

Making Sense of the Micro: Building an evidence base for Ontario's Micro-Credentials

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INTRODUCTION

Around the world, postsecondary institutions are experimenting with new credentials. “Micro-credentials”; “micro-certifications”; and other short, sometimes “stackable” programs that build toward traditional degrees, certificates or diplomas are emerging in response to calls for employability training and skills development (Bailey & Belfield, 2017; Fong, Janzow, & Peck, 2016; Presant, 2020; Resei et al., 2019). With so much experimentation and innovation, a range of new terminologies has also emerged, leaving students, institutions and employers to wonder: what do these terms *actually* mean? And what value do these credentials hold in the labour market?

According to the United Nations Educational, Scientific and Cultural Organisation (UNESCO) (2018), there is no efficient national or global system to collect, connect, search, and compare up-to-date information about alternative credentials, like micro-credentials, in a common language or format. This lack of shared understanding is contributing to “confusion, lack of

trust and uninformed decision-making regarding the recognition of skills and qualifications” (UNESCO, 2018, p.1). In other words, the alternative credentialing space has become “confusing, and at times even chaotic” (Lumina Foundation, 2015).

This is the context in which the Higher Education Quality Council of Ontario (HEQCO) began gathering evidence and perspectives to facilitate a shared understanding of micro-credentials within Ontario's higher education sector. At the same time, HEQCO began building an evidence base to inform strategic approaches to the development and delivery of these new credentials. In addition to reviewing the literature, HEQCO engaged stakeholders—prospective students, employers, and institutional administrators—and examined the perceived and potential value of short, flexible credentials, using “micro-credentials” as an umbrella term to describe them. Below, we describe the impetus for our research and its outcomes, which include a definition, typology and evidence of stakeholder perceptions that governments, postsecondary institutions and employers can draw from to collaborate in the development and delivery of job-relevant micro-credentials.

WHY DOES ONTARIO NEED SHORT, FLEXIBLE CREDENTIALS?

Short, skill-focused courses and associated credentials are not new. Many employers and organizations have long offered in-house training and other informal learning opportunities for professional development and retention (Oliver, 2019). Powered, in part, by advancements in digital technology and evolving labour market demands, micro-credentials have emerged as a new form of focused learning with the potential to respond to both the modern hiring needs of employers and the training needs of adults looking to advance or pivot in the labour market.

HEQCO defines micro-credentials as being tied to short learning opportunities that are focused on a discrete set of skills, knowledge or attributes. They provide more targeted training than traditional degrees, certificates and diplomas (Pichette et al.,

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***Innovation Spotlights** are extremely brief contributions that highlight an innovative teaching practice, approach, or tool, and provide accompanying evidence that speaks to the effectiveness of the innovation.

2021), which, at least in theory, makes them highly appealing to employers. Canada's Advisory Committee on Economic Growth notes that fewer Canadians are working for one employer over the course of their careers. This trend is discouraging employers from investing significant training dollars in their staff. Small and medium-sized enterprises in particular—which employ most private-sector workers in Canada—“often lack the resources to develop internal training programs” (Advisory Committee on Economic Growth, 2017). In the absence, or reduction, of traditional entry-level roles and staff development programs, micro-credentials could position employers to identify qualified applicants more easily and confidently by certifying a prospective hire's specific competencies. At the same time, micro-credentials could serve as a low-cost option for employers to invest in skill development, enabling affordable, on-the-job upskilling and in turn supporting employee retention.

Micro-credentials also stand to serve citizens and governments by acting as an essential feature of an effective lifelong learning system. In a 2019 publication, HEQCO researchers put forward the Lifelong Learning Model, adapted from McGowan and Shipley (2017) and depicted below. Rather than preparing students for a lifetime of work with one employer, the model illustrates the need to support longer careers, where job loss and job change are the norm. In this model, traditional postsecondary and K-12 sectors are relied on to build a foundation of transferable skills. Layered on top of that foundation, postsecondary institutions and employers are responsible for providing opportunities to “top up” transferable skills and foundational knowledge with job-specific training during

adulthood. With the trend of declining long-term employment in mind, HEQCO authors argued,

When adult learners require retraining or upskilling, they should have access to flexible programs that recognize prior learning and experience, are aligned with employer needs and are rigorously evaluated to ensure quality and market value. Such programs should lead to an employer-recognized credential that is portable between postsecondary institutions to allow for learning progression. (Pichette et al., 2019, p. 11)

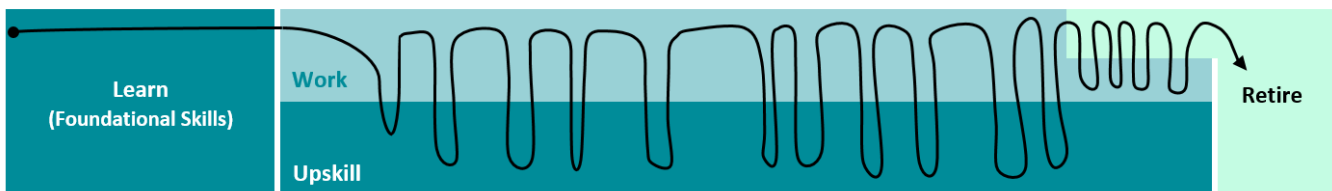
The upskilling aspect of the Lifelong Learning Model is particularly important in times of displacement—something many Canadians are currently or have recently experienced in connection to the COVID-19 pandemic. According to Statistics Canada (2020), “From February to April, 5.5 million Canadian workers were affected by the COVID-19 economic shutdown. This included a drop in employment of 3.0 million and a COVID-related increase in absences from work of 2.5 million.” Research suggests the Canadians whose jobs were affected by the pandemic will fare better if they have access to training opportunities. One study found that displaced workers who pursued postsecondary education within a year of losing their jobs earned almost \$7,000 more in the long term than those who did not (Frenette, Upward & Wright, 2011). Another study of Canadians receiving employment insurance (EI) found that recipients who invested in skills development saw more pronounced positive effects on employment and earnings than other groups of EI recipients (Handouyaha, Roberge, Gringras, Haddad & Awad, 2016).

Figure 1
Lifelong Learning Model

Traditional Model:



Lifelong Learning Model:



NOTE. Adapted from McGowan & Shipley (2017).

Meanwhile, the Organization for Economic Cooperation and Development (OECD) (2015) found that laid-off workers who seek new employment immediately after losing their jobs without pursuing upskilling opportunities experience lower earnings and a higher frequency of part-time work.

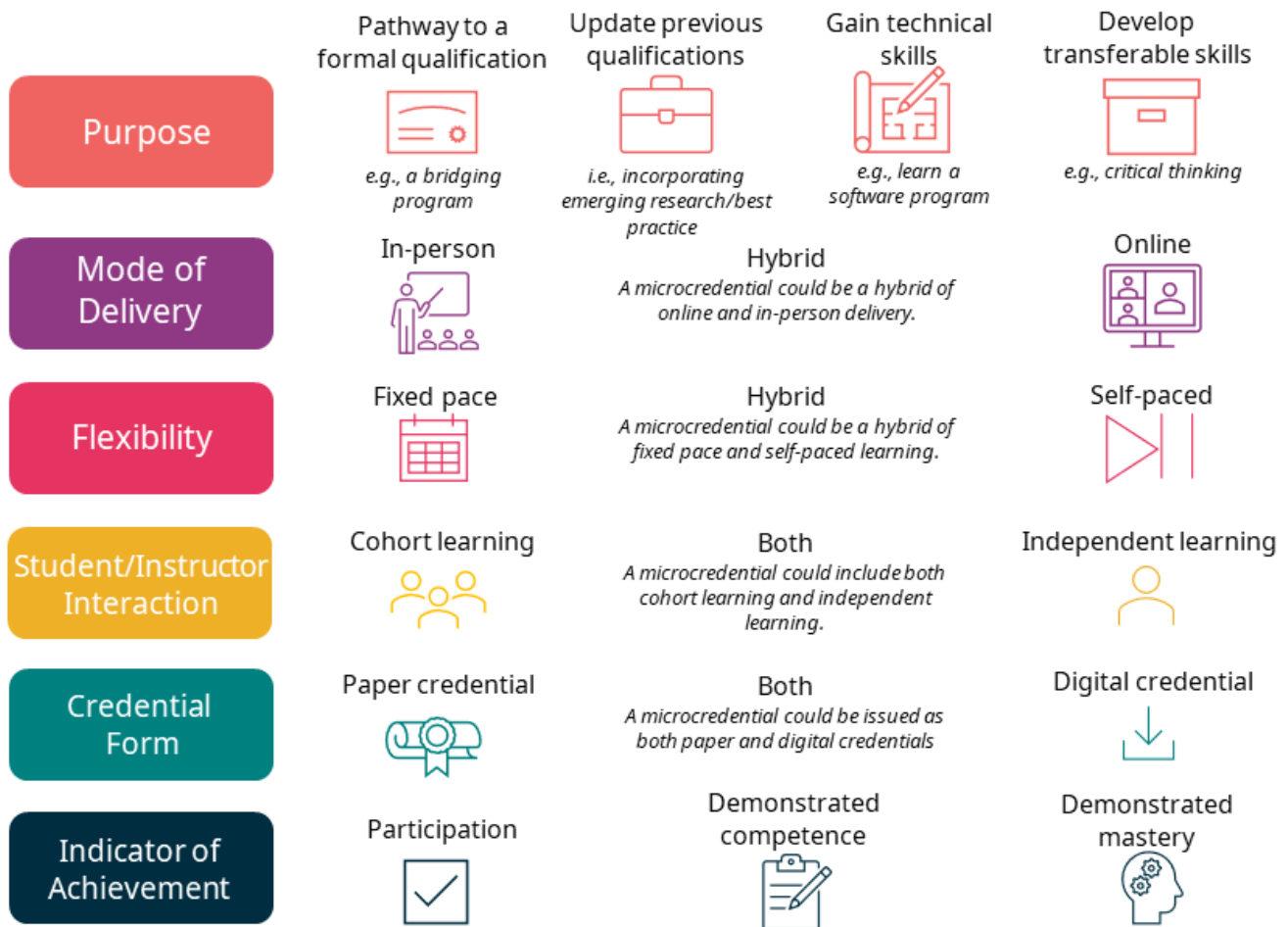
With job loss and job change becoming an increasingly common experience for adult workers and employers (Manyika et al., 2017), short, flexible and affordable learning opportunities focussed on teaching job-relevant skills will be key to adapting and thriving over the long-term. The Ontario government recognizes this; in its 2020 budget the government announced nearly \$60 million for a micro-credential strategy. When speaking about a post-COVID-19 world, the Minister of Colleges and

Universities touted micro-credentials as an opportunity for people who have been affected by the pandemic to retool and advance their careers, in a matter of weeks at a fraction of the cost of a typical degree or diploma (Taylor, 2020).

BEYOND BEING SHORT AND FOCUSED, WHAT DO WE MEAN BY “MICRO-CREDENTIALS”?

As noted above, micro-credentials have lacked a clear, concise definition and standardized criteria. With an interest in developing an effective lifelong learning system and skilled labour force (in Ontario and nationally), HEQCO set out to facilitate a collective understanding of micro-credentials. To this end, HEQCO engaged

Figure 2
Micro-credential Typology



NOTE. Model found in Pichette et al. (2021).

stakeholders to assist in the development of a simple micro-credential definition and typology for Ontario, which we hope will be instructive nationally as well. We conducted 44 interviews between February 2020 and March 2021 with representatives from Canadian colleges and universities, employers and industry associations, as well as subject matter experts.

Looking at the Canadian context, Davidson and Ruparell (2020) argue that no jurisdiction has agreed upon a single definition of “micro-credential”. Research out of Deakin University in Australia suggests the term “micro-credential” is used to describe all manner of short learning experiences with a variety of brands and modalities—adding to the confusion (Oliver, 2019).

Some specific examples of definitions include: one put forward by Oliver (2019), who defines micro-credentials as a “certification of assessed learning that is additional, alternate, complementary to or a formal component of a formal qualification (p. i)”; Davidson and Ruparell (2020) suggest micro-credentials be thought of as, “digitally administered and competency-based certifications that focus on specific knowledges, skills, or competencies (p. 29)”; and RMIT University in Australia defines micro-credentials as credentials which “certify an individual’s achievements in specific skills and differ from traditional educational credentials in that they are shorter, can be personalised and provide distinctive value and relevance in the changing world of work” (eCampus, n.d.).

Pulling together elements of these definitions, and incorporating feedback from sector stakeholders, HEQCO developed the following definition:

A micro-credential is a representation of learning, awarded for completion of a short program that is focused on a discrete set of competencies (i.e., skills, knowledge, attributes), and is sometimes related to other credentials.

In Figure 2, we illustrate how our definition can lead to variation in practice, and indeed, how the micro-credentials currently being offered across the province do vary. Our goal with this graphic is to help address some conflation of terms (e.g., digital badges and micro-credentials) and misguided assumptions about micro-credentials (e.g., that they are all offered online). To some extent this same graphic could be applied to most other credentials offered by postsecondary institutions.

In addition to the points of variation above, like flexibility and the indicator of achievement, HEQCO notes many micro-credentials are designed to be relevant (tied to industry and/or community needs), stackable (part of a sequence of learning, leading to a larger credential) and/or accredited (recognized or

issued by a professional accrediting body). While not defining of micro-credentials, HEQCO considers these features key “quality markers” that postsecondary institutions should be transparent about to facilitate transferability (Pichette et al., 2021).

WHAT DO STAKEHOLDERS THINK OF MICRO-CREDENTIALS?

In addition to developing a common language for thinking about and discussing micro-credentials, HEQCO set out to develop an evidence base to inform strategic approaches to micro-credential development and delivery. We conducted surveys of Canadian employers, prospective students (i.e., adults, aged 18–64 not currently enrolled in a postsecondary program) and representatives of Canadian postsecondary institutions. The surveys of employers and prospective students gauged awareness of, and interest in, micro-credentials as a means of upskilling. The survey of postsecondary institutions examined how stakeholder interests align with existing and planned micro-credential offerings at postsecondary institutions. In total, 201 Canadian employers, 2,000 prospective students, and 161 representatives from 105 postsecondary institutions responded to our surveys—all of which were administered online between September 2020 and January 2021. For a detailed description of our research methods and findings, readers should review our Making Sense of Micro-credentials report, available on HEQCO’s website.

In summary, our research highlights an awareness gap, among Canadians and Canadian employers, about what micro-credentials are and who they serve. Even among postsecondary institutions, the term is used inconsistently. We hope our simple, inclusive definition helps to address this gap, especially given that once provided with a definition, the employers and prospective students who responded to our surveys showed interest in micro-credentials. Results from our prospective student survey suggested that Canadians care that micro-credentials are affordable and that employers see value in them. Employers favour micro-credentials that are competency-based and respond to industry or community needs.

Respondents from all surveyed groups showed mixed levels of interest in the concept of stackability, i.e., the ability to combine multiple micro-credentials into a larger credential. Based on this finding and the views expressed by interviewees, HEQCO advises postsecondary institutions to focus less on deconstructing existing curricula for stackability purposes and more on designing innovative, focused content that serves a new market of students. Stackability should be thought of as a bonus rather than an end in itself.

Reflecting on the perceptions of the stakeholders we engaged, HEQCO sees the primary functions of micro-credentials as responding quickly to evolving social and economic needs (like displacement stemming from the pandemic or new technology) and catering to underserved learners. Institutions and governments should focus their strategies on upskilling adult learners with specific training needs whose prior learning and experience have already provided a strong foundation of knowledge and transferable skills. Put differently, we see micro-credentials as being useful programs for upskilling and would consider more comprehensive learning opportunities as being better suited for reskilling.

WHAT'S NEXT FOR HEQCO?

HEQCO plans to continue research in this area, including by examining labour market outcomes associated with micro-credential programs and working to understand how micro-credentials offered by postsecondary institutions can, and should, differ from those offered by industry. Ultimately, we hope to continue assisting the sector in preparing students for success in a changing labour market.

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