that operate on the national level, which often have influence at the state level as well. Future analyses will more closely examine the ways the ecosystem and the organizations within it operate at the state level.

7 Stoddard, Ruda, Trieckel, & Gallagher, 2023.

8 Credential Engine, 2022.

# II. National-Level Influencers

As interest in NDCs continues to rise, it becomes increasingly important to understand the landscape of national organizations focused on influencing the NDC quality ecosystem. In this section we report on our analysis of these national organizations and the roles they play in influencing NDC quality. Our analysis is based on the conceptual mapping of the NDC quality ecosystem discussed in the prior section. This analysis focuses primarily on non-governmental national organizations and does not map out the influencer role of the federal government or professional associations. In this section, we also draw from our previous discussion on the mechanisms through which influencers seek to impact NDC quality: transparency (both education-based transparency and disclosure-based transparency)[9]; norm setting; policymaking; and capacity building to support these efforts.

Influencer organizations tend to focus on those elements of quality most relevant to their stakeholder groups. Quality influencers seek to directly inform NDC consumers—both learners and employers—via transparency efforts such as the Eligible Training Provider Lists (ETPLs) and the Talent Pipeline Management project discussed in greater detail below. These kinds of transparency efforts can also be linked to norm-setting efforts or regulation by explicitly setting standards of quality in the information they convey. Those focused on engaging with NDC providers often focus on norm-setting efforts, which may build on related transparency efforts. Organizations that work to influence quality at the state level generally conduct policymaking and capacity-building activities, which may involve efforts targeted at both consumers and providers. We examine these three groups of influencers and their primary mechanisms of influence in the sections that follow, addressing them in terms of the unique groups of NDC quality stakeholders they set out to engage.

## A. Organizations Influencing Consumers

Consumers of NDCs include two main groups: individuals—both credential seekers and credential holders—and employers, who use NDCs in hiring workers as well as in developing their existing workforce via training and promotion. Quality influencers are most likely to target consumers by providing information about NDCs through disclosure-based transparency efforts aimed at informing consumers' choices. See Figure 4.

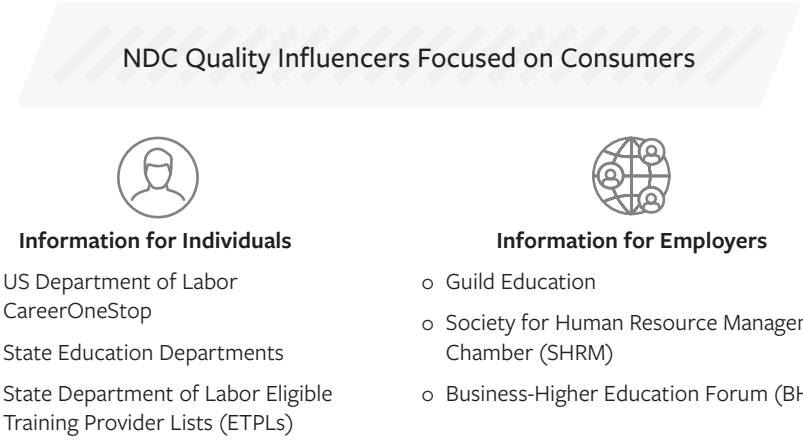
### *Individuals.*

Disclosure-based transparency can be used in tandem with systems of standards to shape information resources about credential quality that are designed to help guide consumer choice. The certification finder tool published to the CareerOneStop website by the U.S. Department of Labor,[10] for example, provides credential seekers with insight into whether a given certification is in-demand, third-party endorsed, accredited by ANAB, or accredited by the National Commission for Certifying Agencies (NCCA). Transparency efforts such as CareerOneStop's finder tool help to establish norms, which in turn build consumers' trust in particular organizations and their standards (discussed further below).

9 Mitchell, 2011.

10 CareerOneStop, 2023.

**FIGURE 4. NDC Quality Influencers Focused on Consumers**




Efforts targeted at individual consumers do not only exist at the national level. There are also state-level actors that seek influence over information that guides individual choice. These actors include state departments of education and labor, which support disclosure-based transparency, set norms, and regulate NDCs. State departments of labor, for example, typically provide data on NDC quality as part of their ETPLs. These data include information on labor market outcomes, such as employment rates and average earnings after the training programs associated with the credentials are completed. These and other state-level as well as regional-level actors focused on sharing information to guide choice will be discussed in more detail in future reports.

*Employers.*

National organizations that focus on influencing NDC quality information targeted at employers generally seek to align that information with employer needs. These organizations are unique in the NDC quality ecosystem, however, in that they must overcome a reluctance to engage with their efforts by the very consumers those efforts are intended to benefit: employers. Research by the Society for Human Resource Management (SHRM) on barriers to employer adoption of skills-based hiring identified challenges related to employers' lack of trust both in non-accredited credentials in general and in the concept of their scaling and scalability. SHRM's findings and ongoing engagement with employers has highlighted the need for quality arbitration and the importance of addressing digital developments in the area of skills. The proliferation of NDCs is a cause for confusion among employers and therefore a potential disincentive to use them in hiring.

Because some employers are ignoring NDCs simply due to a lack of understanding, influencers must, at minimum, address employers' trust issues surrounding the quality of NDCs; expand employers' knowledge of quality indicators; and develop networks of NDC users that are designed to promote information sharing. The most common information an employer seeks in the NDC quality marketplace is whether a credential will help them find workers with the skills and competencies they are looking for when hiring. Employers' focus on assessing skills and competencies to directly address their needs suggests that the most successful key

influencers in this space are acting to increase transparency, specifically through making understandable data readily available, in order to give employers the tools they need to make informed decisions.

Key influencers of employers include the Business-Higher Education Forum (BHEF), the U.S. Chamber of Commerce Foundation (CF), Guild Education (Guild), and SHRM. These employer-centered organizations view quality as multifaceted and emphasize employer validation. They tend to influence employers through activities that set norms and increase both education- and disclosure-based transparency. BHEF influences employers by engaging senior executives in capacity-building efforts to connect employers to NDC providers in collaboration forums and regional initiatives, thus helping employers access new talent through NDC pathways. BHEF's Strategic Partnership Implementation Process guides the development of employer-led engagement with higher education institutions to advance collaboration from the talent-and-skills-needs assessment stage through to changing talent and hiring practices in order to recognize talent enrolled in these new credential pathways. Similarly, Guild performs direct outreach to employers by providing a platform where NDCs can be accessed by employees of the organization's partners (i.e., the companies that contract with Guild to provide educational services to their employees). CF and SHRM emphasize employer engagement and skills-based hiring; both organizations conduct research to address barriers, and the latter provides yet another example of the use of disclosure-based transparency.

CF focuses on creating a change-management framework that allows employers to identify preferred provider networks and communicate the required skills and credentials for specific positions; an example of this is the Talent Pipeline Management project, in which employer validation sets the relevant NDCs. CF's ultimate aim is to establish a data trust that consolidates employer information through standardized data definitions and a software interface. Their system could lead to improved labor market information and enhanced outcomes analysis through the Jobs and Employment Data Exchange project. These and related efforts are supported by organizations like 1EdTech, which provides technical data standards for digital credentials and skills frameworks. CF's project promotes both transparency and norm setting by enabling consistent comparisons between job descriptions; at the same time, CF is also working to shape regulation by actively representing the business voice in federal policymaking.

Guild partners with employers to support the upskilling and retraining of existing employees with the goal of addressing talent shortages. The organization engages in a structured evaluation process that includes assessing program design, learner orientation and support, communication, user experience, and equity and considers persistence and completion rates as components of quality. In doing so, Guild promotes transparency in credential quality and norm setting in NDC program design. These efforts reflect employer-focused organizations' common focus on how credentials serve the needs of employers and how to ensure their quality from the employer's perspective.

*Assessment of NDC quality influencers on consumers.*

Greater understanding is needed of how consumers—both individuals and employers—use information about NDCs, including the extent to which that information can be accessed and understood. It is particularly

important to evaluate how NDCs are understood and used by the various actors involved in hiring and managing workers because this knowledge, as well as potential approaches to improving employer understanding of NDCs and NDC quality, is key to ensuring that NDCs are translated to outcomes of value. More attention to these issues would fill an important gap. In addition, more data on outcomes associated with NDCs are essential to empowering consumers to make fully informed judgments about NDC quality.

## B. Organizations Influencing Providers

A great deal of the activity focused on promoting quality in NDCs occurs among providers that both award NDCs and, in the case of test-based NDCs, deliver the instruction that prepares learners to attain those credentials. These providers include educational institutions, professional associations, private and online providers, and state government agencies. See Figure 5. NDCs include both certificates, which are usually awarded after successfully completing an academic program with a focus on acquiring specific knowledge, skills, and/or competencies and result in an educational credential, that is awarded by educational institutions. We refer to these as program-based. Certifications assess previously acquired competencies and are are professional credentials offered by professional association and/or state agencies (Institute for Credentialing Excellence; www.credentialingexcellence.org). We refer to these as industry-based.

Influencers targeting educational institutions rely heavily on disclosure-based transparency: publicizing outcomes to guide consumer choice. These efforts are often targeted to learners in the form of labor market outcomes. They also use education-based transparency to shape the behavior of providers—for example, to improve labor market alignment—and promote credential design with skill alignment through norm setting. The standards of quality that many groups are working to establish have the potential to become implicit norms as stakeholders gradually come to see them as important and hold them as shared goals and meaningful measures of quality. These influencer-created quality standards can be embraced to the point that they are adopted as state mandates and coupled with either regulatory approval processes or inducements in the form of funding.

### *Educational institutions.*

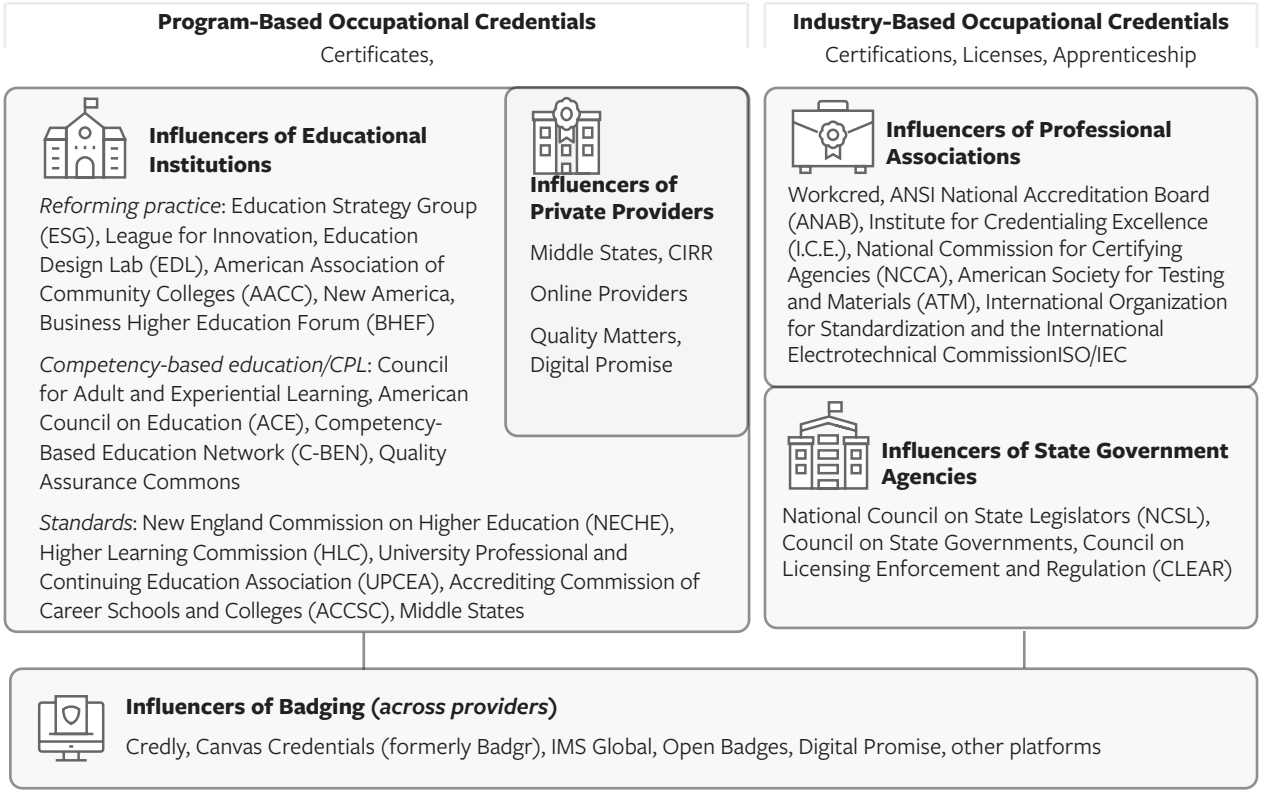
Educational institutions typically award certificates and sometimes award badges. These can include a range of institution types including 2-year and 4-year, public and private, and other emergent types of nontraditional providers. Many national organizations seek to influence the NDC quality information targeted at this group of stakeholders, but their impact on these providers and on NDCs in general is unclear. State variation in funding also influences the activities of educational institutions, the development of the data and quality standards those institutions engage with, and the regulation and resulting consumer protections.

Key quality influencers targeting educational institutions focus their activities on three major issues: general reforms to practice; reforms to include competency-based education and credit for prior learning (CPL); and accreditation and standards. Efforts centered on any one or more of these activities are aimed at setting norms, and some go a step further by helping to implement those norms via capacity-building efforts.

First, concerning general reforms to practice at educational institutions, numerous influencers—such as the American Association of Community Colleges, the Aspen Institute (Aspen), the Association for Talent Development, Education Design Lab (EDL), Education Strategy Group (ESG), New America, BHEF, and the League for Innovation—work to increase transparency and set norms by focusing their activities on labor market alignment, real-world relevance, and outcomes. Among these projects, examples of valued outcomes are numerous, such as wage increases, job placements, or broader societal benefits like increased economic mobility, equity, and accessibility. The standardization and dissemination of these outcomes are examples of the focus on norm setting via education-based transparency. Influencers seeking to reform practice at educational institutions vary somewhat in their focus: For instance, Aspen and ESG tend to emphasize wage returns, while EDL, BHEF, and the League for Innovation emphasize industry-relevant skills. EDL with their Community College Growth Engine Fund is taking a lead effort with large community colleges, districts, and states to conduct reforms of their short-term microcredential pathway programs. BHEF also works closely with 2- and 4-year institutions to reform credential development processes that improve higher education's responsiveness to industry and regional training needs.

Next, influencers in the education sphere that place a strong emphasis on reforming practice to focus on skills, such as the American Council on Education, Council for Adult and Experiential Learning (CAEL), Competency-Based Education Network (C-BEN), and QA Commons (QAC). These groups exert influence through norm setting by seeking to ensure alignment of credentials with skills and competencies that are valued by employers

**FIGURE 5. NDC Quality Influencers Targeted at Providers**



and enhance learners' abilities to succeed in the labor market post-credential. Though influencers seeking to promote competency-based education may share the same emphasis, each has a unique focus. CAEL, for example, emphasizes the value of prior learning, as does the American Council on Education, along with the duration of noncredit certificates (i.e., 12-month minimum duration). C-BEN stands out by emphasizing mastery of competencies, whereby learners only move forward based on demonstrating what they know and can do, rather than the time spent in a course. Similarly, QAC introduces the idea of issuing badges and smaller "chunks" of credentials. With these activities, education-based transparency acts as a mechanism of influence that is directly related to establishing norms.

Finally, concerning accreditation and standards, influencers of educational institutions include accrediting organizations such as the Accrediting Commission of Career Schools and Colleges (ACCSC), the Higher Learning Commission (HLC), and the New England Commission on Higher Education (NECHE). Collectively, these accrediting organizations exert influence through norm setting and by increasing transparency in NDCs by ensuring they are valuable and relevant, and that they enhance student career success. While accreditation is not required for most programs that lead to NDCs, standards can help promote quality, and these organizations vary in their approach. Other organizations such as the International Accreditors for Continuing Education and Training (IACET) are focused promoting standards in continuing education programs. Similarly, the University Professional Continuing Education Association (UPCEA) brings together practitioners from providers concerned with questions of quality.

Quality assurance and evaluation are central activities of this group of influencers and are examples of education-based transparency efforts. Among these, ACCSC evaluates how well students transition into the workforce, looking at input and outcome standards as part of their evaluation paradigm. A strong connection with the employment community is a valued outcome in ACCSC's work. HLC recently launched the Credentials Lab, engaging a broad set of stakeholders to design a quality-assurance framework and process for the oversight of third-party providers offering credential content to colleges and universities. It intends for this process, once fully developed, to lead to an endorsement for the providers that meet the standard, as well as provide guidance for colleges and universities working with these providers. NECHE is developing a quality-assurance framework for noncredit offerings at colleges and universities that plans to emphasize stackable credentials and transfer pathways and focus on certifications that do not already have established quality frameworks. The goal of NECHE's quality-assurance framework is to promote ongoing improvement in institutions providing NDC programs that focus on valued outcomes such as the quality of education and the value of the credentials to students.

Each of these organizations has a distinct approach to the collective mission of setting standards for educational institutions. ACCSC has a strong connection with the employment community, focusing on student transition to the workforce and post-graduation employment as primary metrics of evaluation. HLC adopts a more comprehensive approach by considering broader aspects like curriculum, teaching standards, and the sustainability of credential programs (e.g., outcomes, funding, leadership, faculty, and expert input). NECHE

provides institutions with greater flexibility and autonomy to set their quality goals and markers, placing significant emphasis on institutions' missions; engagement; and diversity, equity, and inclusion goals.

*Private and online providers.*

Private providers are those that assist students in preparing for (usually test-based) NDCs but are not fully categorized as educational institutions. They include bootcamps, proprietary training schools, some online providers, and other emergent corporate actors that are developing their own NDCs (e.g., Google, which offers training for its own Google Career Certificates). Though these providers are similar to educational institutions in that they prepare students for—and sometimes award—certain NDCs, there is little oversight of these institutions. There are, however, some emerging sets of standards. Key quality influencers that target private providers include accrediting organizations, such as Middle States and Council on Integrity in Results Report (CIRR), while key influencers of online providers include Digital Promise (DP) and Quality Matters. Norm setting is the major mode of influence for these groups. DP and Quality Matters influence online providers by setting norms through developing and applying quality-assurance frameworks and rubrics for credential design. DP's quality-assurance framework, which supports its partners in the creation of competency-based microcredentials, has already been used to develop hundreds of microcredentials. DP has a double-blind microcredential assessment process; assessors make recommendations based on rubrics, and the issuing body makes final decisions. Similarly, Quality Matters applies a peer review process to its rubrics for quality assessment of its courses, focusing primarily on for-credit higher education programs but turning its lens toward NDCs with increasing assessment frequency. Finally, Middle States accredits NDC programs that receive Title IV funding at the institution level and verifies at the program level, where completion rates must be 70 percent or higher. Similarly, CIRR tracks program outcomes such as graduation and job placement rates.

*Professional associations* (*as providers*).

There is a wide range of quality influencers targeted at the activities of professional associations that award certifications. These influencer organizations work primarily by norm setting and capacity building. ICE is a professional membership association that provides norm setting through education, networking, and other resources for organizations and individuals who work in and serve the credentialing industry. Their approach emphasizes industry best practices and adherence to standards. ICE's affiliate, the NCCA, also provides norm setting by providing a framework for assessing the structure and governance, psychometric soundness, and recertification requirements of certification programs.

In addition, several international standards organizations are involved in NDCs. ASTM International is an international standards organization that sets norms by developing and publishing various standards, including guidelines for quality certificate program development and administration (i.e., ASTM E2659-18). Similarly, the International Organization for Standardization and the International Electrotechnical Commission are two separate entities, but they often work together to develop international standards, including in the area of information technology as the ISO/IEC joint technical committee. ISO/IEC influences NDC quality by norm setting through its efforts to develop and maintain international standards that pertain to the quality

and recognition of various certifications, qualifications, and accreditations. The committee also increases transparency by providing a framework for certification bodies to ensure consistency and reliability. The International Accreditors for Continuing Education and Training (IACET) sets standards for continuing education and training programs.

Finally, ANSI and its affiliate, ANAB, are nonprofit organizations that oversee standards and conformity assessment activities in the United States. ANAB accredits certification bodies and certificate issuers; its symbol signals to an employer that the credential holder has undergone a valid, fair, and reliable assessment to verify that they have the necessary competencies to practice. ANAB intends to launch a program to accredit the newly developed ASTM 3416-23 Standard practice for competency-based workplace learning programs. Workcred, a nonprofit affiliate of ANSI, expands ANSI's sphere of influence by increasing transparency in noncredit credentials through educating stakeholders (e.g., employers, consumers, educators, and government agencies) about credential value.

*State government agencies (as providers).*

In their role as NDC providers, state government agencies are the targets of quality influencer organizations such as the National Conference of State Legislatures (NCSL) and the NCSL's Occupational Licensing Consortium. The NCSL is a nonpartisan organization that influences through norm setting and capacity building by providing support, resources, and information to state legislatures across the United States. The NCSL supports state legislatures in sharing policies related to workforce development, education, and credentialing. Their approach involves convening legislators and experts, conducting research and analysis, providing policy recommendations, and offering states technical assistance on NDC-related issues. NCSL's Occupational Licensing Consortium is designed to set new norms by helping states improve their understanding and practices regarding that particular form of NDC. Both the NCSL and its Occupational Licensing Consortium collaborate extensively with other NDC quality influencers.

*Badges.*

Badges exist across providers and have a unique set of organizations that seek to influence their quality or to establish standards for transparency in the credentialing marketplace. These organizations include two key badging platforms, Credly and Canvas Credentials (formerly Badgr), as well as other organizations such as 1EdTech, Open Badges, and DP. Both Credly and Canvas Credentials establish ways to capture and reflect new standards through their digital credentialing platform, which enables organizations to issue and manage digital badges and credentials in a way that adheres to a set of expectations about their design. Canvas Credentials also sets norms through its use of an open standard platform, Open Badges, to ensure interoperability and verifiability of its digital credentials. Both organizations aim to increase transparency: Credly shows consumers related real-time job postings, and Canvas Credentials offers learning pathways, where badges are stackable toward a certificate.

*Assessment of NDC quality influencers on NDC providers.*

Providers have many influencers acting on them, and more efforts are coming. There is emerging interest in

NDCs from traditional university accreditors, for example, and numerous organizations continue to develop approaches to promote quality. Online programs are particularly of interest given their geographic reach, but they raise unique issues of governance that must be addressed.

It is clear that increasing attention is being devoted to educational institutions and their NDCs. Given the many organizations with an interest in these institutions, there is a need for more awareness and, potentially, for alignment across multiple influencer organizations and their work. Opportunities may exist to extend some of these norm-setting efforts across provider types, leveraging efforts to establish quality criteria and seeking ways to ensure they align with areas where current quality standards are lacking. Finding ways to incorporate information from providers that are outside of current systems completely—employers, private organizations, and online programs—into the development of these standards is a significant challenge that may be informed by existing efforts involving educational institutions.

Among NDCs, certificates need special attention given the wide range of efforts under way to organize and understand them and the lack of consistent standards for awarding them. Certificates cut across many provider types and are most in need of work in terms of creating consistency in language to describe them; newer credentials like badges and microcredentials also require attention for better definition. Questions remain about the impact of efforts in these areas and whether they will gain momentum to carry forward widespread change in NDC quality standards.

Some emergent efforts are beginning to focus on system building across types of NDC. The Credential As You Go movement, for example, is focused on understanding and building incremental credentialing systems that bring together learning attained across different types of NDCs to provide recognition for this learning. Education Quality Outcomes Standards (EQOS) is another emergent system for examining quality that seeks to apply standards and transparency across types of NDCs. These and other efforts (many focused at the state level with NDC quality standards) represent important steps toward developing a more comprehensive approach to quality for the NDC ecosystem.

## C. Organizations Influencing States

State governments are a focal point for quality influencers given their potential to ultimately provide structure to guide NDC quality efforts across a broad range of providers in their states' NDC ecosystem. Recognizing this, many national organizations have centered their efforts on working with states to develop and refine NDC quality systems. These undertakings aim to help states develop transparency efforts, norm-setting processes, and polices concerning NDCs. For clarity, in this discussion, "policy" encompasses various state-level actions, such as legislation, regulation, program approval, quality guidelines, funding initiatives, and approval processes. Understanding the dynamics of the NDC quality ecosystem at the state level requires a comprehensive exploration of the unique state contexts, the organizations involved, their interrelationships, and the mechanisms they use to promote quality. Such an examination will require extensive analysis and thus will be the focus of a future report. This section, instead, hones in on the ways national organizations collaborate with

**FIGURE 6. NDC Quality Influences Targeted at States**

**Standards:** National Skills Coalition (NSC), New England Commission on Higher Education (NECHE), Quality Assurance Commons (QAC), Digital Promise (DP), Education Strategy Group (ESG)

**Reforming Practice:** Advance CTE, C-BEN, NGA, SHEEO

states to bolster their capacity to influence NDC quality–related policies.[11] See Figure 6.

Momentum exists to define NDC quality standards at the state level, although the data often do not exist. Organizations like National Skills Coalition (NSC), NECHE, QAC, DP, and ESG have been instrumental in driving conversations on NDC quality, aiding states in crafting meaningful definitions. For example, DP has a state policy map on education microcredentials, and it also collaborates with various state departments of education on quality definitions. QAC has worked in several states to develop a comprehensive framework for evaluating NDC's and NSC has worked with two cohorts of states to establish clear statewide quality-assurance frameworks, policies and use cases. That organization conducts a range of activities with these states including convenings, the creation of interstate networks, policy advocacy, and research. The shared objective among NSC, NECHE, QAC, and ESG is to refine practices by engaging with states. Additionally, ESG, NSC, and the League for Innovation have employed coalition- and network-building within and across states.

Technical assistance provision to reform policy and practice is another mechanism organizations have used to enhance state capacities. Numerous organizations provide technical assistance, including NSC, QAC, ESG, C-BEN, ETA, and Advance CTE. For instance, NSC and ESG provide technical assistance to states, particularly in areas such as building systems and processes related to quality. ETA provides extensive technical assistance to states as part of its mandate as the federal agency for education and training. Advance CTE shares best practices, policy recommendations, and research with its member states; the organization reports that some states are now "listening to their learners and parents" as a result of their efforts. The State Higher Education Executive Officers Association, in collaboration with ESG and Opportunity America, is launching an effort to work with states to build capacity around noncredit education.

In terms of policy, NCSL monitors legislation associated with NDC quality. It currently convenes a legislative group examining NDC quality–related policies in their states. ACCSC's practices and standards influence educational policy and practices at the state level by setting a benchmark for what constitutes quality in career and vocational education. The National Governor's Association's Skills-Driven State Community of Practice project, offered in collaboration with Jobs for the Future, emphasizes the alignment of skills-based training with hiring protocols and promotes the adoption of digital wallets and learning and employment records systems (LERs) in states. LERs—the digital containers that hold, verify, and share information about various credentials—improve transparency between learners, employers, and institutions and therefore could elevate the standing and utility of NDCs in the broader education and employment landscape. Other ventures, like the T3 Innovation Network and numerous Walmart-funded LER projects (e.g., grants to C-BEN, CF, DP, Jobs for the Future, and the National Governor's Association), are examining the potential of LERs in collaboration with states.

11 We discussed states as NDC providers in the previous section.

Overall, 26 states were mentioned by representatives of influencer organizations reviewed for this analysis [12]. As noted earlier, the NSC has worked with eleven states across two cohorts to define NDC quality. The 2020–21 cohort included Alabama, Colorado, Louisiana, New Jersey, Oregon, and Virginia. The 2021–22 cohort comprised Minnesota, Missouri, Nevada, New Jersey, Ohio, and Tennessee, while Alabama and Virginia served as peer mentor states. One example of this work is Alabama's effort to develop their credential registry to promote transparency.[13] On a smaller scale, QAC is working with four states, Oregon, Pennsylvania, Kentucky, and Missouri, in relation to quality assurance in NDCs and badging. Similarly, DP's state policy map on education microcredentials, support of state initiatives in Delaware, New York, Michigan, and North Carolina and collaborations with various state departments of education are other examples of national level organizations that are targeted at the state level. NECHE's work is also on a smaller scale, centering its work on Massachusetts, Connecticut, and Rhode Island. The organization works with the Massachusetts Department of Higher Education and is developing a similar relationship with the department's counterpart in Connecticut. ESG takes a slightly different approach to influencing states by working with the State Higher Education Executive Officers Association, workforce entities (like the California Youth Apprenticeship Group), and legislators. Through the Lumina-funded REACH Initiative, ESG also works with six states through their community colleges to build quality NDC attainment leading to an associate degree among adult students of color. Additional states are likely involved in these and other NDC quality efforts. Further research will seek to more comprehensively examine and document state involvement in these kinds of NDC capacity-building efforts.

Because funding often drives the education system, the effects of NDC quality influencers can be limited to narrow programs or certain institutions. Still, their efforts can have significant impact. Apart from funding, current state governance systems are fractured and limited. Although state coordination and governance authority is necessary, there is all a need to be careful about unintended consequences of the current political climate. HCM Strategies' review of state funding for short-term credentials demonstrates a range of funding models across 28 states. The emergence of more kinds of state funding for NDCs as well as associated quality metrics demonstrates the need for data as well as the potential influence of state funding policies on the NDC quality ecosystem.[14]

*Initial assessment of NDC quality influencers on states.*

Activity within states from national-level quality influencers is focused on building capacity around data to track NDCs and to create consensus around how to define NDC quality. National organizations continue to work to aid states in their efforts to reform NDC policy and practice. Clearly many efforts are under way within states, raising the question of how they are complementary as well as how they might work together toward common goals. While many organizations are involved in various forms of technical assistance related to policy and practice,

12 Alabama, California, Colorado, Connecticut, Delaware, Florida, Indiana, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Nevada, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, Tennessee, Texas, and Virginia.

13 Council of State Governments, 2022.

14 Murphy, 2023.

there remains a growing need and appetite for this work. Indeed, as an increasing number of states become concerned about NDC quality and involved in efforts to better understand it, more resources may be needed to support these projects. As various quality influencers' efforts move forward, they may be enhanced by attempts to articulate both their distinctive roles and potential contributions to states as well as how they may fit together to provide a comprehensive strategy for states to be involved in this work. Intentionally moving forward in a manner that encourages communication will help promote an effective use of time and resources to better support states. Further review of existing state systems will be needed to better assess where there is common activity and where there are common gaps in state NDC systems.

## D. General Data Infrastructure

Data is the essential foundation across many quality efforts. Credential Engine is a key national actor in building the data infrastructure necessary to provide information to consumers, providers and others interested in credentials. The organization's goal is to help consumers, make comparisons and to assist them in making informed decisions. Credential Engine does not define NDC quality, however; instead, it respects and supports state-specific quality definitions by improving disclosure-based transparency. It uses two key approaches to achieve this end. First, through its credential registry, the organization utilizes Credential Transparency Description Language (CTDL) to encapsulate and relay quality definitions tied to various organizations and states, thus building an infrastructure to enable widespread transparency and information sharing on credentials of all types. Second, Credential Engine develops benchmark models for quality definitions in the form of frameworks that provide recommendations for publishing to the registry. These efforts help ensure transparency across all types of credentials. Overall, Credential Engine's activities emphasize the use of CTDL data elements to support the developed definitions.

EQOS is an emergent national actor with an interest in influencing information provided to consumers about NDC quality. The organization utilizes a disclosure-based transparency mode of influence to help learners and workers, education institutions and postsecondary training providers, private investors, governments, and others identify high-quality opportunities that lead to equitable economic advancement. Their quality-assurance framework focuses on valued outcomes, including employment outcomes, credential attainment, completion rates, a longitudinal understanding of individuals' outcomes, and consumer best practices such as completion rates and employment outcomes. The data that are currently available and the potential resources that may become available through this effort are planned to be large-scale and could include a wide range of NDCs and their consumers. More complete data will take time to collect, however, and the current and future uses of these data are still being explored and determined.[15]

Several national entities focus on assisting states in enhancing their data infrastructure capabilities to report on NDC quality. A predominant concern among many states is determining quality metrics and, subsequently, identifying and collecting pertinent data to construct a robust data infrastructure. For instance, Credential

15 D'Amico, Van Noy, Srivastava, Bahr, & Xu, 2023.

Engine (as discussed earlier) is working to establish a data framework for credentials. In pursuit of this goal, the organization collaborates directly with numerous states, deferring to them for NDC quality definitions. Its current endeavor involves synchronizing data definitions related to NDCs to ensure components that allow quality assessment are included. In another example, EQOS targets states as a potential source for outcomes data and information. Similarly, the Coleridge Initiative works to provide a platform and process to bring together states to securely exchange data on outcomes and other pertinent information, aiming to fortify the data infrastructure and support the creation of data collaboratives. Working in partnership with the Coleridge Initiative, NASWA provides the administering organization that advises, supports, and coordinates the work of the collaboratives. In a fourth example, NASWA operates the NLX Research Hub, which curates a publicly accessible database that aggregates job posting data with the goal of offering insights on NDC demand in the job market. For context, NLX supplies jobs data to the U.S. Department of Labor's credential finder tool. The National Student Clearinghouse is involved in efforts to compile industry certification data at a national level. The Data Quality Campaign is working with states on data systems building that can provide a foundation for efforts to measure NDCs. Rutgers' EERC is conducting research on states' noncredit data infrastructure to generate a data taxonomy and convene a learning community among states. NSC has developed a set of quality metrics for states to use/adapt in their own contexts and is working to develop a rubric for states to assess their capacity and infrastructure related to data collection, usage, and reporting on NDC quality and outcomes.

The impact of data cannot be understated, as it is an essential element of the process of evaluating and understanding NDC outcomes. As such, it can both bring more attention to NDCs and make them more widely available—Aspen has not included programs that lead to NDCs in its community college excellence program in large part because there are no data available by which to assess them. Further, if data were available, they could help guide efforts to allocate government funding, employer funds for training, and other areas of investment, and they could help noncredit options become a more central part of efforts to identify excellence in community colleges.

# III. Insights of National Influencers

In addition to mapping the national organizations on the NDC ecosystem, we gathered the insights of leaders from these national organizations to identify opportunities and gaps in existing knowledge about NDCs and NDC quality. This section reports on the findings from that research. Overall, opportunities for further development of NDC quality systems relate primarily to the following concerns: coordination across quality efforts and mechanisms; coordination across state systems; standardization of credential language, categories, and meaning of credentials; lack of data and the need for better data systems; the need to ensure that increased gatekeeping of new credentials does not inhibit their accessibility, especially among historically disadvantaged groups; and the need for technical assistance and funding to support NDC programs and quality assurance.

***There is a need for increased coordination and collaboration among NDC quality influencers and their activities***. Interviewees raised the need for coordination and collaboration across the many actors and activities examining the NDC quality ecosystems. As this landscape scan first seeks to understand the areas of activity, the clear next step is to figure out ways for various actors to collaborate productively, as well as how to coordinate such collaborations. One respondent reflected, "This whole ecosystem of non-degree credential quality efforts [is] under way, and I think what we're looking for on some level is not only to map it out but also to kind of look at what's happening and see if there are opportunities for connections and collaborations."

One opportunity for coordination includes the work undertaken by *researchers and national organizations*; as one respondent noted, there is a "need for coordinated investment among [nonprofit organizations]. … I'd like to see greater partnership. I think that for good reasons, but not the most helpful reasons, we have a lot of nonprofit organizations that end up competing with one another." Another respondent echoed this sentiment: "Who is the entity that is coordinating all these coalitions? The Coordinator of the Coalitions [that can] bring them together?"

Another contingent that would be helpful to bring together for the purpose of coordinating efforts is the *accreditors*, especially as more organizations develop NDC quality-control procedures. Some accreditors, such as ACCSC, have had NDC quality standards and procedures in place for years, whereas others, like NECHE and HLC, are newer in developing them. As new accreditation processes emerge, coordination and alignment may help institutions and consumers better interpret their meaning and thus better evaluate the associated NDCs. Existing foundational work in this area could be used to inform new efforts for promoting quality in emerging NDCs.

Related to this idea of collaboration is a request for greater engagement from key stakeholder groups, including *postsecondary institutions and employers*. Greater engagement among these groups was seen as a way of increasing buy-in and advancing feasible solutions. One participant commented that promoting innovation among universities is important because many are limiting their offerings to traditional degrees simply because they do not have the resources to support NDC innovation themselves. The idea of leveraging 2- and 4-year colleges as solutions to NDC delivery emerged from our interviews. In addition, quality concerns emerged more broadly across our interviews, and one respondent stressed the importance of building more alignment between institutional leadership and policymakers.

There was a consensus among interviewees that *employers* have an important voice but are often missing from these conversations. As one interviewee recognized, however, "we've determined that we can't just convince [employers] to do something when the system doesn't support it. … The existing vendors need to figure it out, but maybe what's waiting in the wings will address it." If the goal is to engage employers and, ultimately, to influence them to change the way they currently hire and promote personnel, the need to better communicate NDC meaning and value must be addressed, as does the need to develop the data systems necessary to facilitate their use. We explore these two points further later in this section.

***States are seen as a locus of activity and coordination***. Several respondents mentioned the need for *regional convenings* across states. One noted, "We've got to really figure out how to bring these systems, these [state] agencies, together so that they can talk about it and resolve some of this." A challenge with quality discussions can be aligning competing employers at the regional level; since they may be crossing state lines, it is likely they would be working within different state policy environments. Collaboratives within an economic development corridor can support coordination or ongoing conversation. One participant shared,

> Sometimes there's some areas we use for the regional economic, sort of, collaboratives. And those oftentimes are interesting, because [companies come from] across state lines, which makes it different from the state sort of policies that sometimes can be beneficial or are more problematic, depending on where they are.

However, another noted, "I think [states … ], if they are helping to define what the region needs with regards to a workforce, … may be able to be part of the conversation [about] how you define the quality of that education and [how] training is being delivered." Furthermore, another suggested that states do not need to do this work on their own; they can build on what accreditors have already done.

Since currently NDCs are not systematically covered by federal oversight, much attention falls to the state to ensure quality and protect consumers. We also heard concerns about the tenuous connection between state and federal discussions:

> It feels like the federal conversation is very disconnected from a state conversation. It feels like the thought partners and the folks who are talking about, you know, "Should short-term Pell [grants] happen?" […] are maybe not as in touch with the role that states are trying to get to play.

This respondent went on to point out,

> Governor[s] see this firsthand: their labor force participation rates are really low. They're moving to—again—skills-based hiring and moving full governments—that direction—but for whatever reason, that's not coming up in the policy conversation in DC about, "This is a route to move forward."

Geographical differences are not limited to state boundaries. Vastly different economies may exist within a single state and/or region, making certain NDCs more applicable to the workforce in some areas than in others.

***Many respondents referenced a need for uniformity in the language, categories, and meaning of credentials.*** Understanding NDCs is fundamental to making them both valuable and attractive to consumers, providers, researchers, and funders alike. The barriers to understanding NDCs are two-fold: First, the language of NDCs is inconsistent and needs to be formalized to support the clear discussion and, ultimately, usage of NDCs. Second, the taxonomy of NDCs must be clarified such that it is able to efficiently organize the diverse range of credentials. By bringing together a wide array of possible terminologies and working to harmonize them, Credential Engine's work with the CTDL is an important effort among others in creating that taxonomy. Addressing both of these concerns is critical to advancing discussions of NDC quality.

Several respondents noted the importance of reaching a shared understanding of what credentials are in advancing this work. One stated: "We don't have a good way to understand what credentials are being offered, or we don't have a uniform way of understanding and categorizing credentials." Another noted: "We had a stakeholder-engagement conversation [and found that] this word credential doesn't mean anything. NDC attainment—We get why Lumina created it from a higher ed perspective, but it's about helping folks get access to education and training." This respondent seemed to view NDC attainment as a goal in and of itself—as a marker of higher education or training course completion. Another pointed to confusion over language as an issue, noting that practitioners conflate meanings or use disparate terms interchangeably:

> We've got somebody calling this thing digital badges; some people just calling it microcredential; some people are blurring noncredit and credit together and calling it something else. So, I think until we get that language correct … that that is what we're struggling with.

Finally, another respondent noted the importance of more clarified language on NDCs for actors in the higher education sphere:

> No one [is] understanding the nomenclature. We've been promoting degrees for so long. Higher ed has to get the nomenclature correct. Digital badges, microcredentials. [We] need to get the language correct.

Even as calls for consistency in language emerge, others are attempting to fill this need. For example, the American Association of Collegiate Registrars and Admissions Officers (AACRAO) report defines much of the nomenclature discussed here as well as the Northeastern Microcredentials Primer referenced above. Employers need to be able to understand the meaning of credentials and the skills they represent; providers, therefore, must better convey to employers the meaning of credentials and the skills they represent. It is not always clear what skills an NDC seeks to convey, but that information is crucial to making the NDC valuable to an employer. Speaking about NDC providers, one respondent noted, "if they could at least tell me what [their credentials] represent, that's information I can do something with." One respondent seemed to refer to the active process that occurs to create meaning for credentials, stating that,

> You start realizing that there isn't a real process in place to recognize [NDCs] … instead, you have the providers of these credentials out promoting, marketing, and lobbying, in some cases, for their credentials to be recognized.

One suggestion for addressing the need to delineate and define NDCs was to tie the measurement of NDC quality to skills assessment. For example, one respondent suggested,

> I think we need to get back to assessing the skill of the student. Make sure that if we're teaching someone how to change a carburetor, that each of those steps are broken down, taught, there's an assessment. And we need to know that that student knows how to do each of those steps. … When I think of quality, it's going to come down to those skills that those students must obtain in order to do the job that they're looking to do.

From that perspective, then, the credential would be defined according to the specific set of skills students must demonstrate in order to receive it. Another respondent highlighted the importance of learners' abilities to communicate their own skills: "Have we equipped our graduates to be able to speak to the knowledge, skills, and abilities that they may have as a result of the credential?"

Skills-based hiring and its popularity among employers also came up in discussion, and respondents suggested engaging with employers to make sure they value credentials: "Quality will also be measured by the relationships that individuals will have with these companies, and that the companies will have with our institutions. Quality will be determined by the willingness to come to the table." Others discussed the importance of having input from industry actors:

> The voice of [the] business community is pretty paramount. It's gonna be important everywhere, but it's gonna be … who a given state legislator … is more inclined to listen to, … in addition to the students themselves, obviously, … in terms of these credentials. It's also the businesses that are the sort of the end customer in a way. Still, their voice is always going to be important.

***The lack of data and the need for better data systems were clearly identified as challenges***. Challenges with data and data systems are being addressed at both the state and institutional levels, but significant additional development is needed. Furthermore, the extent to which these systems are informed by quality standards is limited and requires examination. Several respondents noted the importance of foundational work occurring to build out data systems at the state level, as well as the need to continue building out these systems across states such that state-level data systems can connect and work together. Others mentioned the need for data systems development at the provider level and the importance of colleges being able to track students' transitions to credit from noncredit pathways: "Definitely, gaps in data collection [are an issue]. And connecting the non-degree side to the degree side …" Data systems also need to clearly convey information to employers. The "shift from [searching for new hires via] networks to looking for demonstrated skills is a giant shift. It has to be easy, cheaper … much better … more efficient" in order to change employer behavior. "They need some kind of signal to understand quality [NDCs] and garbage."

***Challenges exist in setting quality standards and thresholds.*** Several respondents noted the challenge in defining what quality is and how to set standards for it. There are multiple reasons for this, including "the need to be careful to avoid gaming—that is, to say programs need to end in a credential—without clarifying the quality."

One respondent noted the real "lack of consensus about what quality is," and added, "I like to jokingly say that we throw around words like industry-recognized credential, but then when you look at legislation, it's kind of this circular logic of an industry-recognized credential as a credential recognized by industry. What does that exactly mean?" Another respondent noted, "Academic quality is different from what employers say. The institution doesn't own quality." Others noted the need for metrics, particularly from employers, in measuring employee performance based on a credential or lack thereof. Even current efforts to promote transparency in many cases do not yet have a definition of quality included.

***The importance of focusing on NDC quality in a way that promotes equity rather than inhibits access was also raised as a concern.*** One respondent expressed that it was important, "from an equity standpoint, [to make] sure that [NDCs are] not just an opportunity for a certain type of student or worker, but they're accessible to lots of different student subgroups, including women and people of color." As noted earlier in this report, much of the challenge in defining quality is a function of the particular ecosystem to which it applied. Recognizing this challenge is crucial for advancing NDC quality conversations and reaching agreements on what constitutes quality. Interviewees raised concerns about ensuring these conversations about NDC quality do not end up further marginalizing historically disadvantaged groups. Doing so means addressing issues such as how quality credentials support well-being, security, and agency and creating the data infrastructure to captures such measures.

***Provider-level technical assistance is required in order to build on existing activity around NDC quality.*** NDC providers need to share real models and expertise, making technical assistance available when necessary to enable institutions to adopt quality NDC programming. According to one respondent, "[NDC providers] don't actually understand … exactly how to help colleges implement some of these things." Others noted that national organizations with a wide reach are particularly lacking in this arena. Some emerging leaders in the field are making technical assistance and leading reform a priority, particularly EDL and their work on the Community College Growth Engine Fund. One respondent noted the need for institutional changes, particularly with the role of faculty and advisory boards within institutions, to promote labor market alignment, stating: "the biggest challenge we're having is … this notion of the changing role of faculty—how to keep faculty up to date in skills, how to properly run advisory boards."

***There is a significant need for funding for NDCs; current funding is subject to a great deal of change, complexity, and uncertainty.*** There is work currently under way to understand how to build *sustainable funding models*. As one respondent noted: "We're working with colleges to work on financing for these models and making them sustainable." Many states are working on funding initiatives, and there are emerging funding streams that need to be better understood. Among our respondents, some questions arose about how to make sure all actors, including both learners and employers, are engaged in these funding approaches. There was also an interest in incentivizing providers to be successful via performance-based funding streams. One respondent explained, "State government leadership in this area would be enhanced, perhaps, if [those state leaders became] more engaged in funding noncredit directly."

# IV. Conclusion and Recommendations

As an emergent area of interest and activity, NDCs offer promising pathways for opportunity. To ensure that promise is realized, systems of quality—both in terms of definition and assessment—are an essential step. Yet, determining how those systems should exist and function is still in a nascent stage. Some existing systems offer the potential to be expanded into a more encompassing system of quality that reflects the unique nature of this varied group of credentials. In this section, we bring together findings from our analysis with findings from leaders in the field to provide some overarching conclusions and recommendations for next steps to advance the development of a coherent NDC quality system.

The opportunities and gaps in the field identified above through engagement with the various stakeholder groups included in this study as well as the mechanisms of influence discussed earlier shape the following recommendations. As we developed recommendations, we sought to account for the influence of national organizations on consumers, providers, and states to identify recommendations for next steps in NDC quality discussions. To promote action, we organized the recommendations by constituency although a number of these recommendations cut across constituencies and, indeed, require different entities to work together.

Given the number of philanthropic organizations engaged in or interested in NDC quality, funders can play a key role in coordinating across the philanthropic community and promoting greater conversation. Specifically, we propose the following:

» Support convenings and networks focused on the following goals to promote coordination.
  - Convene ***key representatives by function*** (e.g., researchers, accreditors, educational institutions, employers) and provide them with support so they may engage more broadly, discuss and disseminate information, and explore new standards and norms when they return to their respective stakeholder groups.
  - Promote ***cross-group engagement*** opportunities, including ***coalitions across funders***, to support communication and the sharing of information among influencers, and encourage the building of trust so that coalitions can form around shared goals.
  - ***Engage employers and educational institutions*** in the NDC quality conversation through existing advisory boards such as those required by accreditation processes.
  - Encourage stakeholders to coalesce around a ***definition of what quality means*** to their group and the purposes it serves.
  - Embolden stakeholders to work together to form ***foundational definitions in language and categories of credentials***. The meaning of various credentials can be addressed within each respective ecosystem.

One thread in our interviews was the longstanding experience that accreditors and states have in examining these questions of quality, despite the differences inherent in NDCs. We suggest that accreditors and states can serve as leaders in the following:

» Support and reinforce standards of transparency.

- Continue to promote standards and make them ***transparent to consumers*** (i.e., individuals and employers). This reinforces disclosure-based transparency. Also, set expectations that this information be readily consumable, readily accessible, and understandable such that consumers know how to use the information to make decisions about which credentials to value.
- ***Reinforce standards for providers*** not only through education-based transparency but also through incentives, capacity building, and through the development of new social rules.

» Promote employer engagement.

- ***Engage employers and educational institutions*** in the NDC quality conversation through existing advisory boards such as those required by ACCSC as part of the Program Advisory Committees.

Since both ***funders and policymakers*** can reinforce prioritizing efforts that leverage existing work, we propose the following:

» Engage with existing efforts to build data systems and connect them with quality discussions.

- Identify existing national- and state-level data-collection and system-building efforts.
- Support capacity-building efforts where there is no data infrastructure and include providers that have not previously been approached, such as private institutions, in those activities.
- Survey the data systems used by employers and consider how to facilitate the use of those systems to promote NDCs.
- Explore the relationship between data systems and quality standards to find out where there are gaps and opportunities to extend efforts. For example, areas where coverage is limited include bootcamps where CIRR is developing standards, and online providers where DP seeks to do the same. Emergent corporate trainings could benefit from similar models for oversight and quality.
- Focus on incorporating outcomes data collection into system-building efforts.

As groups reach some consensus on quality standards, we suggest that those providing oversight, including ***policymakers and funders***, attend to the following attributes:

» Support cross-cutting values in the establishment of quality standards that promote equity.

- Recognize that wage thresholds may exclude occupations that suffer from low wages because of market failures. Excluding these occupations from funding may benefit workers by moving them to higher paying jobs but may also leave some workers interested in these lower paying jobs with even less opportunity and further devalue these occupations. Policymakers need full information on these trade-offs to make conscious decisions about how to handle these potential implications.
- Be intentional about refraining from promoting gatekeeping. Ensure that all learners have pathways for additional education and that NDC quality standards are designed to promote CPL and articulation with degree pathways.

We have noted the important but multifaceted role that states play in this work. To that end, our recommendations for research and action are also varied:

- States should support and study funding models and quality frameworks.
  - Closely examine and assess various funding models, including the current proliferation of state funding mechanisms for NDCs. The HCM study[16] documenting recent workforce training investments by states is a good example of this work; other funding mechanisms warrant similar examination.
  - Research the impact and effectiveness of the many quality frameworks currently under development by states, such as those led by NSC.
  - Research the impacts of various funding models and their effectiveness.
- States should consider ways to extend current NDC quality efforts to include more providers.
  - Review all areas of NDC offerings to ensure there is some system of quality in place and to determine where there are gaps/needs and where alignment can happen.
  - Leverage existing systems of oversight for providers not currently included in public governance in order to ensure all providers have some external oversight. This would promote coordination across multiple entities within states and ensure that all providers have some degree of external oversight.

Finally, researchers continue to have a role to play in helping all of the actors in this complex ecosystem better understand the rapidly changing landscape. Though a broad range of research is needed, we recommend the following focus:

- Understand how information is used and how systems can be built.
  - Transparency efforts are generating a considerable volume of information on the many NDC options available. More needs to be learned about how NDC consumers make sense of this torrent of information and about the optimal ways NDC providers can communicate their key data points to their targeted stakeholders.
  - Funding and regulations can provide ways to restrict or prioritize NDC options, and more clarity on how these options are communicated and their eventual impact may be helpful.

National organizations that are influencing quality also have an opportunity to engage with multiple consumer and provider groups. Taking advantage of that breadth, we offer some recommendations below:

- Share examples of NDC use that demonstrate how NDCs are used among employers, build trust, and support new norms of use.
  - Given the many actors in this area and the volume and variety credentials, more attention must be given to conveying information on credentials and creating trust in them among actors who use them.
  - Provide employers with the resources they need to reach a better understanding of how to use

16 Murphy, 2023.

NDCs. This is essential given the shift to skills-based hiring in many states. Efforts focused on employers are limited. Existing efforts could be expanded through further investment to increase their capacity or by channeling funds from investments focused on other stakeholder groups—e.g., consumers or providers—to projects focused on engagement with employers instead.

- Promote the valuing of the occupations often addressed by NDCs through examples of their use and necessity. As one interviewee explained "We have to reconcile the equal value that investing in people and investing in training in an array of fields means investing in all of us. We need physicians, poets, pilots, and plumbers."

» Support technical assistance to states and providers.

- Technical assistance efforts are focused on various areas including program reform, competency-based education, and standards setting. Each can focus on key areas of activity including stakeholders' needs for data, consistent definitions, and quality standards. Providers may also benefit from technical assistance tailored to promoting engagement with employers with the goal of improving employer awareness of credentials.

There are many possible steps for building an NDC quality system. In assessing this system, some issues are clear and in need of addressing, as noted above. Much of this activity is already occurring within states with the influence of several actors. Many opportunities exist to form collaborative spaces for organizations to inhabit and to align efforts to create more coherent quality systems. As credentialing continues to evolve, systems of quality need to keep pace. The field is at a crucial moment where these issues are increasingly garnering attention. With all this attention comes the need and opportunity to guide NDC quality efforts more systematically toward a coherent approach. Workers and learners are depending on these efforts to ensure their goals are actualized when they pursue the promise of an NDC or non-degree pathway.

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# Appendix A: Methods

This landscape scan includes multiple approaches to outreach including: a systematic web scan to gather information on key actors involved in NDC quality and their efforts to promote quality, as well as a review of recent publications by key actors in NDC quality; an open survey to major organizations at various levels involved in NDC quality to gather information on key activities; and interviews with key actors to identify areas where policy and practice have made advances in promoting NDC quality.

To engage with a wider group of organizations, we conducted outreach in a variety of ways via established networks such as the Non-Degree Credential Research Network and other prominent national membership organizations, accrediting bodies, and other organizations that have been involved in convening and promoting NDC quality. Initial data from this scan was used to inform the discussion in a convening held in January 2023. The convening organized by NCSL brought together approximately 40 key actors in engaged in NDC quality efforts, state leaders involved in NDC quality, and researchers in the area of NDC quality. The dialogue from this convening informed ongoing data-collection efforts for this project by integrating current trends in the NDC quality market.

For each organization involved in NDC quality, we gathered detailed information on their approach to NDC quality, including whether they are focused on credential design or outcomes, the quality elements or frameworks they focus on, the stakeholder groups they seek to engage with (e.g., policymakers, consumers, institutions, employers), partners they work with, and how they see their role in NDC quality. We examined the role of each key actor, their potential contribution to the overall NDC quality landscape, and the kinds of measures of quality that are most relevant to each and their primary stakeholder groups. The research for this phase of the project further examined the different approaches to quality across these actors and how they apply to these different stakeholder groups.

Data for this report comes from interviews with 36 leaders at 29 national organizations involved in NDCs. Data from the preliminary scan and January 2023 convening were used to inform organization selection. We considered organizations situated within various contexts to illustrate different approaches to NDC quality and sought organizations with established NDC quality efforts interested in engaging in research on their activities. We included organizations in different regions of the country with variation in their missions, activities, modes of influence, and stakeholder engagement. We sought variety among organizations in terms of activities and stakeholders. See Appendix B for a summary of NDC organizations.

Within each organization, we conducted interviews with people in leaderships positions. We spoke with leaders who could speak to the organizations' overall approach to noncredit education, including quality definition, involvement in NDCs, who they aim to influence, and key partners and funding. We interviewed executives, founders, and managers. Overall, we conducted 36 interviews across 29 organizations from February 2023 to August 2023.

Interviews covered various topics focused on the context of noncredit credential quality at each organization and the specifics of each organization's related activities. Topics related to context included involvement in NDCs, quality definitions, strategic aims, funding mechanisms, and partnerships. Topics related to the mode of influence were based on the EERC conceptual model for NDC quality (i.e., norm setting, regulation, and transparency) and supplemented by additional topics from the scan conducted for the first phase of this research. The topics included labor market alignment, outcomes, outcomes-based measures, and data issues.

Interviews ranged from 30 to 60 minutes and were conducted via Zoom. Interviews were recorded and transcribed using Otter AI and were checked for accuracy. In addition, detailed notes were taken during the interviews. Summaries that examined key quality elements for each program were compiled based on the transcripts and interview notes and then organized around the broad categories described in the EERC conceptual quality model. In addition, we compiled summaries of each college's context concerning funding, state oversight, and program organization. These summaries provided the basis for our analysis of each element of quality across organizations to understand commonalities and differences in their approaches to NDC quality. Our analysis aimed to understand what organizations were doing to address each quality and determine whether these elements needed revision or if others were emergent. The findings are reported in the following sections: quality definitions, major activities, and stakeholder engagement.

To supplement the interviews, we also collected information on additional organizations that were identified as potential NDC quality influencers in the interviews and through prior research. These additional 30 organizations were summarized using the same template as the organizations that participated in interviews.

The summaries were sent to organizations to verify their accuracy and engage organizations in reflection on their work in the NDC quality ecosystem. Ongoing efforts are underway to engage with these organizations and understand their role in the NDC quality ecosystem.

Detailed descriptions of organizations in the NDC quality ecosystem are provided in a companion document, titled "Summary of National Organizations".

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