

Williams, L.M., Serpati, L., Killian, R., and Heath, T (2023). Assessment integrity: Foundations for high-quality credentials. *Intersection: A journal at the intersection of assessment and learning, Association for the Assessment of Learning in Higher Education Conference Proceedings* 4(3).

Assessment Integrity: Foundations for High-quality Credentials

Laura M. Williams, PhD, Lauren Serpati, PhD, Racheal Killian, and Tyson Heath

Author Note

Laura M. Williams, ORCID 0009-0000-0506-7317

Lauren Serpati, ORCID 0000-0001-7169-0705

Racheal Killian, ORCID 0009-0001-0012-9328

Tyson Heath, ORCID 0000-0003-3022-9124

We have no conflicts of interest to disclose

Intersection: A Journal at the Intersection of Assessment and Learning

AALHE Conference Proceedings 2022-2023, Volume 4 Issue 3

Abstract: In a time when the value of a college degree is under continuous scrutiny and the opportunity for alternate pathways to workforce readiness is ever-increasing, ensuring high-quality credentials is imperative. However, how can we reassure our students, employers, and other stakeholders that what we offer is high quality? To answer this question, we can leverage skills, assessment integrity, and credential frameworks.

During the 2023 Association for the Assessment of Learning in Higher Education annual conference in New Orleans, Western Governors University (WGU) presented the importance and value of having a system related to skills, assessment integrity, and credential frameworks that is adequate. In their dialogue session, they explored how institutions can engage in internal conversations to define how psychometrically based assessment practices be used to increase our credentials' quality, value, and trustworthiness. This paper summarizes and expands on the key topics and shares additional resources supporting the presenters' position.

Keywords: *Skills, open standards, micro-credentials, higher education, credentials, assessment integrity*

A new approach to quality, value, and relevance

A new higher education landscape has emerged as the global labor market has been upended. Simultaneously, societal trust in the value of college degrees continues to decline, with a 2018 Pew Research Center report finding that 6 in 10 Americans believe the higher education system is going in the wrong direction (Brown, 2018). Additionally, the overwhelming number of digital credentials in the marketplace right now is no doubt causing confusion for consumers who might already be doubting the power of higher education. As noted in a December 2022 Credential Engine report, more than one million credentials were offered in the United States by nearly 60,000 providers (Engine, 2022). New approaches are needed to ensure the quality, relevance, and value of post-secondary education. Innovative frameworks for understanding different credential types and what they represent are needed to make sense of this growing credential landscape. The value and relevance of post-secondary credentials need to become more transparent, and more nimble education models beyond the traditional two- and four-year degrees need to be set in place. 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 understand better the value of post-secondary credentials and what an individual can do based on their credentials (Thorne et al., 2023). This language is rooted in skills and assessment.

Western Governors University (WGU) recently celebrated its 25th anniversary as an institution of higher education. As a private nonprofit university founded in 1997 by a bipartisan group of 19 governors, WGU has always been workforce-aligned and skills-based. Our competency-based model allows students to self-pace their progression, and skills and learning are measured through the successful demonstration of completing the assessments. The applied master curriculum means all students have the same learning objectives and course material and must successfully demonstrate mastery on a common assessment. Adhering to psychometric best practices and rigorous quality assurance processes during assessment development allows for trustworthy verification of a student's skill attainment in the credential. The innovative approach to skills-based education empowers the learner and allows them to use their skills as currency to prove their capabilities to employers.

To expand on this work, WGU launched a new department in 2021, Workforce Intelligence and Credential Integrity (WICI), focused on making the promise of education work for everyone. Our Workforce Intelligence focus is concentrated on understanding the needs of employers and ensuring our programs are aligned to meet those needs. Our Credential Integrity component is concerned with maintaining and safeguarding the value of a WGU credential. Since its inception, WICI has been aiming at addressing several key issues. Primarily, there exists a necessity for learners to acquire fresh abilities and cultivate novel methods of articulating the significance of their accomplishments. Secondly, the escalating expansion of the college credential landscape has led to increased uncertainty and obfuscation regarding the representation of these qualifications. In the third place, it has become paramount for learners to perceive a more immediate and tangible return on investment throughout their educational voyage. Fourthly, there arises the demand for learners to discover avenues to exhibit their skills and convey the importance of their achievements via validated assessments. Ultimately, learners require improved mechanisms to comprehend the skill sets their qualifications embody, and the inherent value and quality they possess. This article will delve into the strategic solution devised and executed by WGU to address these multifaceted challenges, thereby offering our students a deeper insight into the quality, value, and relevance of their hard-earned credentials.

A shared skills language

When you reflect on your academic experiences, were you able to identify and articulate the skills valuable to future careers based on your coursework? Were you aware of the career options available to you based on your skillset then? Could you connect the skills you were developing to your future career goals? Based on the feedback this group received during conference sessions, the answer to these questions was no. At WGU, we endeavor to change this for our students. Skills-based design paired with quality, authentic assessment is the foundation for setting our students up to articulate the skills they have earned and to know how those skills can be leveraged to create the career path they

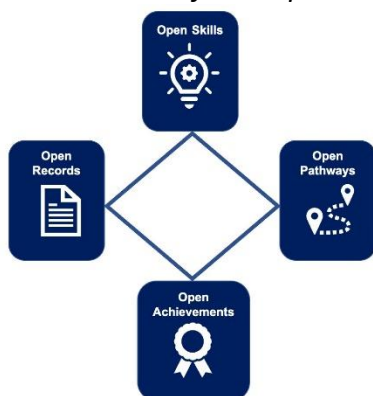


desire. In addition, WGU has published a Skills Library¹, containing collections of skills to help higher education institutions create skills-denominated digital badges, professional development departments align curriculum to workforce-relevant skills, HR managers author more effective job descriptions, and educators build curricular and career pathways. WGU believes that open skills, open records, open pathways, and open achievements are needed to support workforce development for the future of work. (DeMark et al., 2022; Figure 1)

Through the collaborative creation and adoption of open standards², WGU seeks to ensure dynamic, personalized learning experiences for all learners, leading to a meaningful, actionable learner-owned record to be curated and shared across education providers and employers. According to the 2018 Talent Shortage Survey from ManPower Group, 45% of employers globally have said they cannot find the candidates with the skills they seek. This inability to find candidates with the right skills refers to a “skills gap.” The skills gap must be addressed because it hinders the personal growth of individuals and the overall economic development, by creating a mismatch between the competencies that employers need and those that workers possess. Leveraging Open Skills reduces costs and improves the quality of documentation of in-demand skills from the labor market through a shared, machine-readable, and translatable format. Creating Open Pathways creates a standard logic to stack and share learning achievements within and across multiple education and employment providers.

Figure 1

The Diamond of Interoperability



The Career Advisory Board for the 2018 Job Preparedness Indicator asked 500 hiring managers to share their thoughts on nontraditional job candidates. Seventy percent of hiring professionals agreed that if a candidate has the right skills for an open position, it does not matter how much time it took to learn

¹ A national open skills infrastructure is critical to support the future of work and the development of agile and robust talent pipelines where all individuals can achieve their career goals. The scale and urgency needed for this transformation necessitates a significant commitment to the democratization of skills as a sharable, interoperable currency through the creation of a national network of open, accessible, machine-actionable skills. Open Skills Network www.openskillsnetwork.org

² Much of the data needed to support skills-based education and hiring already exists; however, this skills data is siloed, not easily accessible nor machine-actionable, making the switch to skills-based practices for most employers and education institutions a manual and expensive endeavor.

the skill or format of education was used to get them (Bellis, 2018). Developing Open Achievements serves as a consistent, machine-readable protocol for packaging information about accomplishments and recognition of experience and learning. Delivering Open Records enables learners to access verifiable achievement records from any institution or platform and to share them with any education provider or employer using a standard messaging protocol.

A new approach to quality, value, and relevance

Understanding the necessary skills and where their respective gaps lie is foundational to competency-based assessment. At WGU, assessment is central to our competency-based model and to upholding the integrity of our credentials. In competency-based education, demonstration of competence is usually done in such a way that students are deemed competent (or not). Competency demonstration is required for determining whether a student passes a course, negating the need for grades to be awarded. Similarly, other factors such as attendance, homework assignments, or extra credit are not considered when determining whether a student passes a course. Given that, WGU is vigilant about ensuring that assessments are psychometrically sound. That is why WGU focuses on fairness, reliability, and validity (Figure 2). In this section, the role of skills in enhancing validity will be examined.

Figure 2

Psychometrically sound assessment



Validity is focused on using “test scores...to draw inferences about examinee behavior in situations beyond the testing session” (Crocker & Algina, 2008, p. 217) and having sufficient evidence to support those inferences. Scores from an individual assessment could be perfectly valid for determining competence in one application but utterly inappropriate in another. For example, in most states, for a person to obtain a driver’s license, that person must pass both an on-the-road driving test and a written exam (usually focused on state-specific traffic rules). While both assessments measure aspects

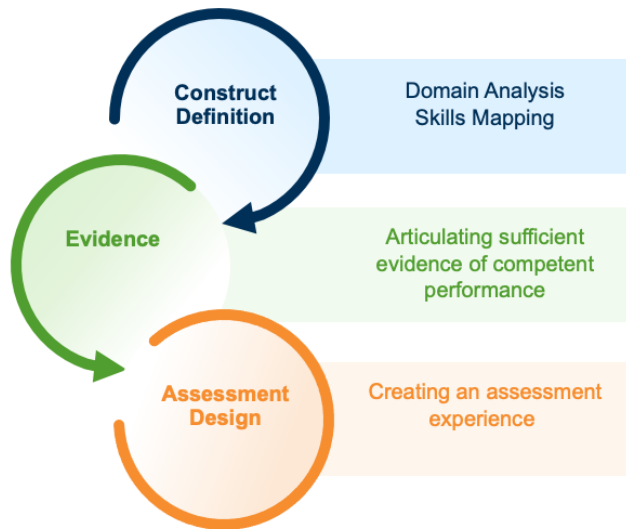
of driving and are essential in determining whether an individual is a competent driver, simply passing the driving test does not equate to adequate knowledge of the rules of the road, and vice versa. Each assessment measures a discrete set of knowledge and skills—and one cannot be substituted for the other. The same principle applies to academic assessment; the same test cannot typically be used for multiple purposes. To ensure the appropriateness of assessment use, the content and composition (validity evidence) of assessments should be examined for relative alignment to the assessment's intended use and inferences made based on scores.

One of the ways to provide validity evidence is through the test development process, where the skills play a critical role in validity. Skills inform validity in a myriad of ways (Figure 3). As mentioned earlier, WGU begins the design of all credentials with a skill analysis to inform the competencies and assessment strategies. By defining constructs carefully and thoughtfully through skills mapping, there is a strong foundation for what the assessment will measure and at what level and purpose it should be measuring. A user can glean important information from the skills underpinnings to determine whether the assessment is appropriate for the intended use—consider the previous example of written vs. one-the-road tests. The skills mapping and analysis will differ for each assessment and help the potential user judge whether it has the right content and context to support the claims they wish to make about test-takers.

Following competency design, activities such as articulating sufficient evidence of competent performance are conducted, which ensure that the assessment is appropriate for and authentic to the skills and contains the correct content to support inferences about student competency. Only then should an assessment methodology be chosen. Prematurely choosing how to assess content and then attempting to retrofit skills and evidence of competency to that assessment methodology can result in a mismatch between the assessment content and its intended use, thus undermining validity. As with the skills mapping, careful thought is given to assessment methodology and necessary evidence of competency to support inferences about test takers. Academic leaders can and should consider these aspects when choosing and designing assessments; indeed, the entirety of Chapter 9 of the *Standards of Educational and Psychological Testing* (AERA, APA, & NCME, 2014) is dedicated to the responsibilities of those who are accountable for choosing, using, and interpreting assessments and their results.

As an added benefit, when skills are so carefully and intentionally considered in assessment design, they are more readily apparent to students when engaging in their assessment experiences. Because students can easily see the connection between the skills, the assessment, and therefore what they are being asked to do, it also allows them to more clearly surface and articulate their skillsets to employers, graduate programs or other entities to whom the student wishes to convey their expertise. Furthermore, when assessments are grounded in skills, institutions can not only clearly articulate how they are addressing the skills gap in their curricula, but also have the data and validity evidence to show that their students are prepared to fill the skills gap in the workforce.



Figure 3*Contributors to validity*

A unified credential framework

Determining a credential's value, quality, and relevance can be challenging for learners and employers. A growing and diversifying credential landscape adds to the ambiguity and confusion about credential value, which could adversely impact the learners who would most benefit from incremental achievements. In addition to advocating for psychometrically sound assessment practice, WGU has developed a framework to help conceptualize and guide our understanding of what credentials of value look like.

WGU's [Unified Credential Framework](#) (UCF; WGU, n.d.) promotes equitable educational attainment in higher education by defining and clarifying the credentialing landscape for learners and their potential employers and providing a framework for institutions seeking to offer incremental credentials toward a degree. Furthermore, WGU's UCF provides solutions to the credentialing challenges by defining terminology related to assessment rigor necessary to verify competency and metadata requirements for establishing Learning and Employment Records (LERs).

WGU's UCF has set a credentialing standard for higher education, private credentialing organizations, and industry (The Evollution® by Destiny Solutions Inc., 2023). The UCF has been shared widely with institutions looking to align their credentials with their workforce partners and the skills the market demands. At WGU, Skills-Denominated Credentials (SDCs) are defined as credentials that are relevant, verified, stackable, and shareable with employers and other education institutions in a portable currency understood by the recipient. SDCs form the basis of all credit-bearing offerings at WGU. They are held to the highest level of assessment verification rigor to ensure students' credentials are valuable in the workforce. WGU's criteria for inclusion in the framework include:

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.
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.

These criteria demonstrate WGU's commitment to open solutions and skills for credential portability. As stated in the problems to solve, the current environment is vast, and the urgency for learners and workers is real. Our commitment to learners, as higher education institutions, should be to provide credentials of value that enhance societal trust in the quality of the skills mastered by our foundational principles of assessment. The road ahead has incredible possibilities for constructing credentials embedded with validated skills that learners can share across a lifetime of education and experience.

Considerations for the future

The value of a college degree will continue to be scrutinized and questioned for the foreseeable future. Because of that, for any credential to have and retain value, thoughtful consideration to design not only of the credential itself but of any assessment experiences is critical. As discussed in this article, introducing skills architecture to the conversation around assessment is one way to ensure the value of a credential and contribute to psychometrically sound assessment practices. It is important to note that the value of the skills conversation is not limited to vocational or workforce-aligned institutions and programs. Tools such as the Open Skills Network provide skills information and value to any program and institution. They are highly recommended to be used as the starting blocks for any future credential.

With the shift to a new era of higher education, we all must come together as a group to ensure we are preparing learners for workforce relevance. As a collective body, the following questions should be pondered to move the needle regarding skills-based education and assessment integrity:

- How does your institution evaluate credentials from a student-centric lens?
- What steps might your organization take to provide students with more transparency regarding their credentials?
- What obstacles are present that make moving to outcome-driven value measures a reality?
- How can a skills-based framework help you improve assessment validity?



References

- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education (Eds.). (2014). *Standards for educational and psychological testing*. American Educational Research Association.
- Bellis, R. (2018). Stop Confusing Your Job Skills with Your Credentials. Fast Company. <https://www.fastcompany.com/40533276/stop-confusing-your-job-skills-with-your-credentials-and-do-this-instead>
- Brown, A. (2018, July 26). Most Americans say higher ed is heading in the wrong direction, but partisans disagree on why. https://www.pewresearch.org/fact-tank/2018/07/26/most-americans-say-higher-ed-is-heading-in-wrong-direction-but-partisans-disagree-on-why/?utm_source=AdaptiveMailer&utm_medium=email&utm_campaign=18-7-26%20Higher%20ed%20press%20release&org=982&lvl=100&ite=2932&lea=651931&ctr=0&par=&trk=
- Credential Engine (2022). Credential Confusion: New Report Identifies More than One Million Credentials Offered in the U.S. Across a Maze of Nearly 60,000 Providers. Credential Engine. <https://credentialengine.org/2022/12/07/credential-confusion-new-report-identifies-more-than-one-million-credentials-offered-in-the-u-s-across-a-maze-of-nearly-60000-providers/>
- Crocker, L. & Algina, J. (2008). *Introduction to classical & modern test theory*. Cengage Learning
- DeMark, S., Hobbs, D., Thorne, K., & Young, K. (2022). Charting a Future with Skills: The Need for a Skills-Based Education and Hiring Ecosystem. In A. Brower & R. Specht-Boardman (Eds.), *New Models of Higher Education: Unbundled, Rebundled, Customized, and DIY* (pp. 61-80). IGI Global. <https://doi.org/10.4018/978-1-6684-3809-1.ch004>
- The Evollution® by Destiny Solutions Inc. (2023). Creating incremental value for modern learners. The EvoLLLution. <https://evollution.com/programming/credentials/creating-incremental-value-for-modern-learners/>
- Thorne, K., DeMark, S., Heath, T. and Young, K. (2023). Ensuring student-centered value with skills denominated credentials. *International Journal of Information and Learning Technology, ahead-of-print*. <https://doi.org/10.1108/IJILT-01-2023-0003>
- Western Governors University (n.d.). Unified Credential Framework. <https://www.wgu.edu/content/dam/wgu-65-assets/western-governors/documents/skills/WGU-UCF-OnePager-QR.pdf>

About the Authors

Laura M. Williams, PhD, Senior Lead Assessment Integrity Strategist, Western Governors University, l.williams@wgu.edu

Lauren Serpati, PhD, Senior Lead Credential Integrity Strategist, Western Governors University, lauren.serpati@wgu.edu

Racheal Killian, Senior Lead Credential Integrity Strategist, Western Governors University, racheal.killian@wgu.edu

Tyson Heath, Director, Credential Integrity, Western Governors University, tyson.heath@wgu.edu