



# Non-degree Credentials Research Network

## Recent Developments and New Opportunities for Non-Degree Credentialing Research

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## DEDICATION



This report is dedicated to Dr. Stephen Crawford, co-founder of the Non-degree Credentials Research Network (NCRN) and research professor at George Washington University. Dr. Crawford was a passionate advocate for the field of non-degree credentialing research, and his leadership was essential to the establishment and growth of the NCRN. A tribute to Dr. Crawford's life and work can be found on the [website of the GW Institute of Public Policy](#).

# ABOUT THE NON-DEGREE CREDENTIALS RESEARCH NETWORK (NCRN)

The Non-degree Credentials Research Network (NCRN) is a community of 370 researchers and practitioners (users of research data and analysis) concerned with all aspects of credentialing falling outside the traditional post-secondary degree. Network members work with diverse types of credentials, including but not limited to credit-bearing certificates (both sub-baccalaureate and graduate-level), certifications, licenses, apprenticeships, badges, nano/micro-degrees, and non-credit certificates.

The NCRN's mission is to advance research on non-degree credentials by facilitating the development of a coherent research agenda for the field that prioritizes equity and labor market mobility. We also seek to advance the field by providing space for researchers to share findings with each other, provide feedback on each other's work, learn about novel sources of research data, find new opportunities for collaboration and professional development, and disseminate findings to policymakers and practitioners.

The NCRN was established with the support of Lumina Foundation in 2018 to formalize and expand the activities of an informal network of researchers focused on sub-baccalaureate education based in universities and think tanks in the Washington, DC area. Three major conferences were held on the campus of George Washington University in 2019 and 2020, after which the network began holding monthly webinars in response to the COVID-19 pandemic. In 2021, Lumina awarded additional funding to continue hosting webinars and resume in-person events and expand the network's activities – which now include issuing small grants to individual researchers, collaborating with an independent publication (Workforce Monitor) to expand attention to workforce research, a biweekly newsletter, and efforts to inform federal data collection projects. Please refer to the appendix at the end of this report for a summary of the NCRN's accomplishments in recent years.

# PREFACE

This report highlights recent trends in the work being done by Non-degree Credentials Research Network (NCRN) members. It demonstrates the value of the conversations that occur at NCRN meetings and identifies areas of opportunity for Network members to focus their work in the coming years. The intent of this report is to contribute to the coordination of research in the field, which, if we allow ourselves to be guided by the experiences of other scientific disciplines,<sup>1</sup> will help the research community collectively answer key questions about the quality and value of credentials faster than would occur otherwise.

The report summarizes key areas of active inquiry that emerged from the NCRN's webinar series over the past two years, the 2022 Spring Conference ("Non-degree Credentials on the Move"), 2022 Winter Meeting; and events and publications produced by Network members over the past year. The report is organized by ten themes - or challenges - that were identified by NCRN project staff as recurrent topics of interest across all Network activities and in recent contributions to the literature. In so doing, this report continues the NCRN's role as a resource for the broader research community to identify and coordinate efforts around topics in which inquiry can inform practice, with the ultimate goal of creating a more equitable and prosperous society.

## Ten Key Themes in the Non-Degree Credentialing Field

- Making Sense of Non-Credit
- Integrating and Improving Data Systems
- New Federal Interest in Credentialing and the Skilled Technical Workforce
- Prioritizing Equity in the Non-degree Marketplace
- Getting Career Navigation Right
- Understanding and Engaging Employers
- Realizing the Potential of Artificial Intelligence (AI) and Other Technological Advances
- Scaling Best Practices
- Globalizing the Conversation
- Ensuring Effective Dissemination of Research Findings

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<sup>1</sup> For examples of how coordination can affect the long-term outputs of scientific fields, refer to biophysicist John Platt's [1964 article in Science](#) titled "Strong Inference."

# MAKING SENSE OF NON-CREDIT

Multiple NCRN members are actively conducting research on non-credit credentials at all levels of higher education, from community college workforce education to post-graduate non-credit certificates. Non-credit instruction can be seen simultaneously as a barrier to credential attainment and a needed channel for innovation in higher education. Detractors of non-credit education note that students often make significant investments in tuition and other expenses needed to obtain non-credit credentials that cannot be “stacked” into degrees or credit-based credentials, which may be perceived as unfair in cases where a non-credit program was just as academically rigorous as a for-credit program. Yet, non-credit instruction is simultaneously seen as a sphere of innovation: because non-credit credentials can be approved and launched without the costly and lengthy processes associated with accreditation, non-credit credentials can be used to pilot new fields of study or innovative approaches to instruction that would be more difficult to launch if credit-bearing.

NCRN members are finding that evidence exists to support both perspectives. Research projects are describing the universe of non-credit credentials, producing research and data products that may ultimately facilitate the conversion of non-credit credentials into academic credit or otherwise streamline transitions between for-credit and non-credit instruction. Two projects of particular note include (1) a research project led by Rutgers University working to define and survey the landscape of non-credit credentials, and (2) Credential As You Go, a

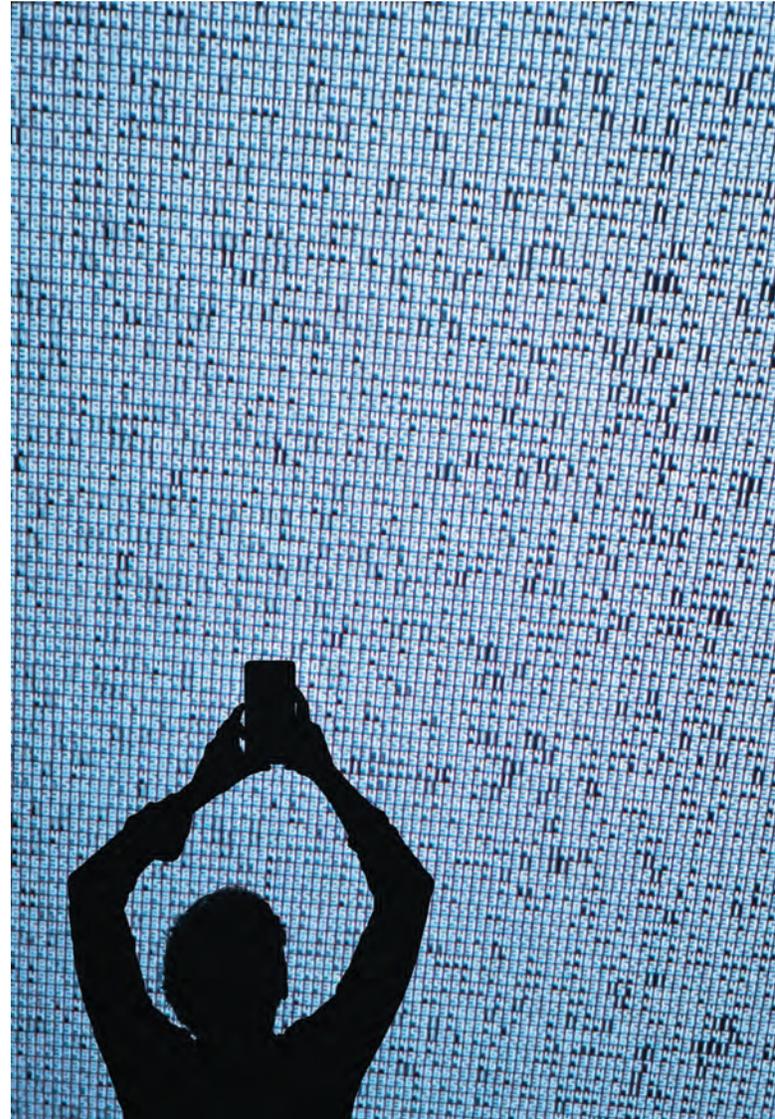
national initiative to create incremental credentialing pathways (starting with three states: Colorado, New York, and North Carolina) that allow individuals to integrate non-credit credentials into degree programs and study the outcomes of incremental credentialing through a rigorous research design. Peter Bahr, Rooney Columbus, and colleagues at the University of Michigan are also conducting research using administrative data to analyze the labor market impact of non-credit instruction in states where data is available for analysis.

Despite growing interest in non-credit credentials, data on non-credit enrollments remains minimal in many of the commonly used administrative data systems in the field. This problem is complicated by the fact that some survey respondents may not be able to definitively recall whether a course or non-degree credential they completed was credit-bearing. Some NCRN members see potential benefit to their work from the inclusion of non-credit credentials in the Integrated Postsecondary Education Data System (IPEDS), especially if non-credit data reporting becomes a universal requirement after it is phased in on a voluntary basis in 2023 and 2024. There have also been promising developments in some individual states. Maryland, for example, has established a Noncredit Workforce Completers System to track non-credit enrollment outcomes and Virginia collects data on individuals who complete credentials with state (non-WIOA) assistance. As available data grows, so will opportunities to analyze the short- and long-term value of noncredit credentials.

# INTEGRATING AND IMPROVING DATA SYSTEMS

One of the reasons for the dramatic growth in the number of researchers in the NCRN today is the growing availability of data. This is allowing NCRN members to find better answers to foundational research questions related to the labor market returns to specific credentials and how (and why) those returns vary by demographic and credential characteristics, including measures of credential quality. Data is also enabling the fine-grained analysis of which credentials are demanded by employers and held by potential jobseekers at a high level of geographic disaggregation, as NCRN members learned in a webinar hosted by Cesar Montalvo of the University of Virginia in 2022. We are also able to see, to a growing extent, how non-degree credentials fit into pathways that may also include degrees and work experiences and how such experiences affect non-degree credential outcomes in the labor market.

As recently as 2010, there was virtually no data on who obtains non-degree credentials and how the holders of those credentials fare in the labor market. A few scattered surveys and analyses existed before this date that resulted in data points on specific types of non-degree credentials in specific industries and locations. However, some of the most important sources of quantitative data used within the NCRN community have emerged or been significantly enhanced in the past five years in which the NCRN has existed (since 2018). These data sources include:



## FIVE KEY NEW SOURCES OF QUANTITATIVE DATA

### Federal surveys enhanced by GEMEnA

GEMEnA, the federal Interagency Working Group on Expanded Measures of Enrollment and Attainment, promoted the inclusion of measures of non-degree attainment on several of the major recurring and ongoing federal surveys covering topics related to education and the labor market. GEMEnA also facilitated the creation of a major survey dedicated primarily to non-degree credentials, the Adult Training and Education Survey (ATES). ATES microdata became available to researchers in 2018; some questions from the ATES reappeared on the National Training, Education, and Workforce Survey (microdata release expected in late 2023).

### National Labor Exchange Research Hub

A project of the National Association of State Workforce Agencies and the Direct Employers Association, the National Labor Exchange (NLx) Research Hub provides access to a national sample of approximately four million job postings at any given time. Unlike data supplied by for-profit firms that aggregate job postings, the NLx is available free of charge for use in academic and policy research.

### Statewide Longitudinal Data Systems and Coleridge Initiative

Since 2005, the U.S. Department of Education has been making grants to individual states in waves to create data systems that combine administrative data on educational attainment with data on labor market outcomes (most commonly from unemployment insurance wage records). Today, 49 states, DC, and 3 territories have a Statewide Longitudinal Data System (SLDS). Data access procedures vary by state, and it has sometimes been challenging for researchers to get approval to access SLDS data. However, since 2019 the Coleridge Initiative has offered an Administrative Data Research Facility (ADRF) that is expanding access to SLDS data for researchers.

### Strada-Gallup Education Consumer survey

The Strada Education Network has been conducting an Education Consumer Survey (ECS) with the assistance of Gallup over the past several years. The ECS has the advantage of allowing researchers to chart changes over time in the perceived value of different types of credentials and how perceptions correlate with demographic, geographic, economic, and educational characteristics.

## Postsecondary Employment Outcomes

The U.S. Census Bureau has been publishing experimental tabulations through the PSEO (Post-Secondary Employment Outcomes) program since 2019. PSEO data is available only for select universities and university systems that have agreed to share data on their graduates with Census; however, it represents a fast-growing source of administrative data on what happens to students who complete various types of credentials, including certificates offered by participating institutions. As of 2023, PSEO includes data from institutions in 24 states; about 26% of all U.S. college graduates' data is incorporated into PSEO.

The universe of data potentially available to researchers to analyze non-degree credentials appears to be expanding faster than the community of credentialing researchers, notwithstanding the dramatic growth of the Network over the past few years. Other potential sources of data are emerging on the horizon that may unlock new insights into the quality and value of credentials and help workers and employers to make better decisions. These include:

- **SOCIAL MEDIA** The sheer amount of data being generated on social media is mind-boggling, and some of it is surely relevant to the decisions that individuals make about credentials and careers. Not only do credential providers increasingly prioritize social media – notable for the potential to micro-target prospective students – in their advertising budgets, but platforms such as TikTok and Reddit increasingly provide space for workers and learners to share information about which credentials are perceived to be of quality and hold labor market value. Multiple NCRN members have mentioned LinkedIn as a high priority platform for research given the detail held in LinkedIn profiles on self-reported credentials and career mobility outcomes, though access procedures for LinkedIn data have limited its use in the research community.



- **HR INFORMATION SYSTEMS AND OPEN STANDARDS** The HR Open Standards movement is engaging with employers to create standardized datasets that can be used to track the effect of credentials, and training that may facilitate the attainment of credentials, within a firm's internal labor market. While significant hurdles remain to allowing researchers to access data held by firms on their workforces, data infrastructure is evolving to the point that the barriers in many cases are related more to business and privacy concerns than technical limitations.
- **NATIONAL SECURE DATA SERVICE** The National Science Foundation is leading efforts to create a common platform for researchers to use confidential survey and administrative data from multiple agencies. The National Secure Data Service is expected to offer researchers the ability to link data from multiple federal agencies and offer a simpler data access procedure than currently exists with the Census Bureau's Federal Statistical Research Data Centers.
- **NATIONAL TRAINING, EDUCATION, AND WORKFORCE SURVEY (NTEWS)** Although GEMEnA is no longer active, its legacy continues with the launch of the National Training, Education, and Workforce Survey or NTEWS (in the field in 2022 with 40,000+ anticipated respondents, first microdata is expected in late 2023). The sample is expected to grow to 120,000+ respondents in 2024 and beyond. The NTEWS will be longitudinal in nature, allowing researchers to track the attainment of non-degree credentials for select respondents over the course of the next decade. Data from the NTEWS will also be compatible with some data from the National Survey of College Graduates for researchers seeking a more comprehensive view of non-degree attainment across the entire U.S. population.

Fully exploiting some of these resources will require researchers to apply advanced technical skills and may require some members to acquire new skills and knowledge. However, innovative researchers who take advantage of new sources of data may find that it can support research that gives us increasingly detailed, nuanced answers to the fundamental questions around credential access, quality, value, and equity that motivate our work.

# NEW FEDERAL INTEREST IN CREDENTIALING AND THE SKILLED TECHNICAL WORKFORCE



Workforce development has been a central component of several major pieces of legislation in recent years, including the American Rescue Plan, Bipartisan Infrastructure Law, America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science (“COMPETES”) Act, and the Inflation Reduction Act. These laws have strengthened and expanded what was already a significant number of workforce development programs funded by the U.S. government that support or issue non-degree credentials. A recent analysis conducted by George Washington University found over 50

of these programs in existence as of 2023, and the number of federal agencies offering programs that support non-degree credentialing appears to be growing every year. These federal initiatives complement state-level investments in workforce development and credentialing. Combined, these programs represent an unprecedented level of public-sector support for the attainment of non-degree credentials, especially those that support the competitiveness of the United States in areas related to STEM (science, technology, engineering, and mathematics) research, clean energy, and environmental protection, and infrastructure development.

The National Science Foundation, through the National Center for Science and Engineering Statistics, and the National Science Board has shown particular interest in non-degree credentials as a source of skills for the skilled technical workforce, which includes workers who use STEM skills at work but do not hold a baccalaureate degree. This has resulted in projects to examine the attainment of credentials for this population, which will complement the forthcoming data from the NTEWS (described above). While the NSF and other agencies are increasingly looking to non-degree credentials to remedy skill shortages, we know little about the relative value of non-degree credentials and degrees in the STEM sectors and much research needs to be done to evaluate the return-on-investment that taxpayers will realize from these new investments in credentialing.

# PRIORITIZING EQUITY IN THE NON-DEGREE MARKETPLACE

Equity is at the top of the agenda of many foundations and other stakeholders in non-degree credentialing research. However, different stakeholders have different definitions and value different aspects of equity. Non-degree credentials are valued by some because they are seen as a means of enhancing the labor market prospects of disadvantaged individuals who may not possess the necessary resources (i.e., time, money, social capital) to successfully complete an associate or baccalaureate degree. From this perspective, we would expect non-degree credentials to contribute to macro-level labor market equity by helping those with less advanced educational backgrounds to “level up” and gain (or demonstrate pre-existing) skills and competencies. Much work needs to be done here, including an exploration of the counterfactual: it is one thing to argue that women or minority learners do not benefit as much as a white male who completes the same credential, but proponents of equity may consider such gaps to be tolerable if those learners would be more disadvantaged had the alternative to enrollment been not earning a credential at all. If, on the other hand, the alternative had been earning a baccalaureate degree in a field of study associated with strong labor market returns, we might worry that the non-degree credential is, in effect, limiting mobility.

There are also many unanswered questions about patterns of inequality in the demographics of individuals who obtain non-degree credentials and how they benefit from those credentials upon completion. Significant academic research has been conducted on issues of equity within degree-granting academic programs: millions of dollars has been spent by the National Science Foundation, among others, to ensure broad participation by members of all races and sexes in STEM fields of study in which the pathway from credential to high-paying career is well traveled. Evaluations of specific



non-degree credential types – such as registered apprenticeship evaluation studies funded by the U.S. Department of Labor - have explored whether earnings gains are equally distributed across the population of credential-completers. To summarize the findings of a broad set of research studies, we see many of the same patterns of inequality after completing non-degree credentials that we see with degrees. For example, Matthew Baird led research while affiliated with RAND Corporation on returns to non-degree credentials, finding that returns to non-degree credentials in terms of the probability of employment are concentrated among women while earnings returns are more concentrated among men. Other NCRN members doing work explicitly centered on issues of equity include Jason Jabbari and his team at the Washington University Social Policy Institute, Peter Blair at Harvard University’s Program on Workforce, and several researchers affiliated with New America’s Center on Education and Labor. The large number of researchers focusing on this topic makes it a logical area for further coordination and collaboration.

# GETTING CAREER NAVIGATION RIGHT

Advances in data on the labor market value of credentials only benefit workers and learners to the extent that individuals are able to make sense of the data – and use the data to improve career navigation. Some researchers and practitioners in the NCRN community are working to improve advising and navigation through innovative support programs – including programs that provide “wrap-around” services that extend beyond the classroom. The WorkRise Network, housed at the Urban Institute, has been a leader in drawing attention to and supporting research on such services. Yet, major opportunities persist for researchers to better understand why and how individuals use career advising services, and how traditional counseling can leverage advances in technology and data infrastructure to lead individuals to better-informed decisions.

Some NCRN members are working with technology to ensure that the knowledge being generated through the revolution in workforce data is accessible to individual job seekers, facilitating self-directed career exploration. Research by organizations such as the University of Virginia Biocomplexity Institute and Initiative is generating insights about which credentials (including industry certifications, historically a blind spot in data systems) are in demand in which geographical regions, which can be presented on easy-to-read interactive maps and dashboards. Credential Engine is continuing to enhance and disseminate searchable metadata on a



growing array of credentials. States such as Virginia, Colorado, and Minnesota are creating dashboards and applications that help individuals identify the return on investment and career pathways associated with credential choices.<sup>2</sup>

A risk associated with individual states taking the initiative to harness data to improve credential and career navigation is that state-level work may be leading the United States towards an even more fragmented system in which the ease of accessing information – and the ability to get quality human-assisted personalized advice - varies depending on one’s state of residency. Identifying, replicating, and scaling effective practices in individual states remains a key challenge for the NCRN and a promising area for future work.

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<sup>2</sup> For an overview of many of the most effective state-level data products and associated career advising initiatives, see Jobs for the Future’s 2022 report, Modernizing Career Advising in the United States [https://jfforg-prod-new.s3.amazonaws.com/media/documents/220922-PLTPublication-JA-v6\\_FINAL.pdf](https://jfforg-prod-new.s3.amazonaws.com/media/documents/220922-PLTPublication-JA-v6_FINAL.pdf)

# UNDERSTANDING AND ENGAGING EMPLOYERS

Employers are not commonly studied by academic researchers, but they are clearly instrumental to determining the outcomes that are associated with non-degree credentials in the labor market. Major questions exist as to why employers might choose to value a non-degree credential relative to a degree in the hiring process, why employers may choose to fund the attainment of a credential, how credentials affect the wages paid to employees, and why employers may wish to offer their own credentials (either on their own or in concert with traditional higher education program). Northeastern University's Center for the Future of Higher Education and Talent Strategy, the American Institutes of Research, Jobs for the Future, and the Society for Human Resource Management Foundation have been among the most active NCRN members in this area of inquiry. The University Professional and Continuing Education Association and Council for Adult and Experiential Learning have also advanced our understanding of employers via research conducted with the support of the NCRN microgrant program, complementing their prior work in this space. The need to engage employers, including the human resource professionals that implement training and hiring policies at many firms, was also a theme of the "Towards an Applied Science of Working Learners" convening and report published by Stanford University in 2021.

The NCRN's 2022 Spring Conference highlighted efforts by several well-known employers and groups of employers, including Humana, IBM, and the Business Roundtable. They are all revolutionizing how credentials are used (or could be used) more effectively in hiring and promotion processes, in some cases leveraging improvements in job data facilitated by the US Chamber of Commerce Foundation's T3 Innovation Network and Jobs and Employment Data Exchange (JEDx). The early wins that large corporations particularly are experiencing

could motivate inquiry into how to scale such practices to the vast majority of U.S. employers, which include small and medium-sized businesses that may not employ HR professionals or have the resources and bandwidth to follow emerging best practices.



However, perhaps the most important development to occur in this space in the past few years was the growth of a social movement – backed by the novel analysis of public data – highlighting the value of workers who are “skilled through alternate routes” other than a baccalaureate degree (often abbreviated as STARs). Opportunity@Work, the nonprofit organization most associated with the STARs acronym, has become one of the leading research organizations analyzing the opportunities and barriers facing individuals who hold a non-degree credential, associate degree, or no credential at all, rather than a baccalaureate degree. While Opportunity@Work and other research organizations have conducted research that demonstrates the value of sub-baccalaureate credentials, much remains to be learned about why some employers are leaders in recognizing and rewarding such credentials and how practices could be changed to promote labor market equity.

# REALIZING THE POTENTIAL OF ARTIFICIAL INTELLIGENCE (AI) AND OTHER TECHNOLOGICAL ADVANCES

The number of researchers studying the effects of technological innovations and interventions in the postsecondary education system and the labor market has grown over the past few years. Research being led and coordinated by NCRN member organizations such as, but by no means limited to, institutions such as the National Governors Association and the Massachusetts Institute of Technology, is evaluating the potential for innovations such as digital credentials, learning

those changes for the attainment, quality, value, and verification of non-degree credentials. It is telling that national surveys sponsored by federal agencies still do not provide a meaningful way to differentiate between credentials earned primarily through in-person instruction versus those earned remotely. As a consequence, the long-term implications of choosing in-person and/or online instruction (or preparation for a certification or license) are not fully understood. And, many institutions and learners choose hybrid models of instruction, which further confounds many of our data systems.



and employment records, experiential learning in remote formats, and digital platforms to unlock new opportunities for learner/workers.<sup>3</sup>

Yet, there is still a need for better data and new knowledge on how technology is changing the “learn and work ecosystem” and the implications of

Another area of interest to NCRN members is the effect of technology on the hiring process. The number of startup firms offering new technology-enabled tools (including AI) to accelerate and improve the hiring process is growing with each passing year, but the collective effect of these tools for individuals of diverse socioeconomic backgrounds is unclear. Speakers at the NCRN’s Spring 2022 Conference warned of the potential for workers to misunderstand how AI is impacting the hiring process to their own detriment; for example, by failing to provide details in job application materials that AI-enabled processes may be screening against. Even if employees understand and can prepare themselves to succeed, there is also a risk that reliance on AI may lead employers to adopt practices that inadvertently favor certain demographic groups that may disproportionately poses certain skillsets. Addressing these hurdles for the adoption of AI will require researchers who understand the technology behind AI as well as the social context and ethical considerations in which individuals seek credentials and find employment.

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<sup>3</sup> This area of emphasis echoes many of the points in *Nine Recommendations for an Applied Science to Support Working Learners*, a report published by Stanford University as a result of a grant led by NCRN member Mitchell Stevens. The report can be downloaded from <https://workinglearners.stanford.edu/>

# SCALING BEST PRACTICES

Innovative approaches to credentialing, and to connecting individuals to sustainable employment after completing credentials, are abundant. Yet many of these programs are not yet deployed at a scale where they reach workers outside a single community or organization, or a small set of communities or organizations. Members of our research community conduct research of an evaluative nature on innovative organizations and practices. Examples include the Washington University Social Policy Institute's partnership with LaunchCode, an organization that blends the "traditional" IT coding bootcamp with apprenticeship program; and the Urban Institute's analyses of apprenticeship programs in non-traditional academic fields. However, this research has not, by and large, resulted in changes to policy and practice that enable the nationwide implementation of promising approaches to upskilling, credentialing, and career mobility.<sup>4</sup>

Achieving scale (be it regional, national, or international) can be both a technical problem – designing systems so that they can accommodate more learners and workers, for example by leveraging artificial intelligence to provide personalized recommendations that in the past might have relied on professionals working directly with clients – and a policy problem. One notable gap in the overall



portfolio of research conducted by NCRN members is the analysis of why government agencies and policymakers choose, or do not choose, to invest in workforce development – whether there are aspects of the U.S. system (such as the decentralization of policymaking at state and local levels) that prevent best practices from being widely implemented and funding from flowing to where it is most needed.

One of the benefits of the NCRN's inclusion of stakeholders is the potential for stakeholders to help members' research findings impact practices at the organizational or government agency level. To further facilitate these connections, we are planning to host breakout groups at future NCRN meetings in which stakeholders will be able to provide direct feedback to the research community on what needs must be addressed in their work to justify broad implementation.

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<sup>4</sup> This conclusion is supported by recent reporting on the challenges of scaling effective job training programs. See, for example: Lohr, Steve. 2022, October 3. "These Job Training Programs Work, and May Show Others the Way." The New York Times, page B1. <https://www.nytimes.com/2022/10/03/business/these-job-training-programs-work-and-may-show-others-the-way.html?searchResultPosition=1>

# GLOBALIZING THE CONVERSATION

The most significant policy developments concerning non-degree credentials over the past two years have occurred in Europe. These developments include a host of projects, among them the European Union-funded MICROBOL <https://microbol.microcredentials.eu/> (“micro-Bologna,” in reference to the Bologna Process that contributed to the harmonization of higher education systems across Europe) project and the European Commission’s adoption of a Council Recommendation to advise and support the implementation of microcredentials in member country jurisdictions. Some national governments, such as Ireland, have moved forward to incorporate microcredentials into degree legislation, qualification frameworks, and quality assurance systems, and are now funding microcredential providers, learners, or both. (Note that the use of the word “microcredential” in the European and global contexts does not always map easily to the usage of “non-degree credential” in the U.S. context. For example, the NCRN’s mandate includes occupational licenses and apprenticeship programs, which are not a key focus in most EU-funded work on microcredentials.)<sup>5</sup>

Developments are occurring in other regions of the world that merit attention. Latin American countries are expanding the use of microcredentials in their higher education systems, though, as in Europe, there is a greater focus on situating microcredentials in existing higher education institutions than in developing new types of training providers. In many countries, such as

Australia, national qualifications frameworks guide the development of new credentials and help institutions situate non-degree credentials in the context of existing degree programs.

The NCRN’s mandate treats international dimensions as a distinct category of research for now, though over time international collaborations may become embedded to a point that it no longer makes sense to break them out as a special category of research. For the time being, serious barriers exist to international research collaborations.

One such persistent barrier is in terminology. Beyond gaps in definitions of non-degree and microcredentials, there are different terminologies and typologies in use around the world for different levels of sub-baccalaureate attainment. Fields of study, occupations, and industries are all coded differently in different national datasets; while multi-country (e.g., the European Skills, Competencies, Qualifications and Occupations scheme developed by the European Union) and global (International Standard Classification of Occupations and World Economic Forum) coding frameworks exist, datasets using truly global data standards are still the exception rather than the rule.

Resource limitations also inhibit efforts to conduct global research. Foundations and government agencies tend to fund projects at the national level, and formal agreements and meetings to convene and/or conduct exchange activities involving researchers from different regions of the world are rare. The NCRN will continue to engage in outreach to international researchers to better understand how developments in the U.S. compare to policy and research efforts underway in other parts of the world with the goal of advancing equitable growth everywhere.

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<sup>5</sup> At the same time, many U.S.-based non-degree credentialing efforts have begun in the past few years to refer to their efforts as microcredentialing efforts, in part in response to the use of microcredentialing terms in Europe, Canada, Australia, and others. Though we have retained the NCRN name, it may be useful at some point to rename the Network to align better with similar efforts outside the U.S and the increasing use of the term “microcredential” on the part of our U.S.-based members.

# ENSURING EFFECTIVE DISSEMINATION OF RESEARCH FINDINGS

Research organizations and individual researchers report that they often find it difficult to disseminate the results of their research to the audiences they want to reach – whether those audiences consist of other researchers, policymakers, practitioners in the field (e.g. instructors and administrators in K-12 or higher education, employees of state agencies, grant makers, leaders of workforce intermediaries and social services organizations) or even individual learners. While in some cases these challenges are a result of not knowing how to have the greatest impact, in other cases researchers fail to identify all interested audiences or lack incentives for sharing their findings with individuals and organizations likely to benefit.

Researchers may also lack appropriate dissemination options. This is especially true in academia, where peer-reviewed journals are especially valued by early-career researchers seeking to influence scholarly debates or to satisfy institutional requirements for career progression. While research on non-degree credentials has been published in a growing number of scholarly journals in recent years, including some that have an “impact factor” of greater than 1.0 (a common metric used to assess impact by promotion and tenure review committees), there is still no single journal that researchers in the non-degree credentialing arena gravitate towards. The situation is somewhat brighter for researchers who wish to reach practitioner audiences: the availability of outlets for research oriented towards practitioners has improved significantly in recent years, with newsletters and electronic publications such as The Job <https://www.opencampusmedia.org/category/newsletters/the-job/>, The Hechinger Report <https://hechingerreport.org/>, Workforce Monitor <https://wfmonitor.com/>, and The EvoLLLution <https://evollution.com/> providing both opportunities for researchers themselves to publish short-form writings and for professional journalists to feature research on non-degree

credentials. However, research organizations still struggle to prepare reader-friendly accounts of their findings and potential implications for policy and practice.

The Work-and-Learn Ecosystem Library <https://learnworkecosystemlibrary.com/> is also helping the field better communicate with external stakeholders and improving internal awareness of key projects and initiatives. Through a website powered by a crowdsourced “wiki” model of content creation, the Library is providing a trusted source of information on topics that previously might not have been well explained by third-party reference sources. However, the Library does not provide credit to contributors that could be used to facilitate professional advancement, nor does it facilitate longer-form publications that are well-suited to scholarly citation.



# LOOKING AHEAD

The field of non-degree credentialing research has grown dramatically since the last major NCRN publication on the state of the field. The research efforts described in this report represent only a small sample of the scholarly and research activities of Network members. While the above areas of research represent recurring themes in our meetings, they are by no means the only pressing questions facing the field. Given the many advances in the availability of data and resources for synthesizing that data that are emerging, the pace of innovation in the field is likely to grow over the coming years. There are also many concerns about the adequacy of the pool of researchers to conduct this work and the adequacy of funding to support their work. Many researchers in the Network are aging out, and there appears to be a lack of new and emerging researchers to study this field. There is also a shortage of researchers of color, at a time in which equity considerations are paramount to developments in the credentialing arena and broader learn-and-work ecosystem.

The NCRN has an ongoing role as a resource for the field as researchers leverage these advances over the coming years. By providing an outlet for high-quality research and a forum for the incubation of new ideas, we believe that the NCRN has a role to play in expanding the range of individuals working in the field and in attracting new talent to the study of non-degree credentials. The NCRN's ongoing work to advance the field establishes our credibility within the broader domains of education and workforce development research, which, over time, will attract new talent to our community.

## Recent Developments and New Opportunities for Non-Credentialing Research

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NON-DEGREE CREDENTIALS  
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# APPENDIX

## SUMMARY OF NCRN OBJECTIVES AND CORRESPONDING ACCOMPLISHMENTS IN THE 2021-23 FUNDING CYCLE

OBJECTIVE	ACCOMPLISHMENTS AND CONTINUING/PLANNED ACTIVITIES
Advance the intellectual agenda for the field	<ul style="list-style-type: none"> <li>• Hosted three major in-person meetings between April 2022 and April 2023, including a two-day hybrid conference attended by 100 members in April 2022.</li> <li>• Facilitated 15 webinars between May 2021 and May 2023.</li> <li>• Published a report summarizing key areas of research.</li> </ul>
Build capacity and collaboration	<ul style="list-style-type: none"> <li>• Hosted a member meeting in December 2022 in which organizations highlighted key opportunities and discussed areas for collaborative action to advance the field.</li> </ul>
Support early-stage inquiry and encourage innovation in research	<ul style="list-style-type: none"> <li>• Awarded 8 microgrants to up-and-coming researchers and supported the study of non-degree credentials in larger survey projects.</li> </ul>
Increase diversity	<ul style="list-style-type: none"> <li>• Doubled the size of the NCRN since May 2021, supported by outreach to researchers from demographically underrepresented groups.</li> </ul>
Impact policy	<ul style="list-style-type: none"> <li>• Provided comments on federal surveys such as NTEWS, IPEDS. Invited federal and state stakeholders to meetings, provide feedback at meetings on research initiatives underway.</li> </ul>
Build awareness	<ul style="list-style-type: none"> <li>• Sponsored Workforce Monitor, which produced content on NCRN member research and “explainers” based on NCRN meeting sessions.</li> <li>• Built a newsletter rich in useful content, with very high engagement/open rates.</li> <li>• Prepared transcripts, recordings, and a “compendium” from each conference, posted on our website and cross-promoted by partner organizations.</li> </ul>

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