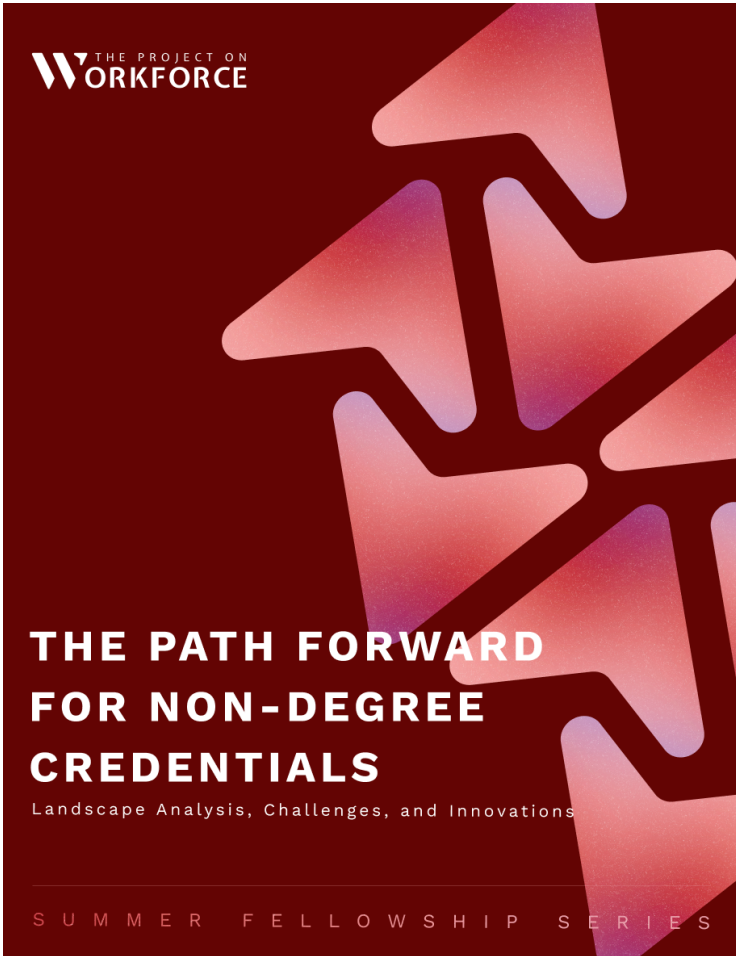


The Path Forward for Non-Degree Credentials: Landscape Analysis, Challenges and Innovations



The Project on Workforce at Harvard Summer Fellowship Series

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Executive Summary

Non-degree credentials (NDCs)—which can take forms as varied as bootcamps, micro-credentials, apprenticeships, and licenses—are offered in the hundreds of thousands by post-secondary institutions and other vendors. Despite this proliferation, the impact and value of NDCs remains unclear. Data on who attains NDCs—and how those credentials ultimately impact their employment outcomes—is elusive, making it challenging for post-secondary institutions to vet and select NDCs that are responsive to student needs and valued in the job market.

In this study, we sought to understand the types of NDC offerings available at eleven colleges and universities and the extent to which those NDCs deliver on the promise of better jobs. Our 11 participating institutions represent a diverse group of community colleges and both public and private 4-year colleges and universities. The majority are members of the [Taskforce on Higher Education and Opportunity](#), a collective of institutions committed to economic mobility and workforce development.

Our conversations evidenced the need for greater support on longitudinal data collection and analysis, alignment between employers and post-secondary institutions, and institutional capacity for rigorous quality assessment and comparative evaluation of NDCs. Based on the findings of our research, we propose recommendations across the institution, employer, student, and policy level that Strada Education Foundation, among other stakeholders, could employ to better address these challenges.

Background

Higher education institutions offer a wide range of courses that vary according to subject type, program duration, and course requirements.[1][2] Students who pursue a traditional post-secondary pathway may opt for a 4-year bachelor's degree or 2-year associate degree. Alternatively—or simultaneously—they can obtain **non-degree credentials** (NDCs) such as certificates, certifications, licenses, apprenticeships, or boot-camps. The supply of such NDCs has witnessed a sharp spike in the last few years, coinciding with COVID pandemic-era demands for quick, digital courses.[3] [4] According to Credential Engine, over 500,000 NDCs were provided in the United States in 2022.[5]

Several potential advantages of NDCs are being echoed in government announcements and policy agendas. NDCs are generally both more affordable and shorter in duration than traditional degree pathways. They are also attractive options for individuals looking to quickly upskill or reskill in a particular field.[6] In this way, NDCs may play an important role in helping individuals become more employable and subsequently fill existing gaps in the labor market.[7] These advantages are reflected in government announcements such as the “Roadmap to Support Good Jobs” and “Talent Pipeline Challenge” that emphasize job readiness.[8][9]

Several states have worked towards improving the accessibility and affordability of NDCs. New Jersey's 65 by 25: Many Paths, One Future campaign and Louisiana's MJ Foster Promise Program enable individuals to gain skills for in demand professions. Some states have eased the

financial burden for those taking up industry credentials through programs including Indiana's Workforce Ready Grant, which provides credentials for free, and Virginia's FastForward program, which follows a cost-sharing model among relevant stakeholders.[10]

Despite a push from federal and state governments, employers are still trying to understand and articulate the value of NDCs. In the information and technology sector, there has been a rise in employer-issued credentials, including those by Amazon Web Services, Microsoft, and Cisco.[11] While many of these, and other industry credentials, are being incorporated into credit-bearing university curriculum and stacked towards degrees, a study from the University Professional and Continuing Education Association (UPCEA) revealed that 65% of employers do not know how to gauge candidate skills based on attainment of an NDC.[12] This is exacerbated by recruitment procedures that cater to those with conventional degrees. [13]

Data collection, analysis, and sharing remains the biggest challenge. There is little or no information on the longitudinal impact of NDC attainment on employment outcomes. While states can refer to labor market data derived from unemployment insurance, this approach is ultimately not meaningful if individuals work for the federal government, move to another state, or do not provide their Social Security Number.[14] While the recent Adult Training and Education Survey (ATES) is making progress towards NDC data collection, it remains a snapshot survey.[15] There is still a need to collect more data over an extended period of time to truly understand the uptake, completion rates, and outcomes associated with NDCs.

The dearth of data motivates this paper to delve deeper into understanding how higher education institutions offer NDCs with a focus on the technology space.

Study Design & Methodology

Scope

For this paper, we focused on tech and IT NDCs offered by eleven key 2- and 4-year colleges and universities—both private and public—who were identified in partnership with Strada Education Foundation, McKinsey & Company, and the Harvard Project on Workforce. The majority of participating institutions are members of the [Taskforce on Higher Education and Opportunity](#), a collective of higher education institutions dedicated to collaborative problem-solving and impact scaling at the intersection of workforce and higher education.

Interview participants tended to be leaders of their institutions, particularly within domains relevant to workforce development. A small number of faculty members at the University of Texas also participated in a 45-minute focus group to share their perspectives on NDCs offered at their institutions.

Methodology

After pilot interviews conducted with two participating institutions, we finalized a battery of approximately 20 questions focused on **institutional objectives and NDC offerings, employer perspectives, student experience and outcomes, and future plans** (see Appendix). All participating institutions then completed 45-minute interviews that were recorded and transcribed.

Colleges and universities interviewed included:

- The City University of New York (CUNY)
- George Mason University
- University of Montana
- Northern Virginia Community College (NOVA)
- New York University (NYU)
- Pima Community College
- Rio Salado College
- The University of Texas System
- Utah Valley University (UVU)
- Virginia Tech
- Wake Tech Community College

Key Findings

Data collection and analysis

Collecting data on student hiring outcomes is difficult. Constraints surrounding employment law and student data collection may obscure the impact of holding an NDC, or an NDC in combination with another degree, on hiring outcomes. While colleges and universities who partner with state Departments of Labor may be able to cross-reference student social security numbers with unemployment insurance records to identify students' places of employment and wages, they are not universally successful at ascertaining students' job titles—or whether their NDCs are relevant to their jobs at all—particularly if students have moved out of state or are employed by the federal government.

The lack of robust data infrastructures may also impact post-secondary institutions' eligibility for state funding. As one participant from Wake Tech Community College shared, "Many times, we're held accountable for data we don't have access to...some of the data [state legislatures are requiring for funding] make sense, but [it's] data that a college could never get. It's almost like a setup for failure."

However, things are changing. Efforts are underway to improve data infrastructure in ways that facilitate longitudinal assessments of student success. The University of Texas system (UT), for example, is partnering with Steppingblocks—a data analytics firm that specializes in workforce and educational outcomes—to assess the impact of a combined bachelor's degree and NDC on students' post-graduation outcomes. Steppingblocks' web-scraping methodology, which combs through student presence on platforms like LinkedIn, may help institutions like UT determine not only which companies are hiring students, but also what students' job titles are.

Institutions may also use predictive analytics to improve the experience of NDC students. Utah Valley University, for example, uses Civitas—an educational analytics platform—to anticipate the impact of specific interventions on student persistence and retention. The use of these algorithms may also make it easier for institutions to measure their impact on students while avoiding the ethical concerns that accompany randomized controlled trials in the higher education setting (e.g. randomly restricting access to NDCs).

Strength of employer-institution relationships

Some employers engage with post-secondary institutions in an advisory capacity, clarifying the knowledge, skills, and competencies desired among entry-level employees. However, the depth and extent of employer commitment remains highly variable.

Deeper employer involvement and consistency is needed in several key domains:

- Some interviewees referenced limited employer bandwidth to **hire and manage internship and apprenticeship programs**, particularly among regional, small, and mid-sized companies.

Institutions may experience success with developing bespoke, non-credit training pathways for specific employers. Through Accelerate Montana—a workforce development nonprofit affiliated with the University of Montana (UM)—UM was able to develop a custom Salesforce administrator training program for Advanced Technology Group (ATG) Cognizant, a sales software solutions company headquartered in Missoula. The program yielded 200 student completions, all of whom were ultimately hired by ATG Cognizant.

- Several colleges and universities vocalized a **need to ensure that enthusiasm for NDCs is articulated in job descriptions and by hiring leads**. "Even if an HR person who does a phone screen values that credential, it doesn't mean that the hiring manager—who's ultimately at the end of the line hiring candidates—values that credential [in the same way]," shared one interviewee from the City University of New York (CUNY).
- Employers are not always specific on **which durable skills** (e.g. creativity, teamwork, and communication) are most relevant to their available roles, and **how** they expect NDC candidates to demonstrate those skills prior to employment. Several participants—including those from Pima Community College, Rio Salado College, and the University of Texas at San Antonio—alluded to emerging "badging" systems, whereby students can accumulate digital badges that formally recognize competencies including negotiation, critical thinking, and conflict management.

NDCs and access to higher education

Some of the institutions interviewed alluded to the potential for NDCs to reduce barriers to higher education. Several interviewees, including University of Montana, Northern Virginia Community College, Pima Community College, Utah Valley University (UVU), and Virginia Tech explicitly mentioned an intention to reach marginalized learners—including students from Indigenous, rural, and first-generation communities—through NDCs and other forms of non-credit technical programming.

Indeed, if implemented effectively, NDCs may act as "on-ramps" to higher education. Northern Virginia Community College and the University of Texas System, for instance, referred to robust Credit for Prior Learning programs and the incorporation of NDCs—including most of those offered through CompTIA, Google, and Amazon Web Services—into credit-bearing curriculum, making it easier for students to begin a bachelor's or associates degree. As one participant from UVU shared, "Many of [our non-degree credentials] are useful enough that people can get meaningful jobs in [their] fields...[but the intent for us] is almost always [that students continue their] schooling and get an associates or bachelor's degree...I think the certificates kind of help them along the way [and remind them] hey, you know, you've gotten this far, keep going."

NDCs also tend to be more affordable than traditional pathways taken for credit. According to interviewed institutions, students may pay as much as \$2000 per credit, making NDC pathways—which, among interviewed institutions, generally cost less than \$1000—a more accessible choice for low-income learners. Two institutions, UVU and Pima Community College, also mentioned examples of employers subsidizing NDCs and post-secondary degrees for students, though this was predominantly observed among regional employers. Other interviewed institutions alluded to lobbying efforts—with some caution, due to the dearth of longitudinal NDC efficacy data—to extend short-term Pell grant eligibility to students taking NDCs, offering additional financial support to low-income learners interested in upskilling or reskilling.

However, many employers may still strongly prefer NDCs taken for academic credit, posing a significant cost barrier for low-income NDC students. As one institution shared, “Employers talk about how they really want a credit program [but aren’t paying for it]...I don’t know that I’ve even seen enough good intention [from those companies] that they’re hiring people with those skills.”

Faculty and student experience

Several institutions reported hesitance among faculty to formally adopt NDCs into the curriculum, especially for academic credit. In response to initial faculty skepticism about the relevance and efficacy of NDCs, some institutions created formal and informal means of incentivizing faculty members to consider NDC programming. The University of Texas system (UT), for instance, developed a system-wide taskforce dedicated to understanding labor market dynamics, post-graduation earnings data, and the value proposition of NDCs relative to regional industry trends. UT Faculty members who incorporate industry credentials into their curriculum are also eligible for a stipend and are further encouraged to explore the value and application of NDCs by attaining fully-funded industry credentials themselves.

While many institutions expressed difficulty in collecting student employment outcomes, many alluded to anecdotal accounts of student success while enrolled in the NDC program. Innovative approaches to student support include:

- **“Last-mile” support for students with resource constraints:** Colleges and universities may offer grants or additional resources to students facing personal challenges that hinder completion of their NDCs. For example, Wake Tech Community College offers a \$1000 Finish Line Grant that can be used for tuition, child care, medical or other financial emergencies. As one participant from Wake Tech shared, “I think [this type of support] has been very beneficial. It’s a little frustrating, because we know that [funding from the American Rescue Plan Act and other COVID initiatives] won’t always be here to help students at that level.”

Some affordability initiatives focus on reducing—or eliminating—the cost of required exams for in-demand, industry-recognized NDCs. Northern Virginia Community College (NOVA) shared that they have committed funding to its “Achieve Career Excellence” (ACE) initiative, which offers exam vouchers for eligible Information and Engineering Technologies students who plan to take select IT industry certificate exams.

- **Staff intermediaries, or “success coaches,” supporting students and vendors:** A few of the institutions referred to the role of supportive staff—both faculty and non-faculty—in acting as a “point person” between NDC vendors and learners themselves. The University of Texas at Permian Basin, for instance, hires Academic Support Coaches: non-faculty staff who are paid to complete NDC programs and then create synchronous, co-curricular learning communities for students pursuing the same NDCs.

Assessing and selecting NDCs

Many institutions alluded to the difficulty of selecting the most appropriate NDC offerings for their students. The proliferation of NDCs was described as overwhelming, with few reliable or automated ways for colleges and universities to assess the value of NDC offerings relative to one another.

A few institutions explicitly referred to a provider-agnostic stance—in other words, a broader, foundations-based system of instruction that mitigates the risk of a chosen NDC provider becoming obsolete or uncompetitive. “There’s still that perspective among faculty that we need to be agnostic to the provider—until and when some vendor ‘wins’, and it becomes ubiquitous for that concept,” shared a participant from George Mason University. “Obviously, no faculty [members] care anymore about showing Excel in their classrooms...it’s become ‘the verb’...We do run into a concern when we talk about cloud environments [where companies like] AWS and Microsoft are actively competing. We don’t want to be seen as throwing our hat in the ring with one vendor. We want to teach students the principles...and [leave more specific NDC direction] at the discretion of faculty and students.”

There is strong demand for more sophisticated analytic tools that allow college and university departments to understand which industry credentials bring the most value for their students. Specifically, the capacity to assess (1) what *knowledge and skills* students attain in particular degrees, including in the social sciences and humanities, in the context of (2) the *labor market conditions and post-graduation outcomes* in each discipline that help institutions identify the skills that make students eligible for better jobs—or better jobs faster.

More states are creating structured attempts at vetting NDCs for quality. Virginia’s FastForward Program, for instance, provides financial support for students partaking in short-term, workforce training programs intended to yield an industry credential upon completion. In order for NDCs to qualify for FastForward funding, institutions must receive approval on a case-by-case basis from the Virginia Community College System, which evaluates—upon submission and every three years thereafter—whether candidate NDCs are “industry recognized, portable, competency-based, third-party validated, and stackable.”[16]

The pace of higher education vs. tech

Post-secondary institutions may not always be able to keep up with advances in technology. According to several participants, rapid advances in technology sometimes renders degree curricula obsolete. As one participant from the University of Montana noted, “[Our institution] just got Board of Regents’ approval for a cybersecurity degree. Which is awesome...but essentially, they’re designing a curriculum for someone who’s going to graduate in 2027. Who knows what cybersecurity looks like in 2027? We need to have education and training systems for tech programs that are agile, both in terms of the core of curriculum and their delivery models. NDCs can help institutions become more agile.”

One participant from Pima Community College echoed this perspective, indicating that the fewer bureaucratic limitations on non-credit curricula allowed for faster adaptation to shifts in tech: “[Non-credit allows us to] make changes [and] updates in anticipation of what’s going to eventually get through the process on the credit side of the house...We try and align our noncredit to our credit [pathways] because we know learners can come right out of high school with a certification if they want to, and get a decent paying job.”

Informal and formal opportunities for applied learning

Both 2- and 4-year colleges and universities expressed strong interest in creating opportunities for NDC students to demonstrate their learning in real-world settings.

Open-access centers for applied learning may help students put their skills into practice while attracting the interest of industry leaders. Pima Community College, for example, hosts a live cyber warfare range: a free, publicly accessible environment allowing cybersecurity students to apply their learning in a real-world setting: “Industry professionals actually come into the range to look at the latest malware...and make connections with students and potential students. It’s incredibly valuable, and a big part of [the] hands-on, disruptive learning where you can try anything...[it’s] a great culture of shared learning, knowledge, and helping each other out.”

Other colleges and universities may choose to leverage online learning resources focused on experiential learning. Utah Valley University (UVU), for instance, uses Pluralsight—an online learning and workforce development platform—as part of a co-curricular, team-based learning activity that prompts students to exercise project management skills in scenarios that approximate the real world. “I’m really interested in getting students experience in their first two years. I think it’s easier for them to get internships [after] they’ve had a little experience working in teams and working on projects,” shared one participant from UVU. “We’ve used Pluralsight to upskill [students who] may...want to [work on real-world] projects but may not be quite skilled enough to [meet all expectations yet].”

Recommendations

The chart below further illustrates the key findings and existing challenges from the qualitative data collected on NDCs, and presents corresponding solutions at various stakeholder levels.

Harvard Project on Workforce | Strada 2023 : Recommendations

Stakeholder Level	Existing Challenges	Solution	Rationale
Institution level	<ul style="list-style-type: none"> · Lack of data availability and usage · Dearth of robust data infrastructure affects state funding eligibility · Rapid technology advancements may render degree curricula obsolete 	<ul style="list-style-type: none"> · Utilize data analytics firms like Steppingblocks for additional insight on outcomes (e.g. students' job titles) · Advance proposals for state data-sharing agreements · Leverage non-credit pathways to make NDCs more agile and relevant in the tech space · Partner with regional workforce development boards to better understand and meet the needs of the local labor market 	<ul style="list-style-type: none"> · Enables data-based decision making · Validates program effect and assessment · Facilitates longitudinal assessments of student · Ensures students receive up-to-date training
Employer level	<ul style="list-style-type: none"> · Lack of clarity surrounding validation and recognition · Limited employer bandwidth for internship and apprenticeship programs 	<ul style="list-style-type: none"> · Assist employers in better forecasting their needs; partner with organizations like the Council for Adult and Experiential Learning (CAEL) that act as relationship brokers between employers and post-secondary institutions · Co-develop non-credit job training pathways and apprenticeship programs with local colleges and universities · Invest in on-campus centers for applied learning 	<ul style="list-style-type: none"> · Defines benchmarks for evaluating tech-focus credentials · Provides workforce training tailored to employer needs
Student level	<ul style="list-style-type: none"> · Need for up-front career guidance, expectation-setting surrounding the value of non-degree credentials in the job market, and NDC selection support · High costs associated with degree programs 	<ul style="list-style-type: none"> · Build capacity for student guidance and support from faculty, course leads, and other success staff · Incentivize faculty to incorporate NDCs into credit-bearing curriculum through stipends and subsidized NDC offerings · Provide robust career resource support and pathway mapping · Leverage institutional grantmaking and federal aid to offer "last-mile" scholarship support for low-income students and other marginalized learners · Invest in co-curricular experiential learning platforms (e.g. Pluralsight, Riipen) 	<ul style="list-style-type: none"> · Guides students to meet and relevant career opportunities · Empowers students to make informed decisions about education · Increases accessibility and inclusivity of higher education for marginalized students
Policy Level	<ul style="list-style-type: none"> · Need for longitudinal data collection and analysis · Discontinuation of COVID-era funds for workforce development and student support 	<ul style="list-style-type: none"> · Establish short-term Pell funding pathways for NDCs—and accountability measures that ensure efficacy of those programs · Develop accountability frameworks for state funding (e.g. those implemented by Virginia FastForward) · Fund longitudinal data collection 	<ul style="list-style-type: none"> · Incentivizes the pursuit of non-degree programs · Ensures program accountability and efficacy

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Based on the qualitative data collected, several key recommendations can be implemented to address challenges in the NDC space:

- **Explore partnerships with data analytics firms that fill in existing gaps in outcomes data.** In the case of the University of Texas system's partnership with Steppingblocks, for instance, web-combing methodology may enable the collection of student data—including job titles and longitudinal career mobility—at scale, helping institutions make data-informed enhancements to non-degree credential programs.

- **Unite key stakeholders to advocate for state data-sharing agreements and funding.** As mentioned by Wake Tech Community College, some of the data requirements for state funding may be unattainable for institutions—particularly resource-strapped community colleges—which impacts institutions’ ability to access and leverage state funding for NDC program improvement. As such, we recommend collective action for state data-sharing agreements that strengthen NDC programs and generate a better understanding of longitudinal student outcomes. [17]

Short-term grants and cost-sharing initiatives that incentivize student completion of NDCs—including Wake Tech’s Propel initiative, Virginia FastForward, and Indiana’s Next Level Jobs Workforce Ready Grant—enable low-income students and other marginalized learners to enroll in high-demand certificate programs without incurring high costs.[18] State policymakers can further advance equity in NDC access by extending short-term Pell grant eligibility to NDCs, and by continuing COVID-era “last-mile” student support, including Wake Tech’s Finish Line Grant program. However, institutions and policymakers advocating for Pell grants should also advance accountability measures that vet NDCs for industry recognition and portability to prevent low-impact, for-profit entities from taking advantage of federal funding.

- **Invest in student and faculty co-curricular learning.** The rapid pace of technological change and shifts in the hiring market calls for agile training programs that provide students with applied learning experience. To ensure that course content is relevant and on pace with industry demands, institutions can leverage non-credit pathways and co-curricular project-based learning opportunities that evade the institutional bureaucracy associated with for-credit pathways. Institutions and grant-makers can also follow the University of Texas System’s example by incentivizing faculty to develop both non-credit and credit-bearing NDC pathways. Employers, workforce development boards, and both governmental and private grant-makers should also invest in innovative centers of applied learning—like Pima Community College’s live cyber warfare range—that give students practical experience, attract the attention of industry leaders, and create opportunities for social capital exchange.

Conclusion

NDCs have become widely available and offer various opportunities for individuals seeking to upskill or re-skill in today’s rapidly evolving job market. However, several challenges need to be addressed in order to understand the value of NDCs in the hiring market, assess the quality of NDCs relative to one another, and support the immediate needs of NDC learners.

Our conversations evidence a need for robust data collection and analysis, more alignment between employers and post-secondary institutions, and greater institutional capacity to comparatively evaluate and select the most appropriate NDCs for their students. Stakeholders can make progress against these goals by engaging in collective action for better data-sharing agreements between states and institutions; exploring partnerships with external analytic firms; and investing in faculty and student exposure to NDCs and supplemental experiential learning, in both non-credit and credit-bearing settings.

Building upon these findings, a qualitative analysis that highlights the experiences and perspectives of key stakeholders not interviewed—including students, employers, and policymakers—may further provide a comprehensive understanding of the effectiveness and impact of NDCs.

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About the Project on Workforce at Harvard

The Project on Workforce is an interdisciplinary, collaborative project between the Harvard Kennedy School's Malcolm Wiener Center for Social Policy, the Harvard Business School Managing the Future of Work Project, and the Harvard Graduate School of Education. The Project produces and catalyzes basic and applied research at the intersection of education and labor markets for leaders in business, education, and policy. The Project's research aims to help shape a postsecondary system of the future that creates more and better pathways to economic mobility and forges smoother transitions between education and careers. Learn more at www.pw.hks.harvard.edu/our-work.

Appendix

LIST OF INTERVIEW QUESTIONS

Current offerings

- What is your objective with offering technology-focused, non-degree credentials?
- What credentials do you offer, by subject and type?
- Are these credentials a part of an existing degree pathway, standalone, or both?
- Is there credit associated with these credentials?
- In what school/unit(s) are these offered?
- What is the modality of these offerings (in-person, hybrid, virtual)?
- What is the intended timeline for completion?
- What are the tuition & fees associated with the credentials?
- What is the role of faculty? Did you go through faculty governance?
- What type of student supports do you offer (e.g., tutoring, advising)?
- Is there any "soft skill" development associated with the credential?

Employer partners

- Which employers have validated the credentials? Are they national/regional/local?

- How do the credentials create value in the marketplace (e.g., commitments to interview, targeted roles aligned to the credentials)? Is there any hiring signal from employers?
- What employer engagement is embedded in the course of study?

Students

- Who is the target student (e.g., degree-seeking, continuing education, upskilling)?
- How many students are enrolled at a given time?

Data, Success Factors, and Future Plans

- What data do you currently collect?
 - This might include...
 - Enrollments and student characteristics
 - Completions
 - Outcomes (e.g., employment within 6 months)
- What is working well with this program? What is not?
- On a 1-10 scale, how promising is this program for the future? Do you intend to keep it going, or grow it? What are your future plans?
- What is the state doing from a legislative perspective to strengthen these programs, so that we can get the data around outcomes? Is there anything you or other institutions are planning to do from a lobbying standpoint?

Endnotes

[1] Palmer, Iris. "An Explainer: Non-degree vs Non-credit programs." *New America*. <https://www.newamerica.org/education-policy/edcentral/an-explainer-non-degree-vs-non-credit-programs/> (accessed July 27, 2023).

[2] Thompson, Evan. "Is a Non-Degree Program Worth It?" *The Best Schools*. <https://thebestschools.org/magazine/are-non-degree-programs-worth-it/> (accessed July 27, 2023).

[3] Treffeisen, Beth. "Digital non-degree credentials may go into a black hole when applying for jobs, research says." *Phys.org*. <https://phys.org/news/2023-05-digital-non-degree-credentials-black-hole.html#:~:text=0:Digital%20non%Ddegree%20credentials%20may%20go%20into%20a%20black%20hole,applying%20for%20jobs%2C%20research%20says&text=Many%20human%20resource%20and%20talent,accord> (accessed July 27, 2023).

[4] "Demand for online learning and alternative credentials surges during COVID-19." *ICEF Monitor*. <https://monitor.icef.com/2020/08/demand-for-online-learning-and-alternative-credentials-surges-during-covid-19/> (accessed July 27, 2023).

[5] Smalley, Andrew and Landon Jacquinot. "State Approaches to Non Degree Credentials." *National Conference of State Legislatures*. <https://www.ncsl.org/education/state-approaches-to-nondegree-credentials> (accessed July 27, 2023).

[6] Ibid.

[7] Ibid.

[8] "Biden-Harris Administration Roadmap to Support Good Jobs." <https://www.whitehouse.gov/briefing-room/statements-releases/2023/05/16/biden-harris-administration-roadmap-to-support-good-jobs/> (accessed July 27, 2023).

[9] Fain, Paul. "Tracking Results in Minnesota." *The Job: Measuring Quality*. <https://workshift.opencampusmedia.org/measuring-quality/> (accessed July 27, 2023).

- [10] Smalley, Andrew and Landon Jacquinot. "State Approaches to Non Degree Credentials." *National Conference of State Legislatures*. <https://www.ncsl.org/education/state-approaches-to-nondegree-credentials> (accessed July 27, 2023).
- [11] Half, Robert. "The 29 Most Valuable IT Certifications." *Robert Half*. <https://www.roberthalf.com/us/en/insights/career-development/which-it-certifications-are-most-valuable> (accessed July 27, 2023).
- [12] D'Agostino, Susan. "Microcredentials Confuse Employers, Colleges and Learners." *Inside Higher Ed*. <https://www.insidehighered.com/news/2023/03/03/microcredentials-confuse-employers-colleges-and-learners> (accessed July 27, 2023).
- [13] Camilleri, Anthony F, Brandon Muramatsu, and Philipp Schmidt. "Credentials to Employment: The Last Mile." *Digital Credentials Consortium*. <https://digitalcredentials.mit.edu/docs/Credentials-to-Employment-The-Last-Mile.pdf> (accessed July 27, 2023).
- [14] Mehl, Gelsey. "What We Do (and Don't) Know About Noncredit Workforce Programs." *New America*. https://www.newamerica.org/education-policy/edcentral/what-we-do-and-dont-know-about-noncredit-workforce-programs/?utm_source=the-job.beehive.com&utm_medium=newsletter&utm_campaign=measuring-quality (accessed July 27, 2023).
- [15] Tesfai, Lul, Kim Dancy, and Mary Alice McCarthy. "Paying More and Getting Less How Nondegree Credentials Reflect Labor Market Inequality Between Men and Women." *New America*. <https://www.newamerica.org/education-policy/reports/paying-more-and-getting-less/> (accessed July 27, 2023).
- [16] Cruse, Lindsey R. et al. (2023). "The Non-Degree Credential Quality Imperative." *National Skills Coalition*. https://nationalskillscoalition.org/wp-content/uploads/2023/07/The-NDCQ-Imperative-report_fnl2-1.pdf (accessed July 27, 2023).
- [17] Tesfai, Lul, Kim Dancy, and Mary Alice McCarthy. "Paying More and Getting Less How Nondegree Credentials Reflect Labor Market Inequality Between Men and Women." *New America*. <https://www.newamerica.org/education-policy/reports/paying-more-and-getting-less/> (accessed July 27, 2023).
- [18] Smalley, Andrew and Landon Jacquinot. "State Approaches to Non Degree Credentials." *National Conference of State Legislatures*. <https://www.ncsl.org/education/state-approaches-to-nondegree-credentials> (accessed July 27, 2023).