

Micro-credentials

Stackable, Combinable, or Transferable Qualifications

Aras Bozkurt & Mark Brown

A micro-credential is the record of the learning outcomes that a learner has acquired following a small volume of learning, which is assessed against transparent and clearly defined criteria (European Commission, 2022). While there is no global consensus on the definition of a micro-credential, the above definition adopted by all EU Member States goes beyond the bottom-up movement of issuing open badges. It distinguishes micro-credentials as (digital) proofs of meeting defined learning outcomes that are assessed, quality-assured, and verified by a trusted body. Moreover, micro-credentials are expected to provide metadata transparently showing the learner's identity, awarding body, date of issue, study hours needed to achieve the learning outcomes (including credit value and level if applicable), type of assessment, and form of participation. While other terms are often used interchangeably to refer to micro-credentials (e.g., digital badges, digital credentials, online certificates, alternative credentials, nano-degrees, micromasters, master tracks, and specializations), they do not always meet the above requirements. Importantly, the definition in this paper, which draws on contemporary international developments in the area, positions micro-credentials as a core feature of the 21st-century credentialing ecosystem where they can be stackable or combinable with other verified qualifications or used on their own as evidence of learning.

Keywords: [Higher Education](#), [Micro-Credentials](#), [Nano-Degrees](#), [Specialization](#), [Vocational and Further Education](#)

By the beginning of 2020, a greater consensus has emerged on the definition of a micro-credential. Indeed, major bodies such as the OECD, UNESCO, and the European Commission even agree on including a hyphen to lessen the confusion in terminology. More significantly, all EU Member States have adopted a common definition similar to the shared global definition proposed by UNESCO (2022). Several countries have already developed National Micro-credential Frameworks (See Brown et al., 2021), with Australia being the latest to do so (Department of Education, Skills and Employment, 2022). This paper shares some of these developments and explains several of the driving forces behind micro-credential growth.

What is driving micro-credentials?

Several different but interconnected drivers fuel the current micro-credentialing movement. Firstly, promoting lifelong learning is key to ensuring everyone has the knowledge, skills, and competencies they need to thrive in an ever-changing digital society. Accordingly, there is an increasing appreciation of the need for more flexible learning and career pathways. Secondly, a related driver is the rapidly changing nature of work and the need to upskill people to enhance their employability and fill growing skills gaps in response to labor market trends and the needs of industry and employers. The COVID-19 recovery has amplified the impact of digital transformation (Bozkurt & Sharma, 2022) and the importance of providing fit-for-purpose training and formal education pathways. In this context, micro-credentials emerge as flexible and more inclusive learning opportunities to meet society's current and future challenges. As the European Commission (2022, p. 2) states in its recent Council Recommendation:

“They make possible the targeted, flexible acquisition of knowledge, skills, and competencies to meet new and emerging needs in society and the labor market and make it possible for individuals to fill the skill gaps they need to succeed in a fast-changing environment, while not replacing traditional qualifications.”

This last point recognizes that higher education institutions perform an important role in society. However, traditional degree programs reflect “a long-form learning model” (HolonIQ, 2021, para. 3) that no longer ‘frontloads’ learners with knowledge, skills, and competencies for the remainder of their lives. As several major employers have moved to focus on employing people with work-ready skills rather than degrees (Akhtar, 2020; Kukulska-Hulme et al., 2022), micro-credentials have begun to challenge the traditional credentialing ecosystem. In contrast to traditional qualifications, micro-credentials recognize a wider range of learning or expertise in specific areas (Maina et al., 2022). Micro-credentials can be bundled or unbundled, making it possible to create more personalized or unique training and educational pathways for both professional and personal development (Pelletier et al., 2021).

In this respect, micro-credentials provide new possibilities for life-long, life-wide, and life-deep learning. It is also significant that micro-credentials have the potential to liberate learners in terms of providing entry points to those who want to verify and accredit their qualifications and expertise without entering the long-term traditional higher education system. Additionally, in many cases, employers do not need or have the time for their employees to complete long-form qualifications as they seek just-in-time on-the-job training and continuous professional development. Thus, micro-credentials further help to meet this kind of specific recognition of learning in workplace settings. In this regard, the traditional ‘brick and mortar’ higher education model does not meet such needs (Brown et al., 2021). This is where micro-credentials can help “to overcome the gap between the learning outcomes of initial formal qualifications and emerging skills needs” required by the industry (Shapiro, 2020, p. 2).

Where do micro-credentials fit?

There is growing momentum to integrate micro-credentials more fully into the current credential ecosystem as both standalone and stackable qualifications. However, this is not as easy as it sounds, as the bottom-up open badging movement remains largely outside the scope of contemporary micro-credential definitions. Moreover, Wolz et al. (2021), McGreal and Olcott (2022), and West and Cheng (2022) highlight that a common global definition is still a work in progress. Despite these challenges, our traditional conception of qualifications is changing, which needs to be reflected in how we understand the new and emerging credential ecosystem. Although overly simplistic, Brown et al. (2021) illustrate this ecosystem consisting of four distinctive quadrants representing credit-bearing and non-credit-bearing awards along with traditional bundled macro-credentials (i.e., degree programs) and those being rebundled through the micro-credentialing movement (see Figure 1). In this more contemporary map of the credential landscape, micro-credentials occupy the space of being unbundled, stackable and credit-bearing small volumes of learning. In contrast, nano-credentials refer to all manner of unbundled learning opportunities, such as open badges, that do not meet the definition of a micro-credential as reported in this paper.

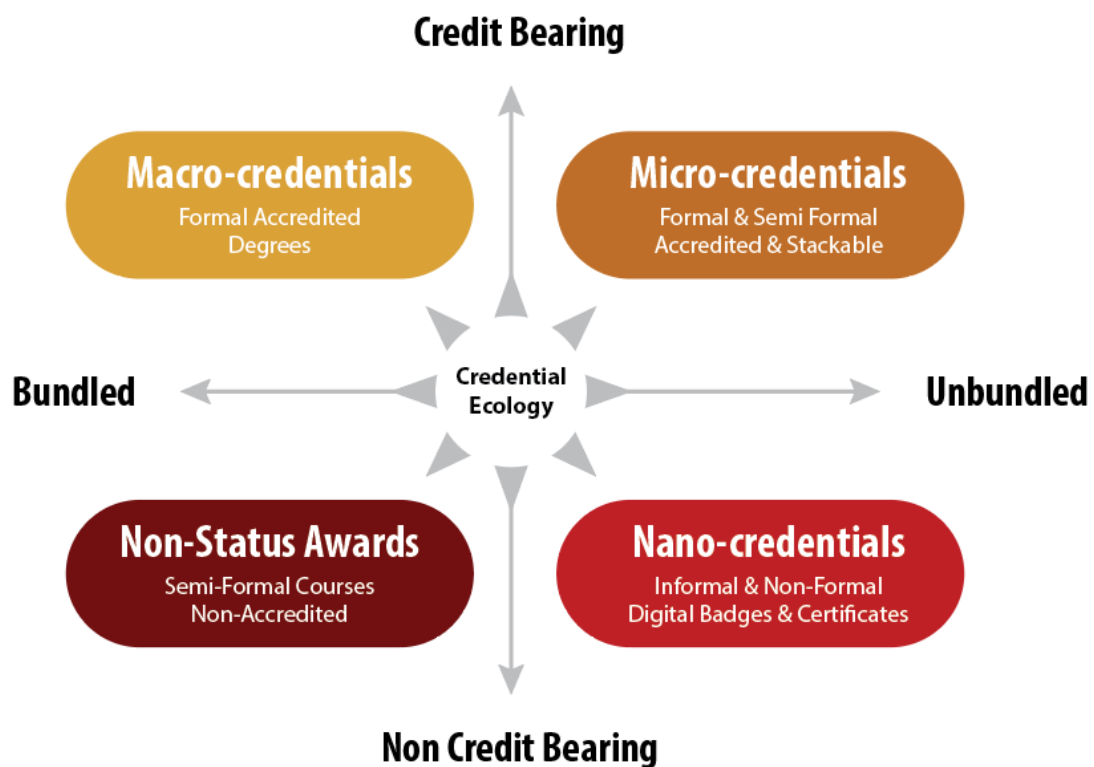


Figure 1. The new credential ecology (Brown et al., 2021).

Where next for micro-credentials?

This paper has shown that micro-credentials have transformative potential, providing pathways for personalized professional growth and career development. They can be a key mechanism for recognizing prior learning and informal learning experiences linked easily to eportfolios. However, there still are some serious challenges to overcome. For instance, greater interoperability is required across digital credential platforms and technologies. Also, there is a need to modify existing regulations so that micro-credentials can be recognized at local, national, and international levels. There is also a need for trusted quality assurance mechanisms and accrediting bodies. Additionally, there is a need to focus more on the demand-side rather than the supply side of micro-credentials. More importantly, micro-credentials research needs more empirical evidence of the (private) benefits to learners and the (public) benefits to employers, governments, and societies.

Related Terms

Digital Literacies, Learner Agency, Lifelong Learning

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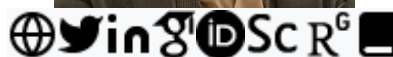
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