CONNECTING CREDENTIALS

MAKING THE CASE FOR REFORMING THE U.S. CREDENTIALING SYSTEM

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The drive to increase postsecondary attainment to 60 percent by 2025 – a goal Lumina Foundation and many others call Goal 2025 – is driven by the reality that higher levels of knowledge and skills are required in today's economy and society. Success in some form of postsecondary education has become a prerequisite for both economic security and full participation in the civic life of the nation.* At the same time, both national and local economies are dependent on postsecondary knowledge and skills to drive future growth and prosperity.

As postsecondary knowledge and skills have become essential to both our economy and to millions of Americans, the need for greater transparency about them has become critical. Postsecondary credentials are the currency through which knowledge and skills are recognized. Credentials are the essential bridge that connect people to jobs, connect educational programs, and define career pathways.

> **A chaotic patchwork of sub-degree certificates, licenses and other credentials is offered by a confusing array of industry and occupational groups, third-party validators, and educational providers and systems.**
>
> *The Corporation for a Skilled Workforce, in "Making a Market for Competency-based Credentials"*

There are myriad credentials in the marketplace, including degrees, educational certificates, occupational licenses and industry certifications. New types of credentials such as digital badges and enhanced transcripts are emerging. However, there's a complication. While some of these credentials represent a clear but narrowly defined set of knowledge and skills, many more represent completion of a postsecondary education program which may or may not have clearly defined learning outcomes. In most cases, there's little clarity about what these credentials mean – their value, their quality and how they connect. And that makes their use difficult – for employers trying to determine whether prospective hires are qualified, and for students trying to navigate an increasingly complex marketplace for education beyond high school. This is a particular challenge for low-income students, adult learners and first-generation students – all groups that typically receive less support navigating the complex credentialing landscape.

So what is the problem?

There are several reasons that the lack of transparency about the meaning of credentials is a growing problem:

1. The range of students served by our education system, and the range of their needs for credentials, is greater than ever. Many of today's postsecondary students no longer conform to a traditional profile of the newly minted high school graduate in pursuit of a two- or four-year academic degree. Rather, today's students include:

- Mid-career military veterans who need to apply their skills in the civilian labor force.

- Dislocated workers who already have valuable experience, skills and capabilities they can use to build new careers.
- Underrepresented students who need expanded opportunities to pursue postsecondary credentials, especially African American, Latino and Native American students.
- Students of all ages, including those with limited income or knowledge of English, who have acquired nontraditional forms of education, such as apprenticeships and experiential learning.
- Former college students who need a way to aggregate old credits with new ones to earn a credential.

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* Throughout this document, "postsecondary" refers to education beyond high school, including higher education, industry and workforce education.

- People with degrees and certificates who need to refresh or expand their knowledge and skills.

Students of all ages and backgrounds need a system of credentials that validates a variety of experience, education and training so they can compete for 21st century jobs. Clayton M. Christensen and Michelle R. Weise describe the disconnect between much of our current postsecondary education system and this nontraditional student market: "Academics have historically separated teaching and scholarship as a distinct enterprise from vocational training. Utility was what graduate and professional schools were for, whereas college was the space and time for students to pursue their passions and gain a global perspective. This approach, however, unwittingly ignores the nearly 80 percent of college-goers in the United States who don't have the residential-college experience we tend to glorify. Most commute, work part-time, have family commit-ments, or don't have the luxury to major in a field with no direct relevance to their future career goals."[1]

As the value of credentials grows, the prospects for those who lack them are increasingly grim. In 1979, 7 percent of young adults with only a high school diploma lived in poverty; today it is 22 percent.[2] In 1973, only 28 percent of all jobs in the U.S. economy required some form of postsecondary degree or other credential.[3] By 2020, labor economists predict that 65 percent of jobs will require postsecondary education, which is one reason Lumina Foundation set a goal of increasing quality post-secondary attainment to 60 percent by 2025.[4] In 2012, wages among certificate holders averaged $3,433 per month, about 10 percent higher than the $3,110 earned by non-holders. Wages were higher still among creden-tial holders who also had obtained a certification or license – $3,920 per month on average.[5]

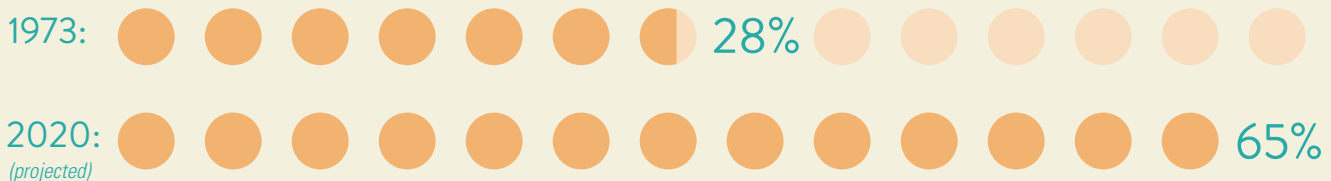**2. Employers have trouble finding people with the skills they need.** The mismatch between employer needs and the skills of job seekers can only be described as chronic. Evidence for the prevalence and extent of the mismatch is extensive:

- 76 percent of CEOs of companies in the Inc. 5000 say that finding qualified people is a major concern for their companies.
- In a survey of 126 CEOs of major U.S. companies conducted by the Business Roundtable and Change the Equation, 97 percent of respondents cited the skills gap as a problem, and 62 percent reported trouble finding applicants for jobs requiring information technology and advanced computer knowledge.[6]
- In another recent survey, only 11 percent of business leaders said they considered college graduates to be prepared for the workforce, while 96 percent of colleges' and universities' chief academic officers did.[7]
- According to the Center for American Progress/Innosight Institute: "The United States is facing its highest unemployment rates in a generation. Yet many employers say they cannot find qualified Americans to hire."[8]

Current credentials serve as the currency denoting that candidates for jobs have the skills employers are seek-ing, but they fail in this task on many levels. No clear language exists for explaining what credentials mean in terms of knowledge and skills. This makes it diffi-cult for students to understand whether they have what it takes to get a job in today's economy. This lack of clarity makes it equally challenging for employ-ers to know who is equipped for positions they seek to fill. There's also no mechanism to ensure credentials' quality, which adds to students' and employers' confu-sion about who is qualified. And without a common understanding of what credentials mean, it's nearly impossible to know how various credentials compare to one another or how they can be combined to give a prospective applicant the competencies needed for on-the-job success.

THEN AND NOW: CHANGING REQUIREMENTS FOR JOBS

Percentage of jobs in the U.S. requiring some postsecondary education

1973: ● ● ● ● ● ● ◗ **28%** ○ ○ ○ ○ ○ ○

2020: ● ● ● ● ● ● ● ● ● ● ● ● ● **65%**
(projected)

3. Many students lack clear pathways to credentials.

The lack of transparency about the meaning of credentials is an even more serious problem for individuals seeking education that will help them reach their goals, particularly for employment and careers. This problem takes many forms, but at the root of all of them is the lack of clear pathways to obtain necessary knowledge and skills.

- New job seekers don't know which credentials have market value for the jobs and careers they seek or how best to obtain those credentials.
- People who want or need to make a career transition are unsure how to apply the skills and knowledge they've acquired in different occupations and industries.
- Military veterans struggle to translate skills they obtained while in service into civilian credentials, jobs and career pathways.

These problems are rooted in the lack of transparency about credentials. Individuals often can't get credit for training they have completed because credentials don't move with them from one job or region to the next. Frequently, these credentials don't even count toward higher education and degrees. Too many individuals have trouble moving from noncredit occupational training, which makes up more than half of postsecondary enrollments, to credit- bearing programs. Short-term certificate programs help people gain a foothold in the labor market, but certificate holders often find it difficult to move to longer-term degree programs that generally have a higher economic payoff. Experienced workers returning to the education system to learn new skills often have trouble earning recognized academic credit for knowledge and skills they have gained at work – whether through formal training or informally, through work experience. Students who have to "stop out" of postsecondary education because of life circumstances are often forced to start over when they return to continue their studies.

Imagine someone with a bachelor's degree who pursues an additional credential such as a postsecondary certificate.

There might be a way for her to save time and money in the certificate program by bypassing topics she covered while pursuing her undergraduate degree or by applying knowledge she's gained through work or life experience. However, because there's no coherent language to translate the knowledge and skills from one type of credential to another, the student is often required to start anew, adding time and cost. Similarly, a worker who has just lost his job and needs new knowledge and skills to make a career transition has no clear way to see what additional skills he needs, or to discern the shortest route to obtaining them. Addressing this challenge is critical in today's ever-changing economy – one in which workers must continually add and augment skills in order to remain relevant.

Related to all of these problems is the fact that students lack information they need to manage their own education, training and career development, such as reliable assessments of education providers and the quality and workforce-relevance of the credentials they offer.

> For many students, the credential is the coin of the realm. After completing a two-year or four-year program or a continuing/executive education program – whether brick and mortar, online or hybrid – students leave with a credential. It's their currency for accessing opportunities as a function of the educational investment that they've made. Students then take their credentials – transcripts, diplomas, certificates, assessments – and move into a world where they continue to get more certifications and licenses.
>
> *Matt Pittinsky, president of Parchment*

4. People now receive education and training from an array of providers, which adds to the confusion of what credentials mean and how they connect.

To meet the growing demand for credentials, traditional providers of credentials have expanded, and an even wider range of education providers has emerged. Colleges and universities – long considered the bedrock providers of postsecondary education – today are joined by a growing array of education providers which may or may not look like a traditional higher education institution. Online course providers, through MOOCs and other open-source efforts, offer instruction on a wide array of topics. Employers provide education and training through on-the-job apprenticeships, internal programming and partnerships with external organizations – including support for more online instruction.

With each pathway, a different type of credential can be attained, from college degrees and certificates to online badges to industry certifications.

Enrollment in colleges and universities has increased in response to the growing demand for skills. In fact, such enrollment has increased dramatically – from 10.8 million in 1983 to 18.1 million in 2011. Associate degrees are rapidly on the rise, having doubled since 2002. But there is also widespread recognition that these institutions alone can't fill the gap.

Career and technical education programs are the fastest-growing source of credentials in higher education. In 1980, they accounted for only 6 percent of all credentials; today they represent 25 percent. The number of certificates awarded has increased by more than 800 percent in the last three decades. Moreover, for each type of credential, there are a number – in some cases, thousands – of different providers, which vary widely in cost and quality. Nearly 2,000 postsecondary education institutions offer medical assisting certificates, for example, and more than 500 institutions award undergraduate certificates in welding technology.

Employers, too, have become important education providers. Employers spend $590 billion annually on training – $177 billion on formal training and $413 billion on informal on-the-job training. In some cases, this involves training future employees. AT&T, for example, is working with a for-profit online education provider to develop "nanodegrees," its name for a series of courses that will take less than a year to complete and lead directly to entry-level jobs at the company related to Web and mobile applications. But the lion's share of corporate spending on employee training supports current employees. Microsoft, for example, offers its employees training and opportunities to take tests to receive technical certifications in Microsoft applications. The company hosted a conference in January 2014 at which employees could obtain certification-path information, participate in exam-prep sessions, and take certification tests. Attendees at the event took 753 exams to help them demonstrate technical readiness.

Within this context of multiple providers, education analysts are increasingly calling for a system of stackable credentials, defined by the U.S. Department of Labor as "part of a sequence of credentials that can be accumulated over time to build up an individual's qualifications and help them to move along a career pathway or up a career ladder to different and potentially higher-paying jobs." Such credentials have the potential to enable people to advance in education and careers without having to start over as their needs and interests change.

However, a particular problem in creating this system is the growing range of education and training that does not carry college credit. While noncredit learning helps people gain valuable knowledge and skills, there is no standard way of recognizing it. This is a problem for both individuals and employers, and it's a growing problem for education providers, too.

Even a promising approach such as prior learning assessment (PLA) has significant problems. "Since PLA is largely faculty- and institution-based, there are no common descriptors of the credentials being evaluated and no common standards on which to base decisions about the amount of credit to be awarded. As result, decisions about the awarding of credit are often inconsistent from one institution and program to another."[9]

5. The lack of quality assurance of credentials is a problem.

The growing range of postsecondary credentials is putting enormous pressure on our postsecondary quality- assurance systems. For example, approximately 26,000 U.S. postsecondary providers now offer certificates.[10] While many are accredited – including all community colleges – this is not true across the board.[11] Moreover, even for those institutions that are accredited, the process is designed to indicate institutions' operational capacity more than their instructional quality.[12] As the National Center for Education Statistics reported in 2012, "As one might expect in a highly decentralized system with mixed public and for-profit provision, quality is highly uneven."[13]

Fields such as information technology and healthcare require workers to regularly obtain certifications or licenses to practice their profession, but there is no mechanism to ensure that these certification pathways maintain high standards for quality. There are more than 4,000 certification bodies in the U.S., and less than 10 percent are accredited or reviewed by a third party.[14] As a result, quality among the many certification bodies – and therefore quality of the certifications themselves – varies enormously.[15] But a top-down approach to quality assurance won't work. The signatories of *Creating a Competency-based Credentialing Ecosystem* "… see no need to create a single unified accrediting body as other countries have done [to address the quality assurance problem] … rather, the challenge for us is to improve the interoperability of the diverse parts of our complex system in order to (help ensure) quality student outcomes that are transparent, trusted and portable."

Connecting credentials: Elements of a reimagined system

The U.S. credentialing marketplace has developed over many decades into a complex, loosely linked collection of education and training providers, personnel certification bodies, accreditation organizations and federal/state regulatory agencies and boards. The result: a highly fragmented patchwork that presents major challenges for employers, students, workers and government funders attempting to compare and evaluate the major features and overall quality and value of different credentials.

This complexity, however, is not the only problem that needs to be addressed. In fact, the key problem we must fix is the lack of options for understanding these credentials so they can be used to help millions of Americans to advance in their education and careers. In other words, these credentials don't connect – to each other or to education and careers.

This is not an insurmountable problem, nor does solving it require a massive new centralized system of credentials. A good way to think about what we need to do to connect credentials is to think for a moment about money. Dozens of currencies operate across the globe, including some that are shared among countries, such as the euro, and many that are unique to one country. But systems exist to establish value and connect transactions regardless of the currencies being used. Customers spending their home country's currency and businesses accepting that currency enter this exchange with a clear understanding of what each unit of money will buy. They also trust that the money in use is valid. And when consumers travel to another country that operates under a different currency, they can use a credit card and rest assured that the meaning of their currency will translate.

We need a credentialing system that functions similarly – as a *system*, not as a collection of disconnected parts. We need a system with common definitions – one that engenders trust, much like the currency exchange. This is essential if we want to help students obtain the knowledge and skills they need for today's jobs – and if we want to help employers accurately assess the qualifications of prospective hires. It's also fundamental to the success of our economy – and to the future of millions of Americans.

One of the elements needed to build a system to connect credentials is a common language to make credentials broadly understood. Each type of credential uses its own terminology to describe the knowledge and skills people must possess to complete a course or program of study and/or perform a job. Also, each organization operates under its own assessment methods and standards, using different quality-assurance mechanisms to award credentials. In such a multi-layered environment, there's no comparability – no interoperability across the different types and dimensions of credentials.

Another missing element of a connected system is a common set of metrics and units to measure learning. Colleges and universities rely on credit hours to track student advancement and assign value to students' learning. In contrast, an increasing number of programs award credentials based on students' demonstration of what they know and can do. But making a shift to competency-based education is difficult for colleges and universities, in part because funding, transcripts, degrees requirements, faculty workload and numerous other systems are all tied to the credit hour.

There is widespread agreement that the reshaped American credentialing system should have several key attributes. It should:

- *Be easily understandable.* All postsecondary credentials – from badges to degrees and beyond – should be based on competencies, making them easier to understand and use by students, employers, educators and workforce agencies.

- *Assure quality.* Users must be able to rely on the quality of credentials, including their accuracy in representing the competencies possessed by a credential holder.

- *Be up to date.* Credentials should be continually updated and validated to ensure they stay relevant to employer needs.

- *Be interconnected.* All students should understand how credentials connect and be able to see several pathways to increase career and economic mobility. Users also must be able to combine credentials to fit their needs and inform their education-career planning, including job transitions.

- *Enable comparisons.* Stakeholders must be able to compare the value of various credentials and determine which credential best fits their needs.

Many stakeholders are working toward solutions

Key stakeholders agree: Reshaping the nation's fragmented credentialing system is critical to position students, employers and our economy for a successful future. As the several signatories of a paper calling for a conversation on credentialing wrote in 2014, there is a "crisis of credibility in our complex and highly fragmented credentialing system."[16] But change can't come from the top down or the outside in. Solutions must emanate from the users and issuers of credentials. The good news is the movement for change will not start from scratch. Key stakeholders are aware of the need to transform credentialing and are taking steps to address the problem. These stakeholders include the following:

• *The federal government* has supported credentials reform through its leadership, funding and participation in research. The federal Interagency Working Group on Expanded Measures of Enrollment and Attainment is in the process of identifying shortfalls in measuring educational attainment, and is researching and developing ways to measure alternative credentials. The federal government also is working to improve data collection on credentials and is testing alternative ways of administering student financial assistance programs to support competency-based approaches and the assessment of prior learning.

• *State governments* are working with higher education systems to develop and share consistent, competency-based metrics for credentials and licensing. States also are building more entry and exit points for individuals to earn credentials, are experimenting with incorporating competency-based certificates into financial aid and performance-management systems, and are establishing policies and programs to support a range of related efforts (e.g., prior learning assessment, aligned data systems, public-private partnerships, career pathways and sector partnerships).

• *Professional societies, accreditation bodies and employer-based organizations* are working to identify competencies that their employees require and are mapping those competencies to postsecondary programs so they can better integrate education credentials and industry certifications. A new industry-led affiliate of the American National Standards Institute, called Work-Cred, is partnering with higher education institutions, government agencies and a range of employer groups to explore the concept of an online database that would explain what each credential means, including the competencies it builds, its quality, how easily it can be transferred, and the value it brings to the labor market.

This is not all gloomy – this is a good news/bad news story. The good news: There are high earnings from many of these credentials vis a vis traditional degrees; many are bite-sized and relatively cheap to earn, many are responsive to employers, and many are timely to marketplace needs. The bad news: They're not transparent, and many don't deliver gainful employment or measured learning.

Anthony Carnevale, director of the Georgetown University Center on Education and the Workforce

• *Higher education institutions* are exploring how best to integrate industry and professional certifications into degree and certificate programs, and many are moving toward competency-based models. Higher education institutions are, for example: applying credit for non-degree learning toward degrees; developing industry certifications within their academic programs and seeking accreditation from industry-accreditation organizations; and enabling students to work concurrently toward a high school diploma and postsecondary credentials. Higher education programs are moving toward competency-based models that integrate industry and professional standards and even seek industry accreditation.

• *Foundations and think tanks* are sponsoring and promoting studies, dialogue and models that capture the challenges and potential solutions associated with a new credentials system. Organizations such as the American Council on Education, American National Standards Institute, Business Roundtable, Center for American Progress, Center for Policy Research and Strategy, CLASP's Center for Postsecondary and Economic Success, Corporation for a Skilled Workforce and Council for

Adult and Experiential Learning sponsor research and discussion on improving the credentials system and will continue to play a key role. A recent effort is the call for a national dialogue on the need for a reimagined U.S. credentialing system. This effort, supported by Lumina Foundation on behalf of more than 40 co-sponsoring organizations, represents a diverse array of stakeholders.

There is growing agreement that now is the time to act. Today's economy makes education beyond high school more critical than ever, and the skills required to succeed in the workplace will continue to evolve. We're fortunate to have a flexible, dynamic system of postsecondary providers, credential issuers and validators that can adapt and respond to these needs. For our robust network of currencies to work for students, employers and other stakeholders in the credentialing marketplace, we need an exchange-rate system to make those currencies widely understood and relevant. In creating a reimagined system that *connects* credentials, we will provide better life outcomes for the next generation of students, fill the gaps in employers' talent pipeline, and lay the groundwork for a prosperous American economy for decades to come.

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Lumina Foundation is an independent, private foundation committed to increasing the proportion of Americans with high-quality degrees, certificates and other credentials to 60 percent by 2025. Lumina's outcomes-based approach focuses on helping to design and build an accessible, responsive and accountable higher education system while fostering a national sense of urgency for action to achieve Goal 2025.

As a private foundation, Lumina Foundation does not support or oppose any legislation.
Lumina provides educational information, nonpartisan research and analysis to advance Goal 2025.

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