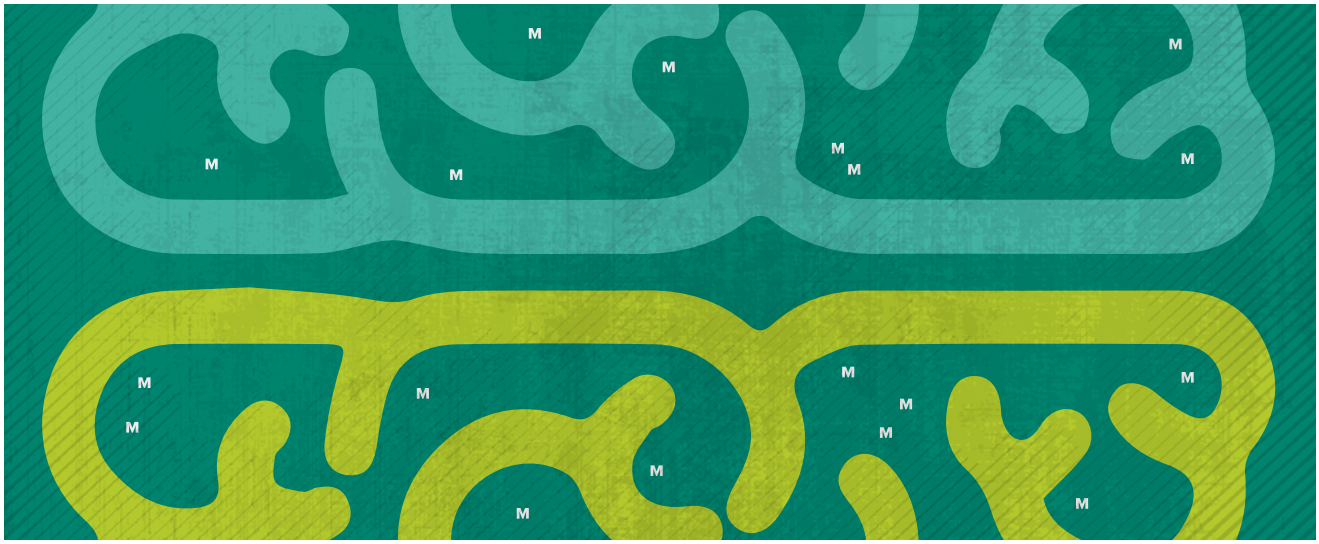

WHAT NOW?

MICRO CREDENTIALS

'Small' qualifications, big deal

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PROBLEM

Policy-makers and decision-makers looking for ways to rapidly upskill and reskill the workforce for the post-pandemic economy have bet big on micro credentials. These credentials are generally considered a type of "mini qualification" that verify a person's skills, competencies or experience for specific roles. Governments consider them a smart and effective solution to help close the skills gap to get people who were laid off or unemployed due to the pandemic or other economic transitions back to work. They also reflect a trend towards on-demand, short-form learning focused on skills, competencies and specific capabilities – beyond and apart from long-form learning, such as degrees and diplomas. Micro credentials are set to become even more prevalent over the next few years. A large portion of the huge allocations for upskilling and reskilling included in the federal budget was tied to micro credentials. The provinces have implemented strategies that support their post-secondary institutions to create micro credentials in competencies related to their own economies.

But for all of the buzz around what micro credentials can *do*, there's little clarity and agreement on what micro credentials actually *are* and how they can work consistently and effectively for both people and jobs. Before governments, post-secondary institutions and training providers race to create even more micro credentials, they must clearly define the purpose, value and the specific training qualifications they offer. This will help ensure micro credentials are recognized, portable and valued across jurisdictions, employers, jobs and sectors.

SOLUTION

As education and training providers roll out more micro credentials, 11 key actions will ensure that there is a common understanding of what micro credentials are – and what they are not. Further, this will ensure that this method of short-form learning and assessment will help people secure skills-based employment and provide employers with people capable of doing their jobs.

In their most useful form micro credentials certify that the holder has the knowledge, skills and attributes – the competencies – that are required to successfully and reliably complete different job-related tasks. When competencies for related jobs are arranged in frameworks, this shows both the kinds of things *individuals* can do and the *levels of competence* needed. This, in turn, shows which skills and competencies are transferable between different jobs. Over time these frameworks can be linked to show pathways between jobs and across sectors.

11 KEY ACTIONS

The following actions by employers, industry associations, governments and education and training providers, often working in collaboration, will help to define micro credentials, ensure that they meet their purpose and fulfill their promise to deliver to learners and employers the skills and competency-based learning needed in the workforce.

01 Engage employers in the design of micro credentials at the earliest possible stage

The needs of employers must be foremost in the determination of which skills and competencies are required to complete job-related tasks, and how the competencies are assessed. Some competency frameworks based on known and verified employer needs already exist and more are under development. These frameworks can be leveraged to speed up the design process, but the key is that employers must agree that a specific micro credential and its assessment provide a sufficient basis for employability.

02 Link micro credentials to skills and competencies known to be in-demand

Most micro credentials relate to the job market. Key to the development of micro credentials that match jobs with people and people with jobs is the development of focused labour market intelligence about both the current skill gaps and the skills needed to improve competitiveness. A specific example is the emerging need to rethink and refocus the skills and competencies needed for eldercare and childcare. Sector Councils are engaged in the compilation of this data that can provide valuable evidence of both what is needed and how sizeable the market may be.

03 Make a strong connection between micro credentials and related competency frameworks or qualifications frameworks

Employers or professional associations are active in the development of competency frameworks and micro credentials. For example, micro credentials in mechatronics offered in Canada are generally based on a competency framework developed by Siemens. Other micro credentials have their roots in similar frameworks from professional bodies, such as the Canadian Professional Sales Association.

Not all jurisdictions have a qualifications framework (Ontario is an exception), but many professions and specialist organizations do. For example, a comprehensive competency framework has been developed for climate change adaptability by the federal government and a number of partner organizations; based on this framework, a number of modular courses, have been developed. The intention is that students can stack these courses and eventually obtain a micro credential.

In their development of micro credentials, New Zealand deliberately set out a framework linked to its qualifications framework and required industry partners for their micro credentials, and Australia did something similar.

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04 Encourage employers to partner with post-secondary institutions (PSEs) in the design of micro credentials for work-based training

Companies such as Shopify or Amazon Web Services offer training and skills development for both their clients and their staff. In Europe, it is commonplace for PSEs to use work-based learning recognition agreements for both non-credit and for-credit certification. Many Canadian PSEs, especially those offering professional studies programs in hospitality and tourism also partner with employers. Micro credentials could become more important in the work-based training space. Canadian PSE quality assurance agencies should accelerate the capacity of our institutions to engage in this work, using micro credentials to ensure quality, and portability, through transparent and valid assessment.

05 Identify those micro credentials that can be 'laddered' into undergraduate and graduate programs

If micro credentials are also to be stackable into undergraduate or graduate programs, as some already are, then the process should be transparent and the provincial credit transfer agencies should quickly evaluate and recognize them. For example, a student may enroll in a Massive Open Online Course (MOOC) focused on Statistics and Data science from the MicroMasters offered by MITx and then, upon demonstrated successful attainment of stated competencies, transfer them to the graduate program at Queen's University – one of the 22 MIT pathway universities worldwide that will accept these courses for credit. Similar arrangements exist for other MOOCs with Royal Roads University. Athabasca University's LMD program in the Faculty of Business has a number of micro credentials called Certificates (e.g., in Leadership, Manufacturing Management and Supply Chain Management). These Certificates were intentionally designed to be recognized as electives in the Athabasca MBA.

Not all micro credentials can or should be "ladder-able" in this way, but if this is a design intention – e.g., with the planned micro credential in climate adaptation now under development – then these micro credentials need to meet the requirements for credit courses at the appropriate level of learning.

06 Launch a national conversation on the portability of micro credentials

If they a) are based on recognized competency frameworks; b) have had the involvement of major employers; and, c) make use of legally defensible competency assessment, then portability of micro credentials should be easily navigated. While credentials are a provincial matter, Canada should use the opportunity presented by recent nationwide attention on future skills and competencies to improve portability of micro credentials. For example, there is no reason why a micro credential in AUTODESK REVIT micro credential earned from Humber College in Ontario should not be accepted by employers in Vancouver or Halifax.

07 Clearly identify the mode of delivery for each micro credential. Not all micro credentials will or need to be online

Collège Boréal offers a micro credential in Battery Electric Vehicle maintenance, in partnership with Mayhew Performance which requires face-to-face work. Lethbridge Community College's Aquaponics Design micro credential is intended as an in-person course, but other micro credentials may be offered as a hybrid – part workshop or class environment and part online. Yet others, such as Wellness Works Canada Health Performance Master certification are fully online. Students need to understand the delivery model associated with the micro credential. Therefore, any portal created to access to these credentials should make explicit the delivery mode, estimated time to complete and costs.

08 Foster and support more PSE collaboration

New collaborative micro credentials, with modular learning delivered by different institutions across the country, could truly leverage different skills and capabilities that exist within institutions. The work of the Resilience By Design Lab at Royal Roads for Natural Resources Canada and the B.C. Climate Action Secretariat to build an Adaptation Learning Network for climate change shows the potential in such partnerships. The intention is to create a national set of micro credentials through the aggregation of courses driven by a competency framework. Courses using the framework have already been developed at seven B.C institutions in the network, and more are being commissioned. This could be a prototype for similar developments in other fields, especially those that are quickly emerging – cybersecurity, AI ethics, AI enabled health diagnostics and others.

09 Offer micro credentialed learning on demand

To increase the demand for and utility of micro credentials they should be, like many MOOCs, available on demand rather than on a few fixed start dates; short (hours, days or weeks, not months); and easily affordable. Because these attractive features have been incorporated into the design of many of them, more than 1,180 MOOCs are offered around the world. Worldwide (with the exclusion of China), enrolments in MOOCs jumped by one-third in 2020 due to the pandemic – to 180 million learners, including 650,000 Canadians.

Many college and university offerings are short, focused and skills-based but are still generally semester-based.

10 Strengthen the focus on demonstrated competencies in micro credential assessments

To be truly useful to employers, micro credentials must certify that the holder is competent to complete certain tasks or functions. In Canada there is very little assessment of what the learner can actually do; often assessment is only knowledge-based or skill-based. One prime example of this is in the Red Seal, the certification of skilled tradespeople, which has a final assessment through a four-hour multiple-choice exam. Generally, few of the thousands of competencies specified are systematically or consistently assessed for every Red Seal candidate in Canada. In some fields, this lack of direct assessment of actual competence is a safety issue.

The use of well-established technology platforms for assessment would enable employers to be directly involved in assessment both of general capabilities (e.g. RIIPEN which has participants solve real world problems) and specific competencies (Valid-8, through which evidence of on-the-job performance is assessed) and the use of MyCreds to capture these abilities are keys to the future for these credentials.

11 Identify and develop assessment-only micro credentials

A variety of skills recognition systems are available at colleges and universities where the role of the institution is assessment, not teaching. For example, the University of Wisconsin's Certificate programs in Health Care Informatics or Substance Use Disorder Counselling use assessment, without tuition, to recognize competency for credit and permit students to accelerate in the program where possible. Students complete the courses they need to fill the "gap" between what they already know and what they need to know, based on the assessment. The Kentucky College System "on demand" (start any Monday) uses pre-tests and post-tests to award credit. In this case, if a student admitted to a course passes the online pre-test they are immediately given the online post-test – upon passing they are awarded the credit. The Open Polytechnic of New Zealand is also moving towards a competency-based assessment centre separate from instruction, which will allow students to receive assessment when they are ready and select among alternative formats.

CONCLUSION

Micro credentials must meet employers' need to know that a person with a specific micro credential has the skills and capabilities the credential says they have. The moment is ripe for a focused and systematic approach to micro credentials that is Canada-wide and stakeholder-driven.

These 11 actions will help Canada to become a leader in the delivery of what micro credentials are fundamentally about: credentialed short-form learning.

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