Future Skills Centre | Centre des Compétences futures

State of Skills Report

Microcredentials

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KEY INSIGHTS

1. Microcredentials are designed to offer flexible and innovative approaches to changing needs in the labour market and across industries.
2. Many industry partners and employers remain confused about and lack awareness of microcredentials. Employers highlight inconsistencies in what skills and learning are conveyed by microcredentials.
3. With strong industry engagement, microcredentials can successfully address emerging labour market needs.
4. There continue to be challenges in accurately measuring the value of microcredentials, including employment and promotion post-completion.

The Issue

In recent years, microcredentials have attracted significant attention and promotion, particularly from post-secondary institutions (PSIs). The onset of the COVID-19 pandemic in 2020 accelerated existing dialogue about how to better align educational offerings with industry needs. These shifts in the skills needed for various jobs, accompanied by digitization and automation, called for rapid re-training and upskilling opportunities to fill critical skill gaps amongst employers. Microcredentials also offered a way to support workers who are vulnerable to industry shifts with targeted and modular upskilling opportunities. Microcredentials promised a lower-cost, flexible, and timely way to address these rapidly changing skill gaps and increase access to pathways into higher education.

At present, there are varying definitions for microcredentials. However, across multiple definitions, there are cross-cutting characteristics that constitute a tentative consensus:

- Specific to skills or competencies
- Awarded based on assessment
- Employer-relevant
- Can stand alone or be connected to other accreditations
- Delivered in short durations

Microcredentials aim not only to provide transitional upskilling or reskilling pathways, but also intend to validate and demonstrate existing skills and experiences of employees to employers. The definitions and approaches have varied across different jurisdictions. In Ontario, for example, microcredentials have three different use-cases: upskilling, retraining for shifting to different industries (reskilling), and expanding postsecondary access for historically marginalized learners by creating alternative pathways to degrees and diplomas.

Provincial governments have put dedicated resources into supporting microcredentials:

- The Province of British Columbia provided $5 million in support for 35 different microcredentials in 2021 that directly addressed government priorities and labour market shortages.
- In 2023, the Province of Ontario announced over $60 million in investments for the province's microcredential strategy, prioritising employment-focused training complementing existing knowledge. Changes to the Ontario Student Assistance program (OSAP) included funding for eligible students to take part in over 1,900 different microcredentials programs. The province has also funded over 100 microcredential projects with 65 through the Challenge fund and another 36 projects funded through eCampus Ontario pilots.
- Fédération des cégeps of Quebec (2016-17) and the Province of Alberta (2021) also piloted microcredential initiatives and partnerships with postsecondary institutions and industry.
- In 2023, the Province of Nova Scotia implemented a microcredential framework, working to align offerings across apprenticeships, colleges, universities, industry organizations and the government.
- Saskatchewan also published a Guide to Microcredentials, guiding learners to universities, polytechnics and colleges in the region.

Despite the prospect of microcredentials being a responsive extension of higher education and a flexible means to adapt to labour market changes, little evidence exists on whether microcredentials meet what they were set out to accomplish and what role they will play in the future of higher education.

Across the globe, educators and policy makers initially framed microcredentials as a one-size-fits-all solution to addressing both gaps in education and training that could further prepare learners to enter the workforce. However, microcredentials do not always fill these gaps. For example, in education, microcredentials do not fit into typical program development processes and governance because they need to be assigned credit value in order to be integrated into degree programs.

Despite attempts to standardize the definition of microcredentials, there remains a widespread lack of understanding of the real value of microcredentials, on both the supply side (i.e. organizations issuing microcredentials) and the demand side (i.e individuals and employers standing to gain benefit). On the supply side, a key issue highlighted by various education organizations is the absence of a universally accepted definition. For instance, a recent study found that employers report feeling unsure about the meaning of microcredentials, with 59% of the survey respondents indicating being "not familiar at all", and only 10% indicating having a good understanding. This lack of common understanding prevents effective advancement of standards of practice, ultimately hindering measurement and recognition of value among learners and employers alike.

Inconsistent definitions are often attributed to uneven quality of microcredentials and the sluggish development of a strong microcredential ecosystem. Many employers and industries don't understand what skills and capabilities microcredentials signify.

On the demand side, employers in certain industries don't recognize microcredentials as offering value – hindering further investment and leverage of the offerings. An FSC-sponsored study with the Northern Alberta Institute of Technology found that employers under-appreciated value in microcredentials and was directly linked to slow adoption. The lack of employer buy-in is exacerbated by the lack of evaluation to measure and communicate microcredentials' economic benefits. Hence, maximizing microcredentials' ability to produce consistent outcomes across industries necessitates a broader adoption and a stronger evidence base on its effectiveness and use.

However, employers continue to be interested in the potential outcomes of microcredentials when they understand how to effectively use them. HEQCO's survey found 60% of employers would feel confident in skills demonstrated by potential employees through microcredentials if there were a clear definition. Two-thirds of the employers also expressed interest in relevant, competency-based, and accredited microcredentials. There is great potential to advance the adoption of microcredentials more broadly as benefits become known to more industries and employers.

While promising efforts from key actors in the microcredential space are underway, there is more opportunity to catalyze the widespread adoption of standardized microcredential frameworks. Establishing a clear definition, including what contexts microcredentials effectively operate in (higher-education vs. employer-focused training,) is critical to building credibility and trust among end users and fulfilling the promise that it can be a tool that can address the changes to labour market needs.

What We Investigated

The Future Skills Centre funded a variety of unique microcredential-focused initiatives that addressed both industry and workforce challenges. These projects piloted delivery methods and processes aimed at optimizing employment outcomes for employed professionals and jobseekers. The Future Skills Centre focused on uncovering key learnings on the different ways microcredentials could be designed, piloted and what needs and challenges they are addressing.

Several microcredential projects explored the use and effectiveness of innovative employer-focused microcredentials responding to workforce gaps and equipping workers who are vulnerable to industry changes. Many of these projects tested the embedment of microcredential training into their workflow. To improve the skills of manufacturing employees, one partner undertook efforts to carry out workplace-delivered microcredentials efficiently, while another piloted a pay-for-performance model to improve soft skills. Microcredentials that targeted training and skill development within the Future Skills Centre portfolio also integrated competency assessments to evaluate whether users gained the expected competencies needed through the project delivered-microcredentials. In the interest of addressing workforce gaps in emerging sectors, another project explored the creation of a national competency framework to establish common skills and guide the creation of industry-relevant microcredentials. Another project launched a digital credential platform that provides recommendations to aid user-decision making in pursuing short courses in key sectors like manufacturing, healthcare, and information technology to address industry gaps.

Applying a learner-centric lens, several initiatives focused on meeting learners "where they're at" and provided different types of support and opportunities to facilitate a great variety of upskilling and reskilling experiences of equity-deserving groups. A few other piloted initiatives aimed to provide better access to employment for newcomers, women, racialized individuals, persons with disabilities, Indigenous Peoples, and LGBTQIA+, employing equity-focused, hybrid delivery models. Among these, one project delivered soft skill and technology skills training in tandem with career coaching that targeted post-secondary graduates as they pivot into the technology sector.

A few projects also explored the general use and perceptions of microcredentials. One project in particular, looked into the broader use of microcredentials, scanning Linkedin profiles to measure the extent of their use. This project investigated to what extent users who are workers in the technology industry make use of microcredentials to demonstrate their competencies.

✔ What We're Learning

Inclusive partnerships and employer buy-in are critical
Several projects actively engaged employers and partnerships at the forefront of designing, delivering, and awareness building of training programs across different sectors all over Canada. This multilevel engagement across various projects was a key contributor to bringing about shifted attitudes in training among employers, workers, and job seekers, including those belonging to equity-deserving populations. A few projects demonstrated that greater employer recognition of the value of microcredentials led to stronger interest in investing in this type of training for workers. Moreover, these partnerships provided resources such as employer information sessions, networking opportunities, job placements to workers and jobseekers, contributing to a stronger alignment in changes in skills, better employment outcomes, and increased productivity in the workplace. However, while employer engagement was highlighted as a key contributor to outcome achievement, a few projects underscored the difficulty in achieving intended outcomes (e.g., not delivering on key project objectives) and in building industry-responsive microcredentials due to the absence of the right employer partnerships. Employer engagement couldn't happen periodically or only at the end of a program – it needed to be intentional, consistent, and servicing specific market skills gaps.

Microcredentials need wraparound services to best support marginalized groups
When tailored to needs and delivered in tandem with wrap-around supports, microcredentials can generate high completion rates and responsive employment pathways in high-demand occupations for individuals, including those belonging to marginalized populations. In the spirit of achieving the intended skill gains and affirming existing skills, projects in the Future Skills Centre's portfolio underscored the importance of tailoring microcredential design and delivery not just to employer needs but also to the needs of learners. Projects that specifically tackled the upskilling of equity-deserving groups also employed equitable approaches and frameworks to delivering training (e.g., mentorship, flexible learning modes, Universal Design for learning). For example, one project utilized the Prior Learning Assessment and Recognition (PLAR) process to validate previous lived and learning experiences, accelerating the training process and workforce transition for equity-deserving individuals. Many of the pilots delivered blended learning options to provide individuals in remote areas with the opportunity to enhance their skills. The Future Skills Centre also funded initiatives that expanded support to include job search support such as employment coaching and trainer support. This multifaceted approach supported projects in better aligning microcredential assessments with positive employment outcomes.

Lack of rigorous evaluation
Despite purportedly incorporating evaluation measures, funded microcredential projects generally did not assess outcomes post-training which are considered critical to advancing their broader acceptance and use through their evaluations. Most programs delivering microcredentials only assessed whether individuals finished the programs, and considered program completion the successful metric for their purposes. The assessment of soft skills posed significant challenges. While most of the projects that piloted upskilling and reskilling efforts factored employer perceptions in the delivery of microcredentials, insights on perceptions did not describe the extent which employers and the industry recognize microcredentials in their evaluation, which could have yielded robust data on what interventions and engagement mechanisms could be utilized in future iterations to effectively engage employers. These challenges necessitate rigorous analytical methodologies and standardized competency assessments to comprehensively measure the skills outcomes attributed to microcredentials and communicate its successes to employers. Moreover, the constrained timelines for evaluation posed limitations on conducting thorough assessments of medium and long-term impacts and the scalability potential of these initiatives. At the least, it is critical to know to what extent microcredentials lead to positive employment outcomes for individuals – whether a new job, a promotion, or relevant skills for their current workplace. Unpacking these complexities through rigorous evaluation is critical to advancing the understanding and appreciation of microcredentials' crucial role in preparing the workforce and enhancing productivity.

Why It Matters

Changing relationships with international trading partners, technology and net-zero transitions means increased labour market volatility and more job displacement. Now more than ever, workers need the right support to navigate career pathways and transition between jobs and sectors as smoothly as possible. Microcredentials have been widely touted as one tool to facilitate these transitions, with potential to address the needs of workers and employers.

The Future Skills Centre's microcredential portfolio generated important insights that can drive further investments from employers and the broader industries for workplace training. In recent years, there has been much enthusiasm from the post-secondary sector about microcredentials, and willingness to condense longer programs and courses into more digestible short-course learning opportunities. FSC's investments in this area focused on projects that incorporated strong employer partnerships, responsive digital skill microcredential delivery, and performance-based financing mechanisms. We found that post-secondary institutions can succeed in identifying key competencies for microcredential delivery, including integration of employers in design and delivery. However, delivery partners need to ensure that they are not only focused on signing up students for microcredential programs, but staying keenly attuned to the post-program trajectories of learners in their workplaces and the broader economy. To do this, post-secondary institutions may require more support from funders, industry, and potential partners in the broader adoption of this training type to different industries and in expanding impact. This effort requires rigorous evaluation to carefully compare post-training outcomes across the ecosystem.

As Canada's skills landscape continues to undergo dynamic shifts, there is a pressing need to scale innovative approaches to fulfill the promise of rapid upskilling and reskilling – and microcredentials may be one tool to do this. Funders and decision makers must continue to encourage the development of industry-driven learning, aligning upskilling efforts and competency profiles with demand in the labour market. Support should be tailored to regional and sector-based priorities and infrastructure to optimize effective delivery and consider wraparound support in delivering training programs that are responsive to diverse learner needs.

What's Next

The Future Skills Centre will continue to monitor lessons learned in its microcredential portfolio and integrate these learnings into its knowledge mobilization efforts. These efforts will continue to shape a shared understanding of the value of microcredentials for funders, policy makers and partners, and many other key actors. The Future Skills Centre is confident that the ecosystem has developed strong learning about how to develop and deliver microcredentials effectively – thanks to the strong innovation commitment across the post-secondary sector in recent years.

In the coming years, the Future Skills Centre will encourage more focus on industry-oriented microcredentials that lead with critical skill gaps and that engage employer needs more centrally in the microcredential design and delivery process. We will look for opportunities to strategically support more innovative thinking and design for new models and partnerships that address the core challenges in this area – including initiatives that begin with identifying skill gaps within industries in demand and reimagine the role of employers in the microcredential process. We will continue to work with partners across the country, like the Conference Board of Canada and eCampus Ontario that are working on systemic solutions to embed microcredentials into existing labour market tools and pathways.

We are also committed to working with policymakers leading in this area, such as the province of British Columbia's efforts to leverage regulatory tools to bring more consistency, clarity, and recognition to the microcredential space.

Projects in this Report

Northern Alberta Institute of Technology, Employer and Employee perceptions of micro-credentials

The Dais, Built to scale: Assessing microcredentials for digital sector professionals

Social Research & Demonstration Corporation with Excellence in Manufacturing Consortium, A Pay-for-Performance Model for Skills Training

Bow Valley College, Bridging the Gap: Developing a Flexible Learning Platform (FLP) for Reskilling and Upskilling

Anaconda Mining Inc. Building Capacity for Advancing Climate Change Leadership, Academy for Sustainable Innovation, Creating a Microlearning Model for the Canadian Mining Industry

Hospitality Workers Resource Centre, Micro but Mighty: Sector-Specific Micro-Credentials for a Recovering Hospitality & Food Service Industry

Work-Based Learning Consortium, Rapid 'On-the-Job' Employee Upskilling / Re-Skilling for In-demand Skilled Jobs via Work-Based Learning: Higher Productivity, Retention, & Career Pathways

Humber College Institute of Technology, Digital Fluency for the Workforce

eCampus Ontario, Microcredentials: Getting people into programs and into jobs

Canadian Council for Aviation and Aerospace, CCAA Micro-credentialing for the Canadian Aviation & Aerospace Industry

Level UP skills Evolution, Level UP skills Evolution, Excellence in Manufacturing Consortium (pending publication)

TECHNATION, Blueprint and Diversity Institute, ADaPT (pending publication)

Atlantic Colleges Atlantique, Optimizing Skills Development Systems through Collaboration and Capacity-Building in Atlantic Canada – A Pan-Atlantic Transformation

Have questions about our work? Do you need access to a report in English or French? Please contact communications@fsc-ccf.ca.

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