



Credential Data Pioneers

Forging new partnerships to measure certifications and licenses

BY MICHELLE MASSIE

APRIL 2014



WORKFORCE
DATA QUALITY
CAMPAIGN

Introduction: Meeting the non-degree credential challenge

Workforce development issues have come to the forefront of national discussions as the country continues its recovery from the Great Recession. In this shifting economy, one way that job seekers, students and workers may improve their opportunities is by earning credentials.

Colleges, states and the federal government have traditionally tracked the attainment of bachelor's and associate's degrees, but recent research suggests that there are other types of credentials that matter to employers. One-quarter of adults in the United States had a non-degree credential in fall 2012, and full-time workers with these credentials have higher median earnings than those without, according to a report released in January 2014 by the U.S. Census Bureau.¹ The report shows that non-degree credentials are an important part of the labor market.

Workforce Data Quality Campaign (WDQC) supports efforts to measure the full range of credentials — not just those associated with traditional education pathways. Data systems that capture all types of credentials can be used to:

- Show **policymakers** a fuller picture of the skilled workforce, so they can see the results of their investments in education and training programs and identify skills gaps where further investment may be needed.
- Help **educators** know whether their occupational programs are appropriately preparing students to obtain credentials needed to advance in particular industries.
- Publicize the average earnings and employment trajectories of credential holders to assist **students and workers** in making education, career and credentialing choices.
- Attract **businesses** seeking to expand or locate in areas with a supply of workers that have particular credentials.

It can be especially challenging to collect and use data on credentials that are awarded outside the education system, i.e. certifications and licenses. These credentials are time limited and usually associated with particular occupations. Certifications are awarded by entities such as trade associations, professional societies and employers. Licenses are administered by government agencies, generally at the state level.

Some education and training programs survey their graduates to find out if they have successfully earned a certification or license, but these surveys can be burdensome and may not be very accurate, especially if they occur months or years after program completion. Certification bodies and licensing agencies maintain individual-level data on attainment of these credentials, but it is not usually shared and matched with student records or employment data. These data linkages would enable richer and more complete analysis of education and training program alignment with industry requirements, as well as providing evidence on which licenses and certifications demonstrate value in the labor market over time.

This paper highlights states and schools that have taken steps to broker data-sharing agreements with certification bodies and licensing agencies in order to better understand the attainment and value of selected non-degree credentials.

Types of Credentials

The case studies in this paper do not cover data on certificates. The definition of “certificate” is provided to distinguish them from certifications and licenses, which are not awarded by educational institutions.

Certification

A credential awarded by a certification body (not a school or government agency) based on an individual demonstrating, through an examination process, that he or she has acquired the designated knowledge, skills and abilities to perform a specific occupation or skill. The examination can be written, oral or performance-based. Certification is a time-limited credential that is renewed through a re-certification process.

License

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

Certificate

A credential awarded by a training provider or educational institution based on completion of all requirements for a program of study, including coursework and tests or other performance evaluations. Certificates, as an academic award, are not time limited and do not need to be renewed.

These definitions are based on the U.S. Census Bureau publication; Stephanie Ewert and Robert Kominski, *Measuring Alternative Educational Credentials: 2012* (Washington, DC: U.S. Department of Commerce, U.S. Census Bureau, 2014), 2.

Indiana: Licensing linkages



Building Capacity

Nearly one in seven people working in Indiana have a professional or occupational license regulated by the state's professional licensing agency (PLA). That agency is an umbrella organization for more than 35 boards, commissions, committees and licensing bodies such as the Medical Licensing Board and the Indiana Real Estate Commission. It regulates more than 70 professional licenses including pharmacists, nurses, dentists, veterinarians and cosmetologists.

The PLA was created in 2005 by the Indiana legislature in order to reduce duplication, increase efficiency and better integrate licensing requirements.² This centralized administration of the multiple boards and commissions is designed to make it easier for people to apply for licenses through a single agency and for consumers, clients and patients to check on the status of professionals from whom they are receiving services.

The agency built a combined database with information on the majority of professionals issued a state license or permit. It contains more than 1.5 million records, some of which go as far back as 1905. The focus is on the more current (1990s and forward) licenses of individuals for the professions covered.³ Though robust, the database is not comprehensive, as teacher licensing collected by the Indiana Department of Education is not currently included.

Indiana's longitudinal data system for workforce and education, called the Indiana Workforce Intelligence System (IWIS), worked with the PLA to obtain the necessary permissions to access the database in 2013. Its first task was to document the content of this database and develop a process for obtaining updates, which is now done automatically on a monthly basis. The

PLA database includes information on individuals who hold licenses, including the license's status and date of issue. It also contains identifying information such as name, date of birth, and last four digits of an individual's Social Security number, which is essential for matching licensing records with other state data on education and employment.

Using the licensing data alone, Indiana can provide statistical summaries of the number of active licensed professionals by type at the state and county levels of aggregation. These summaries, particularly for health professionals such as doctors, nurses and psychiatrists, can be used to measure patient access to health professionals and determine labor shortages. Still, some limitations to the system remain. For instance, the address the professional puts on the application can be either a work or home address and is not identified as one or the other. And, the licensing data does not indicate whether a licensed professional is actually working, since having an active license does not necessarily equate to actual practice.

Making Connections

Indiana is finding broader uses for the licensing data, using IWIS to match the licensing records to either workforce or education records (or both). For example, they can now create data sets that include unemployment claims and new hire records as well as matching to wage records and employers. As a result, tracking the new hire rates for licensees is now available as well as understanding the unemployment of people with differing types of professional licenses.

For 40 percent of the licensing records going back to the early 1900s, the IWIS matching process found the license holders in other state datasets. Those that were unable to be matched included actual organizations that are

They can now create data sets that include **unemployment claims and new hire records as well as matching to wage records and employers.**

licensed (17 percent), no date of birth (30 percent) and records indicating the license was expired, withdrawn, inactive, denied or suspended. The match rate improved to 75 percent when the state limited the year of the license to those granted on or after 1970.

Linking the license information through IWIS enables matches to place-of-work information in Unemployment Insurance wage records, thereby removing the problem of "home or work" addresses. Pinpointing work addresses allows for better calculations of the potential shortages or surpluses of specific occupations and the impact of unemployment for these types of occupations. Matching to employment may also show how many professionals keep their licenses active, but are not actually working in the state — something the license database cannot do by itself. As Indiana provides more public reports on the matched data, it can provide critical information for training and education programs in states and regions to make sure their offerings are aligned with industry needs.

Data matching can also track the enrollment and completion of public college and training programs and the range of wages earned by their students, offering a more complete picture of employment prospects for those seeking to enter licensed occupations.

Illinois: Piloting industry partnership

Demonstrating Success

In 2012, Illinois partnered with the Computing Technology Industry Association (CompTIA), a trade association that provides information technology certifications, to explore ways to match individual-level certification data with other education and workforce program data. Specifically, CompTIA individual-level certification data was matched with student records by the Illinois Community College Board (ICCB) through its centralized data system. Upon matching education data, ICCB collaborated with the Center for Governmental Studies at Northern Illinois University, which was the employment data agent for the Illinois Department of Employment Security, to track employment outcomes of former community college students.

By matching their disparate datasets, partners in the CompTIA and Illinois Industry Certification Data Sharing Pilot Project were interested in analyzing preparation for employment in high-demand occupations, validation of

demand-driven skill sets and the possibility of embedding industry certifications into programs of study.

The project was successful in matching certification data with student records from Illinois community colleges to analyze characteristics of students who took and passed certification tests and their employment outcomes. It was also successful in demonstrating the major legal issues in sharing data and identifying ways to improve the quality of data matching.⁴

Identifying Challenges

With successes also came some challenges. One such issue was the limited data in the CompTIA dataset that could be used for matching with student records. The available matching data elements from CompTIA included: first name, last name and geographic coding — zip code. The student's major program of study was also used to capture additional probable matches where the names matched but the zip code was not a match. According to project administrators, the preferred

approach would have been an expansion of the data elements to capture the following: first name, last name, student identifier, date of birth, geographic code(s) and gender. It was proposed that date of birth and gender be added to testing records as minimally intrusive data elements, and CompTIA is exploring the collection of this additional test-taker information to improve data matching protocol as the project expands. The goal is to avoid alienating third-party certification customers while enhancing the quality/confidence levels regarding the data match.⁵

For future undertakings between industry and professional associations and states on how to effectively and securely exchange and use data, a project would have to acquire agreement on data elements from multiple third-party certifiers to ensure the most comprehensive system matches. One possibility for capturing the most valid data elements from a wide cross section of third-party assessments would be working with testing organizations such as Pearson VUE. These organizations are



The CompTIA-Illinois project showed how **a state can build partnerships with industry to improve the quality and completeness of data** on student credential attainment and workforce outcomes.

well positioned to add these data elements to the standard background/demographic information that they routinely collect.⁶

As the CompTIA-Illinois project has grown beyond the Illinois pilot, privacy issues between the certifying bodies and exam takers presented another barrier. To protect itself when sharing individual-level data, CompTIA has asked states to enter into a data-sharing agreement, which currently includes an indemnification or “hold harmless” clause. The clause means that states take on responsibility for any individual data that may be improperly released. Several states have faced challenges signing these agreements; only Illinois and California have been able to sign, so far.

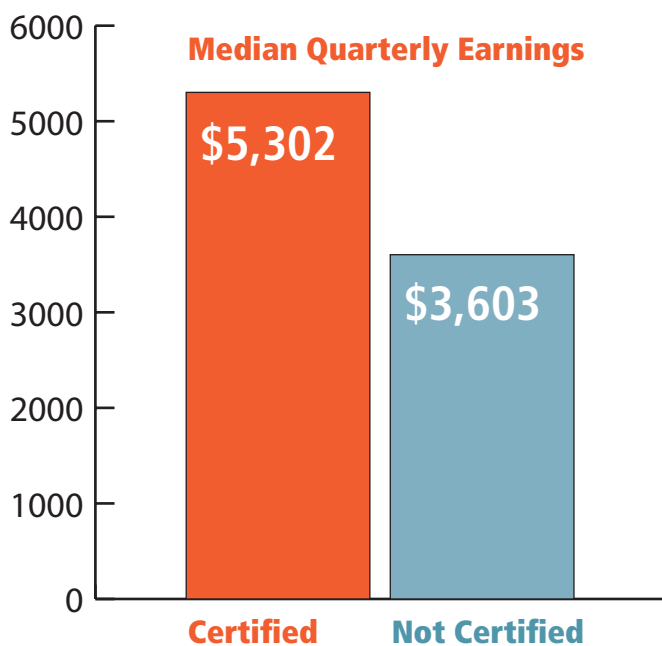
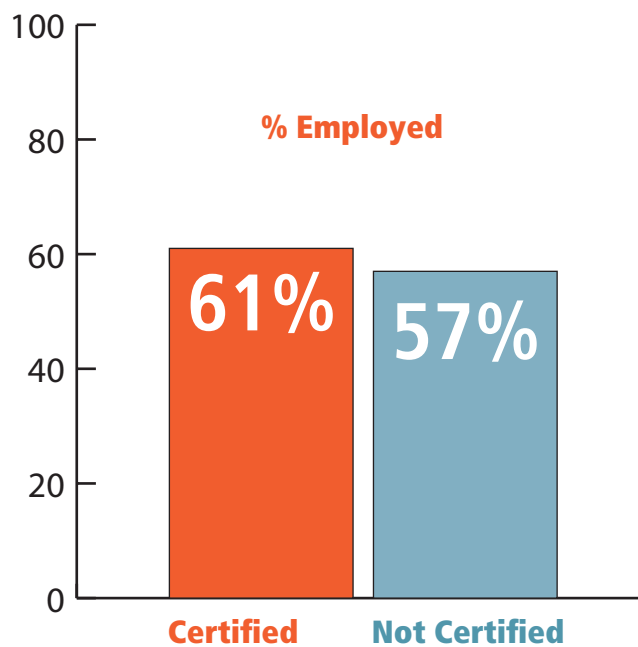
Looking to the Future

To address concerns around data protection, CompTIA is exploring new language that would enhance the “permission to share” statement that test takers are asked to sign. The revised statement would specifically request permission to share data with the Illinois State Board of Education or projects of this nature, in order to reduce their risk of liability in the future.

The CompTIA-Illinois project provided an example of how a state can build partnerships with industry to improve the quality and completeness of data on student credential attainment and workforce outcomes. As a result, the project partners formed a Certification Data Exchange Project & Advisory Group and created a multi-year roadmap to develop a national data exchange clearinghouse.⁷ Through the inaugural data-sharing project, Illinois and CompTIA are offering insight to current states participating in data-sharing pilot projects.

The Association for Career and Technical Education, a WDQC national partner, is working with CompTIA and The Manufacturing Institute as well as a host of other interested stakeholders, including the U.S. Department of Education, to expand the pilot to other states.

Post-Certification Exam Employment Outcomes



Graphs are based on Gretchen Koch and Scott J. Parke, “CompTIA and Illinois Industry Certification Data Sharing Pilot Project” (PowerPoint presentation in January, 2013).

California and North Carolina: Leading the way for a nationwide coalition

The California Community College Division of Workforce and Economic Development recently partnered with the North Carolina Community Colleges to lead a coalition of 21 states in a newly formed effort to access certification data and analyze whether community college students, especially those in non-credit occupational programs, are earning certifications.

Coalition leaders believe that better alignment between academic and

industry-awarded credentials is a win-win for community colleges, certification providers, employers and students. The coalition hopes to establish joint data standards and data sharing agreements so that information on certification outcomes could be more easily shared with community colleges across the nation.

The coalition explains several reasons why community colleges seek out certification attainment data.

Performance-Based Funding: In many states where funding for colleges comes from the tax base, lawmakers are looking at performance-based funding models. It is likely that these models will consider external credential attainment as a performance metric.

Alignment with Local Needs: Many community college systems are working to better align themselves with their local industry needs and see the competencies that are specified in industry credentials as an efficient way to test whether students are attaining critical skills.

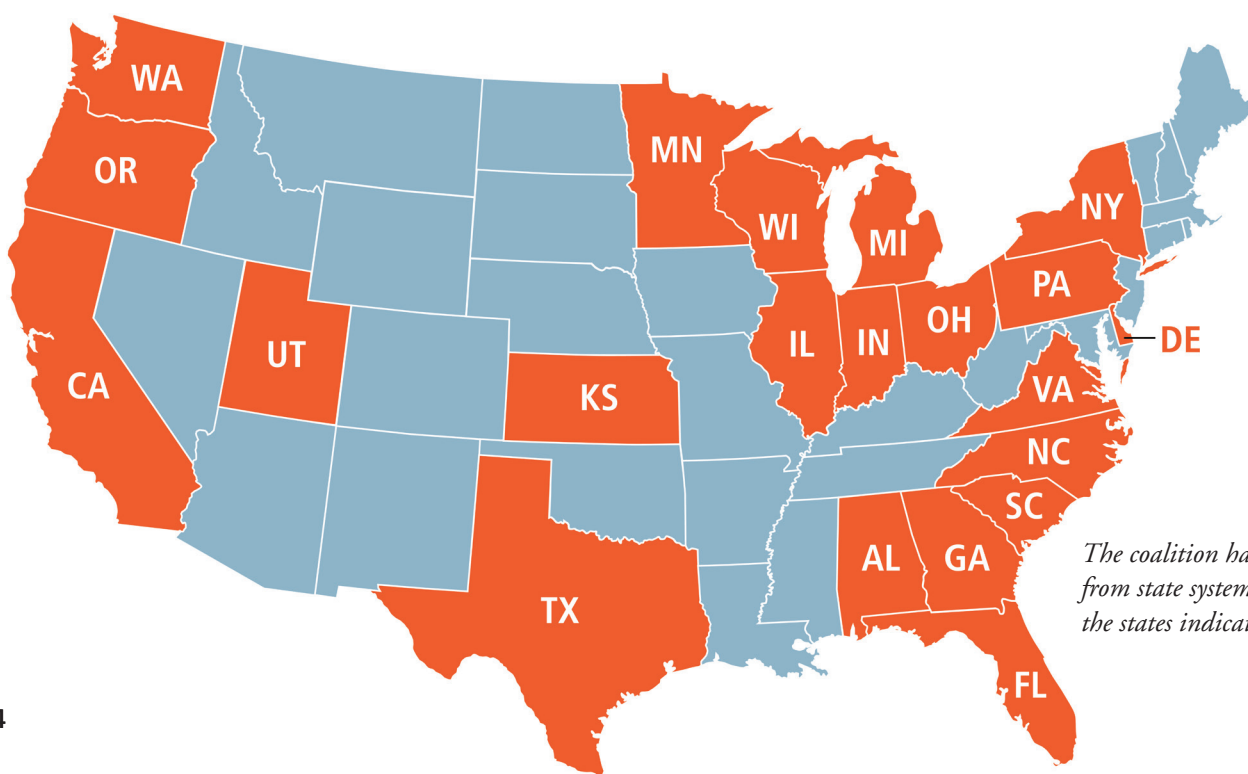
Federal Grants: The U.S. Department of Labor is requiring colleges that have been awarded Trade Assistance Act Community College Career Training Grants (TAACCCT) to track participants and report on credential attainment of the participants. Also, following the Carl D. Perkins Career and Technical Act of 2006 (Perkins IV), states have been urged to use technical skill assessments aligned with industry-recognized standards to measure Career and Technical Education students' technical achievement.

Challenges lie ahead for the coalition, including compliance with federal and state privacy laws and the need for certification bodies to protect individual privacy. Coalition members hope to forge partnerships with industry and professional associations, as well as advocacy groups like WDQC, to overcome these barriers and improve credential data.

High priority certifications

Some frequently awarded certifications that are a high priority for inclusion in data-sharing agreements are:

Registered Nurses
Cisco Certifies Network Associate
National Institute for Metalworking Skills
American Welding Society
Manufacturing Skills Standards Council
Production Technician
Retail Management
Medical Laboratory Technician License



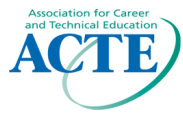
Notes

- 1 Stephanie Ewert and Robert Kominski, *Measuring Alternative Educational Credentials: 2012* (Washington, DC: U.S. Department of Commerce, U.S. Census Bureau, 2014). This report marks the first time that a major federal survey included interview questions about the prevalence and characteristics of certifications, licenses and educational certificates.
- 2 “Information Maintained by the Office of Code Revision Indiana Legislative Services Agency,” *Indiana General Assembly*, accessed March 3, 2014, <http://www.in.gov/legislative/ic/code/title25/ar1/ch5.html>
- 3 The Indiana Professional Licensing Agency maintains a database on all professionals that have been issued a license, certification, registration or permit. All of the information in the database is public information and it does not contain any confidential information, such as Social Security numbers or examination results. Through the www.in.gov/pla portal, you search the entire database or select parameters for specific information.
- 4 Gretchen Koch and Scott J. Parke, “CompTIA and Illinois Industry Certification Data Sharing Pilot Project” (PowerPoint presentation in January, 2013).
- 5 Scott J. Parke, Florida Department of Education, e-mail message to author, February 25, 2014; and Catherine Imperatore, Association for Career & Technical Education, e-mail message to author, February 28, 2014.
- 6 Scott J. Parke, Florida Department of Education, e-mail message to author, February 25, 2014.
- 7 “Certification Data Exchange Project,” *Association for Career and Technical Education*, accessed February 24, 2014, https://www.acteonline.org/certification_data

Workforce Data Quality Campaign (WDQC) wishes to thank the experts on state and education data systems who helped inform the thinking behind this report. Particular thanks to Carol Rogers, Indiana Business Research Center; Matthew Meyer, North Carolina Community College System; Renah Wolzinger, California Community Colleges Vice Chancellor’s Office; Catherine Imperatore, Association for Career and Technical Education; Nathan Wilson, Illinois Community College Board; Scott Parke, Florida College System; John Haigh, U.S. Department of Education; and Gretchen Koch, CompTIA.

WDQC is grateful for the support of our funders: Apollo Education Group, Joyce Foundation and Lumina Foundation.

Finally, WDQC would like to thank our national partners:





WORKFORCE
DATA QUALITY
CAMPAIGN

www.workforcedqc.org

1730 Rhode Island Avenue NW, Suite 712
Washington, DC 20036
202-223-8355