Ensuring student-centered value with skills-denominated credentials

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Abstract

Purpose – The global labor market has been upended and a new landscape has emerged. New models for ensuring the value and relevance of post-secondary education are needed. Learners need better understanding of the value and relevancy which the education provides and more immediate return on the educational investment. Education providers must ensure the relevance of the credentials. Employers require transparency into skills an individual possesses based on the credentials they hold. New models are needed to guide an understanding of credentials so that all have equitable pathways to opportunity. This paper aims to discuss the aforementioned objectives.

Design/methodology/approach – The authors in this paper discuss how Western Governors University implemented a Unified Credential Framework (UCF) for ensuring credentials are relevant, verified, transparent and portable. The UCF is predicated on the use of skills as an underlying foundation.

Findings – Using a structured theory for understanding skills and micro-credentials creates more transparency into what post-secondary credentials represent, and the value they hold for individuals, employers and education providers.

Research limitations/implications – This paper represents a use case where the proposed solution is still emergent. Additional research is warranted as longitudinal data become available on student outcomes and impacts.

Originality/value – This paper presents a model that any organization can implement for clearer line of sight into the value and relevance of post-secondary credentials.

Keywords Skills, Micro-credentials, Skills-based education, Skills-based hiring, Higher education, Open source, Credentials, Degrees, Open skills, Competency-based education

Paper type Case study

A question of value and relevance

Skepticism in the value of college degrees is on the rise in the USA. A 2018 report issued by the Pew Research Center found that 6 in 10 Americans believe the higher education system in the U.S. is going in the wrong direction (Brown, 2018). Two primary contributors to this viewpoint are the rising costs of a college education and the growing belief that students are not getting the skills they need to be successful in the workplace.

Over the last two decades, college tuition in the USA has increased at both private and public institutions by 45 and 55%, respectively (Ma and Pender, 2022). While these numbers in themselves are problematic, when paired against a median wage that has been stagnant since the 1990s for workers below the 90th percentile, the rate at which the cost of college is

outpacing earnings is unsustainable (Donovan and Bradley, 2020). The juxtaposition of these numbers paints a clear picture for why many individuals are questioning whether a college degree is worth the time and investment. A recent report from the US Federal Reserve notes that only 56% of bachelor's degree holders under the age of 30 believed their education was worth the cost. This number drops notably among associate degree holders of the same demographic, with only 4 out of 10 reporting that their education was worth the investment (Loro *et al.*, 2022). Additionally, roughly 60% of the same demographic reports relying on student loans, credit cards and home equity loans to finance their education. With wage growth severely lagging behind the growing cost of college, more and more learners are leaning on loans to finance their education with US undergraduate students graduating with an average of nearly $25,000 in debt (The White House, 2022).

The apprehension over college return on investment is further exacerbated by a perceived lack of relevance in the college experience. Even though, according to a 2018 Gallup survey, 58% of US education consumers cite their primary reason for pursuing a degree is career related, only 26% report that their college education prepared them for important career and life skills (Auter, 2018). US employers are also calling the relevance of a college education into question as a mechanism for preparing learners for important career skills. A 2018 series from The Society for Human Resource Management (SHRM) reports that college graduates are not meeting employer expectations (or their own) and there is a growing disconnect between what graduates learn in college and what they will need to be successful on the job (Wilkie, 2019).

The growing cost of post-secondary education in the USA and the lack of clear alignment between credentials and the world of work are growing issues—but not ones that cannot be solved. To provide post-secondary education that is more responsive to employer needs, more aligned to learners' needs, and more favorable in cost with a faster return on investment, many organizations are embracing a movement towards micro-credentials. Yet, breaking down qualifications into more granular forms does nothing to address the question of credential value or relevance. Without a solid foundation for understanding the value and relevance of these credentials, their potential to better meet the needs of learners and employers alike falls flat. This problem is only exacerbated as more credentials enter the market (Whissemore, 2022). According to the most recent credential count report released by Credential Engine in 2022, the USA alone has over one million unique credentials across secondary and post-secondary education providers (Credential Engine, 2022).

To make sense of this growing credential landscape, a model for understanding different credential types and what they represent is needed. Value and relevance of post-secondary credentials needs to become more transparent and more nimble models of education beyond the traditional two- and four-year degrees need to be set in place. A collaborative investment will be needed between employers and educators to understand the skills an individual needs to be successful in the workforce. For those skills to be portable by the learner-earner it will require a shared language to bridge the gap between employers, education institutions and learners to better understand the value of post-secondary credentials and what an individual can do based on the credentials they hold. This language is rooted in skills.

The case for skills

Skills are the new currency of the labor market globally and can serve as an important foundation for bridging the gap between employers, education providers and individuals (World Economic Forum and Willis Towers Watson, 2019). This new currency has emerged as employers struggle to find skilled talent to meet their workforce needs. The 2022 Global Talent Shortage survey from ManpowerGroup found that talent shortages have reached a 16-year high globally, with 75% of employers having difficulty finding the skilled talent they

need (ManpowerGroup, 2022). As global talent shortages have reached an all-time high, employer demand for skilled talent is more urgent than ever. According to the Q4 2022 ManpowerGroup Employment Outlook Survey, between 72 and 75% of global employers in high-demand industries such as IT & Data, Sales and Marketing, Operations and Logistics, Manufacturing and Production and Customer Service reported difficulty hiring for both hard and soft skills (ManpowerGroup, 2022). As more and more employers struggle to fill open roles with skilled talent, the need grows for more transparency into the skills an individual has as indicated by the credentials they hold. Employers also need faster and more cost-effective mechanisms for reskilling and upskilling their existing talent. Similarly, learners need access to a variety of education credentials that more transparently align to their career goals, support more focused and personalized skill development and provide for more immediate return on their educational investment. Skills are a critical intersection between the world of work and the world of learning and have the potential to revolutionize this ecosystem.

Creating a shared skills language
Since its establishment in 1997, Western Governors University (WGU) has placed learners at the center of its competency-based model to create more equitable pathways to opportunity in support of critical workforce development needs (DeMark *et al.*, 2022). As a natural evolution of that commitment and to better meet the needs of today's learners, WGU has implemented a powerful use case for transforming pathways to opportunity with skills as the underlying currency and infrastructure. In 2020, Western Governors University in collaboration with the Open Skills Network (OSN) developed a universal, machine- and human-readable language for describing skills known as Rich Skill Descriptors (RSD). The RSD is a structured data syntax that provides a common language for defining and describing skills in a way that can be understood by both individuals and technology systems (Rich Skill Descriptor, 2022). The RSD is predicated on contextual definitions of skills and what that skill looks like when applied in different industries, sectors and job roles. For example, "communication" for a software engineer, more precisely, required that an individual be able to "communicate code changes to both technical and non-technical stakeholders." This context is a critical component of precision in describing skills to help bridge the gap between the world of work and the world of learning.

As WGU worked to understand the high-value skills required of students for each of its degree programs, the WGU Skills Library (https://www.wgu.edu/lp/general/wgu/skills-library.html), which contains thousands of RSDs spanning many job roles and industries, was created. Each RSD represents a high-demand, employer-valued skill that learners need to be successful in the workforce. Every RSD in the Skills Library was developed in conjunction with practitioners, employers and hiring managers in their respective industries. This collection of skills has grown from a single RSD in 2020 to a library of over twenty thousand RSDs today.

All RSDs in the WGU Skills Library were authored using WGU's first open-source software project known as the Open Skills Management Tool (OSMT). OSMT provides organizations like WGU with the ability to author, edit, curate, maintain, publish and share collections of RSDs (Open Skills Network, 2022). In February 2022, WGU began publishing collections from its Skills Library using OSMT for public use. To date, WGU has published 60 open skill collections with plans to release its full skills library by the end of 2023. OSMT has provided WGU and other organizations with the ability to create an open skills ecosystem and a common skills language to bridge the needs of employers, education providers and individuals.

Using RSDs from its Skills Library, WGU can create powerful linkages between high-demand, employer-valued skills and each of its academic credentials. This linkage provides learners and employers alike with a clear line of sight into the skills a student has demonstrated as part of their credential attainment, making the relevance and value of the credential more transparent. RSDs serve as a primary foundation to WGUs credentialing strategy by providing a mechanism for understanding the value of any given credential to the learner and its relevance to the workforce and their career goals.

The National Student Clearing House reported in the Spring of 2022 that over 39mn Americans have some college education but no credential (National Student Clearinghouse, 2022). To further meet the needs of today's learner, WGU has implemented a powerful use case for transforming pathways to opportunity with skills as the underlying currency and infrastructure. WGU has developed a Unified Credential Framework (UCF) to ensure transparent alignment of all WGU credentials to high-value, industry-relevant skills as illustrated in Figure 1.

A Unified Credential Framework

Over the last few years, WGU has created and implemented a unified approach to credentialing that helps address the ambiguity of the current credential landscape. The number of issued digital credentials continues to increase as entities representing higher education, private industry and governments see the value of implementing a badging system. WGU began the process of creating a skills-based credential framework by conducting research into the current credentialing landscape. This research included looking for standard definitions, fundamental credential components and intersections between academic credentials and the workforce. European models, US-based credentialing initiatives and other higher education institutions were reviewed. Ambiguity and inconsistency ruled the landscape and WGU needed a cohesive approach to credentialing that best aligned with the WGU academic structure. The WGU UCF (https://www.dropbox.com/s/hf74qzceq0mrqod/WGU%20UCF%20One%20Pager_QR.pdf?dl=0). was created.

WGU's UCF provides standard definitions and guidance on the different types and mastery classes of credentials. Every WGU credential is aligned to in-demand RSDs, providing transparent employment value that is sharable with employers and other educational institutions and understood by individuals. WGU's framework ensures a transparent and consistent credentialing strategy where each skill and credential are backed by clear definitions and value for learners. The UCF also creates clear alignment and crosswalks with other relevant external credential and industry frameworks helping to remove some of the ongoing ambiguity across institutions.

The UCF enables WGU to implement a system of credentialing where learners can earn incremental value as they make their way to higher-level credentials. By aligning each credential to in-demand skills, WGU ensures that every micro-credential prepares the learner for a particular professional or academic skill or competency. To ensure that all issued credentials have employer value WGU has defined that each credential is:

(1) Workforce Aligned Competencies and Skills: credentials recognize professional and personal competencies and skills explicitly aligned to high-demand workforce needs.

(2) Relevant and Authentic Assessment: credentials require validation of achievement of competence, which is assessed using authentic, real-world workforce use cases.

WGU

Unified Credential Framework

Western Governors University's Unified Credential Framework (UCF) enables a unified system of credentialing where learners earn incremental value as they make their way to higher-level credentials. This framework supports Skills-Denominated Credentials (SDCs), including our competency-based, skills-tagged and shareable degrees, and a new system of microcredentialing high-demand, labor market-relevant skills and competencies

UCF Criteria

Workforce Aligned Competencies and Skills

Credentials recognize professional and personal competencies and skills explicitly aligned to high-demand workforce needs

Relevant and Authentic Assessment

Credentials require validation of achievement of competence, which is assessed using authentic, real-world workforce use cases

Transparent and Portable

Credentials are issued in open standards allowing for seamless portability and transparency of credentials between organizations

Validated Open Skills

Credentials represent skills aligned to industry partners and/or external bodies ensuring market value

SDCs Mastery Classes

Class 1

Mastery of essential knowledge, skills, and dispositions foundational for the demands of modern society, learning and work
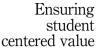
Class 2

Ability to apply an expanding set of knowledge, skills, and dispositions in a given professional or academic context

Class 3

Ability to apply and transfer an expanding set of knowledge, skills, and dispositions across a range of professional or academic contexts

Class 4

Ability to create novel strategies and tactics to address the requirements of a range of professional or academic contexts

Competency Badges
- Prepares learners for a specific professional or academic skill or task
- Mastery class: 1-4
- Offered as part of a degree or microcredential program

Certificates
- Prepares learners for a particular job or set of professional or academic skills and tasks
- Mastery class: 1-4
- Scope and targeted outcomes to certification not industry recognized qualifications

Certifications
- Qualifies learners for a particular job or set of professional skills and tasks required by industry qualification requirements
- Mastery class: 1-4
- Typically offered by third-party industry credential provider

Specializations
- Prepares learners for an array of specified jobs, skills, and task sets within a professional sector or academic domain
- Mastery class: 2-4
- Sub-component track or path of degree program

Degrees
- Prepares learners for employment and advancement in a specified career trajectory
- Mastery class: 2-4
- Associate's, Bachelor's, Master's

Source(s): Created by Western Governors University

(3) Transparent and Portable: credentials are issued in open data standards allowing for the seamless portability and transparency of credentials between organizations.

(4) Validated Open Skills: credentials represent skills aligned to industry partners and/or external bodies ensuring market value.

WGU uses skills research to reveal the most high-demand skills in the labor market that then inform recognized WGU competencies. Subject-matter experts review material to determine where opportunities exist to embed a micro-credential on the learner's path to higher credentials. By embedding these value focused digital micro-credentials, learners receive immediate recognition and return on investment along their educational journey.

As part of the ongoing research into workforce demand, WGU partners with employers and industry groups to identify job requirements and work expectations. Each skill and competency is reviewed to determine the work that individuals would be expected to do on the job leveraging these skills. Assessments are then designed to create opportunities for learners to demonstrate mastery of the required skills and competencies. As WGU is a competency-based university, learners must successfully demonstrate ability in all skills and competencies to pass the requirements for the course. Validation of underlying skills is critical for upholding the integrity and value of a credential. And as part of WGU's rigorous validation requirements, over 2.5 million assessments are delivered every year. WGU employs stringent security measures with proctoring and authenticity verification to ensure that both individuals and employers trust the skills that are asserted as part of a WGU credential.

Furthermore, WGU adds another criterion of openness by providing that all credentials are portable and transparent. WGU graduates benefit from credentials that are issued in open standards thus allowing for the seamless portability and transparency of credentials between organizations. While withdrawing from an educational experience is sometimes inevitable, by incorporating digital micro-credentials of value with portability and transparency learners can still communicate their verified mastery of relevant competencies and skills in a way that aligns with employers.

These ideas and applications underline WGU's commitment to open skills and open solutions for credential portability. The landscape is vast and the urgency for learners and workers is real. Learners enroll in academic credential programs to gain the skills needed to be successful in the workforce, but there is forever another summit to achieve. The next commitment to learners, as higher education institutions, should be to provide a shareable learner-owned record where credentials of value can be surfaced as verified achievements. An example is social media platforms, such as LinkedIn, that allow users to curate their profiles to showcase their learning and employment history. The road ahead has incredible possibilities for showcasing an individual's validated skills across a lifetime of education and experience.

Exploring the diverse alignments and multifaceted global potential of the Unified Credential Framework

The relevance and efficacy of the UCF are considerably enhanced by its alignment with a diverse range of existing credentialing frameworks and processes. This alignment forms a crucial component of the UCF's functionality, ensuring compatibility, comparability and transferability of credentials across various sectors, regions and systems. One of the core alignments the UCF establishes is the Workforce/Professional Alignment. This relationship effectively creates a coherent and easily navigable path from education to employment. The UCF covers a range of credentials from entry-level to senior or executive level, reflecting the diverse levels of expertise and responsibility present within any professional context.

The UCF also recognizes the importance of catering to secondary education students. The Secondary Education Alignment ensures the UCF's credentials are pertinent to students preparing for college or career readiness and those pursuing technical and career certifications. The UCF's responsiveness to various stages of post-secondary education is illustrated through its Post-Secondary Education Alignment. The UCF coordinates with each

stage, from college readiness to the highest-level major or graduate specialization requirements, indicating the comprehensive range of credentials the framework offers. Alignment with the Connecting Credentials, a US-based framework describing eight levels of competence, provides additional clarity and comparability for learners, educators and employers (Connecting Credentials, 2016).

In a similar vein, alignment with the UNESCO World Reference Levels (UNESCO, 2019) offers a global reference point for qualifications, thereby ensuring the UCF's credentials retain international relevance. The European Qualification Framework (EQF) EUROPASS is a comprehensive qualifications framework facilitating the comparison of qualifications from different countries (European Union, 2017). The UCF's alignment with EQF ensures its relevance and applicability in the European context, further enhancing its global reach.

Connecting with the Framework for Qualifications of the European Higher Education Area ensures that its higher-level credentials are comparable with those awarded in the European Higher Education Area (European Centre for the Development of Vocational Training *et al.*, 2017). These diverse alignments illustrate the UCF's flexibility and commitment to catering to a diverse array of learners and stakeholders, from secondary students to professionals and from local to international contexts. Moreover, they underline the importance of a coherent, globally understood credentialing system in today's interconnected world. The UCF has set a robust foundation for broad recognition of its credentials across multiple contexts. The transparency this alignment fosters aids stakeholders in understanding the value and relevance of a given credential, thereby enhancing its efficacy and acceptance.

The extension of the Unified Credential Framework (UCF) can certainly venture beyond the linkage of credentials to workforce demands, as there are numerous universities that already have effective programs for skills development that align with future employment. Nonetheless, the UCF can still offer considerable value in such contexts, as it presents a multitude of opportunities for expansion. It can be incorporated into ongoing professional development and lifelong learning programs, assisting those who are currently in the workforce and seeking to enhance or change their skills. This aligns with the need for perpetual learning in an ever-evolving job market, a necessity that is driven by factors such as technological advancements and economic shifts (Bessen, 2018).

Moreover, the UCF's emphasis on transparency and portability can prove beneficial in scenarios where learners transition between institutions, sectors, or even countries. By providing a clear, standardized approach to defining and recognizing credentials, the UCF can facilitate these transitions and ensure that learners' skills and competencies are recognized and understood in various contexts (OECD, 2019). It can be employed to better recognize and validate interdisciplinary and transdisciplinary learning, which has become increasingly significant in a complex, interconnected world. For instance, a student might integrate studies in computer science and sociology, thereby developing a unique set of skills that traverse traditional disciplinary boundaries. The UCF could provide a framework for recognizing and credentialing such learning pathways (Augsburg, 2014).

Additionally, the UCF could be broadened to recognize learning that occurs outside of formal education settings, such as through work experience, volunteering, or online learning. This could offer a valuable means of recognizing and validating the diverse range of skills and competencies that individuals develop throughout their lives (Werquin, 2010). Lastly, the UCF's standardized framework can facilitate collaborations and partnerships between universities, industry and other stakeholders by providing a common language and understanding of credentials. This could assist in the development of more effective co-op programs, internships and other forms of experiential learning (Jackson, 2014).

This framework embodies a transformative approach to credentialing that is comprehensive, responsive and globally relevant. By aligning with a multitude of existing

frameworks and processes, the UCF ensures its credentials are compatible, comparable and transferable across different sectors, regions and systems. Its alignment with workforce/ professional, secondary and post-secondary education, coupled with international frameworks like Connecting Credentials, UNESCO World Reference Levels, EQF EUROPASS and the Framework for Qualifications of the European Higher Education Area, underscores its versatility and global applicability. Furthermore, the UCF's potential for expansion extends well beyond just linking credentials to workforce demands. Its application in ongoing professional development, lifelong learning, fostering transparency and portability, validating interdisciplinary and transdisciplinary learning, recognizing informal and non-formal learning and facilitating collaborations, demonstrates its commitment to cater to diverse learners and stakeholders. Therefore, the UCF sets a robust foundation for a coherent, globally understood credentialing system, reinforcing the importance of transparency and broad recognition of credentials in today's interconnected world. This comprehensive approach not only enhances the efficacy and acceptance of credentials but also fosters an environment of perpetual learning, thereby equipping individuals for the dynamic demands of the modern workforce and society.

Change management and the stewardship of skills
WGU's commitment to skills has been underway for some time; however, our underlying guidelines for credentials are more recent. Finding the intersections between both skills and credentials took time and implementing them has been a more considerable challenge. To align this work, WGU had to think about what this means for a learner at WGU and how *open skills enhance credentials*. First, within the UCF, a critical criteria item is validated open skills. This means all WGU credentials represent skills aligned to industry partners and/or external industry bodies, ensuring their market value and relevance. Implementing this approach to credential creation is assisted by collaborating with open skills partnerships, like the OSN. Establishing institutional partners can be challenging and ensuring the program creation represents their needed skills added complexity to the process.

Implementing a new process or product can always present multiple challenges. There is always a concern about feasibility, implementation and risk. There are even more significant concerns when implementing processes that impact the larger organization and that will result in a change in approach to an area's workstreams and deliverables. At WGU, the evolution towards becoming skills-denominated was not an obstacle, as we have always focused on offering career-relevant, competency-based education. However, over the past four years, there was an intensified focus on efforts to fully embrace a program design process that starts with underlying skills research. Through all the initial work, WGU determined that as the workforce shifted towards skills-based hiring, there was an opportunity to rather publish these collections in open sources rather than keeping the skills data siloed. The OSN provided a space for the democratization of skills as a shareable, interoperable currency through the practical application of open, accessible, machine-actionable skills data.

The story could end here, except for WGU's belief in collaborative leadership. By committing to open skills as a new open language of RSDs and frameworks and through collaborative intentional partnerships, this community can reduce technological and operational barriers and cultivate the adoption of skills-based education and hiring as a standard practice for most education providers and employers around the world. The new landscape of skills is rugged and mountainous but filled with incredible opportunities to better the life of every learner and worker. While each step is unique to the climber it is through a collective community that the summit is reached. Carving a pathway to a new vista can be arduous at times, but always rewarding when undertaken together.

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