Future Skills Centre

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Future Skills Centre Podcast

Episode 4: Putting Microcredentials into Practice

Microcredentials are a recognition of learning, assessing specific competencies and addressing employer needs. In this episode, we discuss the rise of microcredentials, their potential, and ongoing challenges such as coordination across Canada and assessment quality. Our guests provide perspectives from industry and from post-secondary education and include Emma Gooch from eCampusOntario, Kerri Korabelnikov from Red River College Polytechnic, and Theresa Davis-Woodhouse from the Canadian Council for Aviation and Aerospace.

Guests

Emma Gooch, Program Manager, Microcredentials, eCampusOntario

Kerri Korabelnikov, Dean, School of Education, Arts and Sciences, Red River College Polytechnic

Theresa Davis-Woodhouse, Director of Project Management, Canadian Council for Aviation & Aerospace

Host

Linda Nazareth

Links

Future Skills Centre and Conference Board of Canada links, such as recommended articles and webpages, social media handles, etc.

Future Skills Centre Homepage:
https://fsc-ccf.ca/

Future Skills Centre Twitter:
https://twitter.com/fsc_ccf_en

The Conference Board of Canada Homepage:
https://www.conferenceboard.ca/

The Conference Board of Canada Twitter:
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The Conference Board of Canada Facebook:
https://www.facebook.com/
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Research report: The Future is Micro: Digital learning and microcredentials for education, retraining, and lifelong learning

FSC Project: Materials handling 4.0: Building pathways to employment for disadvantaged groups

FSC Project: Aiming higher: Microcredential training in aviation and aerospace

eCampusOntario: Microcredentials
https://micro.ecampusontario.ca/

eCampusOntario
https://www.ecampusontario.ca/

Transcript

Linda Nazareth:
You're listening to Season Two of the Future Skills Centre Podcast, gathering experts from all over Canada to explore the most crucial challenges to the future of work. I'm your host Linda Nazareth. This podcast is brought to you by the Future Skills Centre and the Conference Board of Canada.

Canada is facing wide demographic and technological changes, and the COVID-19 pandemic has accelerated these disruptions to our work environment. Our economy is changing fast, and this means we have to change fast too.

Linda Nazareth:
Today, we're talking about a topic you might have been hearing a lot about lately – microcredentials. In general, microcredentials are short and with a narrow scope, focused on specific competencies, validated by an issuing organization, and often digital. These can be led by post-secondary institutions, by organizations, or by businesses.

These microcredentials have the potential to help Canadians keep their skills current throughout their careers, in an effective and responsive way. Microcredentials are new, though. We haven't yet figured out how exactly these will work. For example, beyond credentialling institutions, will employers and industries at an everyday level accept and adopt them?

Today, we will explore what these microcredentials are, their potential, and issues affecting their widespread roll-out and acceptance. We'll talk to people involved in two practical, Canadian projects using micro-credentials to adapt to needs in the supply chain and aviation industries. They'll tell us about the choices they're making to put micro-credentials into practice.

First, we speak with Emma Gooch. Emma has been working on microcredentials for a number of years. She's at eCampusOntario, an organization funded by the province to drive online learning innovation. She shares insights from her experiences working on this topic. First, she tells us about how the definition has evolved – what microcredentials are – and, what they're not.

Emma Gooch:
The definition of what a microcredential has been like a very hot topic over the past few years. A lot of the conversations up until this point centered around how to define them. But I would say over the work for the past couple of months, I've definitely seen a shift towards a consensus. One of the reasons is that I attribute this largely to an uptick in practitioners who are doing the work, who are developing and running microcredential programs. So about two years ago, eCampusOntario developed a set of principles and framework around microcredentials. And then we ran 22 pilot projects with Ontario colleges and universities, as well as their employer partners to test how the framework helps in the development of micro-credential programs. eCampusOntario has just released a report in partnership with the Diversity Institute, Future Skills Centre, and Magnet that explores the findings of these pilot participants. And one of the major findings is that in doing the work developing and running micro-credential programs, key points of convergence on the definition of a micro-credential have emerged.

And these include things like a microcredential focuses on specific skills or competencies, and that it is awarded on the basis of an assessment, and that they are also employer or employment relevant.

Microcredentials are not a traditional course or program that is just broken down into smaller pieces and smaller components. When done properly, they're designed to be different. That's not to say that microcredentials can't stack towards a larger credential, but it's not as simple as just taking modules of a pre-existing course and breaking it down. Microcredentials are also not meant to be a replacement for these traditional college diplomas or university degrees. It's meant to be a complimentary add-on or just something that's supplementary, to be able to help a learner achieve a new job or a new opportunity.

Linda Nazareth:
Microcredentials are rising in popularity and adoption, in Canada and around the world. Some say they will revolutionize our education systems. Just what is the potential of microcredentials to enhance education and employment? Here's Emma again.

Emma Gooch:
When done right, a microcredential should increase opportunity and access to learners. So, whether this is opportunity to a new job or the next job – because they're always tied back to the workforce – access to learning opportunities that may not be accessible to non-traditional learners as well. Whether these are learners who have never accessed post-secondary education, for example, or whether they're newcomers to Canada, that is where we are seeing a lot of program development for micro-credentials, in these areas where non-traditional learners can access training opportunities.

And then also because micro-credentials are targeted programming, they're shorter in duration, and that means that they're also less expensive than traditional education. There's a lot of appeal to adult learners. Micro-credentials are designed to be flexible, and this flexibility is required for adults with other commitments in their lives.

Many jobs have broader education requirements, to ensure that a specific knowledge area has been developed. So, many of the times micro-credentials can be used as a supplement if the knowledge required is specific enough. And that means that doors are open to more job opportunities for learners who do not have that education requirement. This is an issue that we see a lot with access to post-secondary education, so for example, with Indigenous or rural learners.

Linda Nazareth:
A survey by the Higher Education Quality Council of Ontario indicated that once they knew precisely what a microcredential was, Canadian employers viewed them positively. This was especially true if they gave future hires or current employees the skills that were in demand in their industry. Similarly, prospective students were interested in microcredentials for personal and professional development, and as a way to future-proof their careers.

Emma Gooch:
When we talk about microcredentials, we often talk about how they target specific skills and competencies that are relevant to the labor market. Many microcredential programs are developed to be pathways to careers, whether this is up-skilling in a certain area, or if it's training for a newly required skill – for example, on a new technology. We know that this partnership and relationship to industry is central to the concept of a microcredential. So, because they are so closely linked to the workforce and to industry, industry really needs to be involved to help determine what skills are required, what gaps they're seeing in their learners that can be addressed with a micro-credential programming.

And then also we know that when industry and employers are involved in the microcredential development, there's more buy-in. Because they can see that these microcredential programs address their own needs, and they have more faith in the program's ability to train learners for that desired skill.

And that also extends to microcredentials in terms of assessment as well. If industry is involved in the assessment, we know that the assessment can be kind of a real-life workplace scenario that whoever needs to achieve this microcredential is going to encounter in the workforce. So, industry can have confidence that that learner knows how to address that issue.

Linda Nazareth:
Despite the potential advantages for employers and workers, we know there are still challenges ahead to roll out microcredentials on a larger scale across Canada. Here are a few that Emma brought up.

Emma Gooch:
There's no formal qualifications framework for microcredentials. That is a big question mark in terms of how they work for for-credit programming in the province. So right now, a lot of microcredentials happen in the continuing ed space and as supplements to curriculum. But once you start to actually embed them within curriculum, it gets a little bit challenging in how they can work for credit.

And another challenge, is the cost of microcredentials, right? Because they're brand new, a lot of the resources that go into developing a microcredential such as a subject matter expert, an instructional designer, all of those costs are about the equivalent of a full course. So, in terms of development, it doesn't look that much different than a course or a program, but learners expect that microcredentials are cheaper. So, the way of costing a microcredential, especially when it's a brand-new concept to higher ed is a bit of a challenge.

I think it's important to note that microcredentials are a new concept everywhere. We're very early on in the development phase for microcredentials here in Ontario, but also across Canada. One of the challenges is that there is no national education ministry to bring this cohesion to the messaging around micro-credentials. So, we fall back on a lot of informal ways of collaborating in the development

of them. eCampusOntario's principles and framework for micro-credentials have helped provinces such as Saskatchewan and British Columbia set their own, and that has happened through just conversations with people in these provinces – informal micro-credential working groups across Canada, just to kind of how each context is definitely unique, but where we can find cohesion.

Linda Nazareth:
Let's hear about a microcredential program taking place in practice. The Future Skills Centre is working with several partners who are deploying microcredentials as part of their skills training. The Material Handling 4.0 program is one of these projects. It is led by Mohawk college in Hamilton, Ontario and also run at Vancouver Community College, Nova Scotia Community College, and Red River College Polytechnic in Manitoba.

In six weeks, participants are trained in the skills needed to work in the supply chain sector. They learn about how to move, store, access, and distribute materials and products. In addition to these technical skills, social and emotional skills such as teamwork, problem-solving, and communication are an explicit focus.

We spoke to Kerri Korabelnikov about the program. She is the Dean of the School of Education, Arts and Sciences at Red River College Polytechnic in Winnipeg. At this location, newcomers to Canada and Indigenous peoples participated in the first two cohorts of the program. Their third cohort combines these two groups. Kerri first tells us about the importance of quality assessment practices for the microcredential competencies.

Kerri Korabelnikov:
And so, when somebody finishes the program, they would get a logistics micro-credential, but then there was these other microcredentials for the 21st century. And in the values rubric, as we assess these 21st century skills, there's real rigor in it, in that they are linked to the competency, they are taught and they are assessed in three different categories. So,

you can meet, not meet, and exceed. And this was based on industry feedback, as they started to develop the program – it's an industry driven project is they said, no, we want to know which student meets it and which student exceeds it.

If Amazon in Vancouver, Winnipeg and Hamilton and in Halifax hire a student from our program and they have an exceeds badge in teamwork, it's exactly the same. They've been the same competencies. They've been assessed by a trained instructor who's been trained on how to teach and assess the skills for the microcredential. And it's been assessed by a third-party assessor through Mohawk. And so our instructors, they assess it, but then it's reassessed. And that way, there's a real rigor around it. If we are going to give this badge, it's not a badge that's just shiny, a badge that truly has some something around it and means something – not just to the student, but also to the sector. that's been a really important piece of this project.

Linda Nazareth:
Many employers currently don't have a strong understanding of how microcredentials work or have not even heard of the term. We wanted to know how employers in the local supply chain industry were responding to the project – and what benefits they were envisioning for their workforces.

Kerri Korabelnikov:
It was interesting to connect with the employers as we were moving through it because they didn't know what it was. They were like, well, what is this thing? It's a little different. Microcredential six weeks … we need supply chain material handling. And, and so we started to talk and, and for the first iteration, the first cohort, it was actually quite difficult for all of us to find some industry partners. It took a bit. But at the same time, because Mohawk had developed the program based on industry feedback, when we did talk to industry, they were like, yeah, this meets our needs. Absolutely.

We've entered our third cohort and we've already had other employers reach out again saying, hey, when's your next cohort? When is it done? And so that the word is getting out. It's been very successful. It's short, it's giving those students the real foundation so that they can go into the employer, the employers are still providing a bit of training and then off they go. So far, it's been extremely successful. It seems to be meeting a labor market need. And, we're definitely connecting with employers to get some feedback too, on how we might be able to tweak the program to make it even better.

Linda Nazareth:
With the project taking place in four different provinces and looking quite different from traditional post-secondary offerings, how are the colleges involved coordinating their efforts and promoting their microcredentials program to employers and participants? Kerri emphasized the importance of adjusting to the local context, trust, and knowledge sharing.

Kerri Korabelnikov:
Mohawk was the lead in the project, which brought us all together. We love working with each other. The strengths of one institution helping other institutions develop in other areas. And one of those being the microcredentials, it was a good example of something that Mohawk was doing that the rest of the three institutions were not doing. And so, we're all learning from each other. We're really looking at, is what's working in also working in Manitoba or Winnipeg and Vancouver and Nova Scotia, Halifax. And what we're finding is it works, but there needs to be a few tweaks depending on what we're working with.

Linda Nazareth:
Kerri sees what is happening now in the microcredential space as just the beginning.

Kerri Korabelnikov:
We're seeing more and more microcredentials like material handling where it is a short labour market need for re-skilling or up-skilling. We keep hearing from industry constantly, we need this, or this gap needs to be filled. If you're

already in the labor market there's just a piece you're missing, you don't want to have to go to school for 10 months or whatever. You don't want to have to take an entire program or even an entire course.

Industry-wide, it's definitely coming in strong. This isn't something that is passing by as the next ship that sails. I can't imagine having a conversation with industry, and them saying, hey, can you create a 12-month program? It's just not the reality anymore.

I think is something that we're really digging deep into. It's being talked about everywhere. Microcredentials, it's a big thing, whether it's for new students coming in, students who have already been our students, our alumni, and now are having to re-skill or up-skill. And even for our own faculty and staff, do we start looking at it from not just a here's leadership training, but how do we look at it from here's leadership training with some credentials attached to it, or having to prove that learning, right. You're not just taking a PD session.

As an institution, we really are looking at are we going to do some stackable microcredentials, something where you can take a part and then another part and another part. And then together it creates something. There's not a lot of that out there yet, but we're definitely looking at that.

In Ontario, they have a microcredential framework that's provincial wide. We don't have that in Manitoba. Let's just call it an unregulated microcredential right now. There's both pros and cons to that. There's no shared understanding within industry and post-secondary around what a microcredential might mean. And so that's both great because we can try some different things. It's also not so great because there is potential to perhaps undermine the microcredential. You need to make sure that microcredential, isn't just being given as a participation badge. There needs to be clear competencies. They need to be assessed.

Linda Nazareth:
Theresa Davis-Woodhouse is at the Canadian Council for Aviation & Aerospace (CCAA). The CCAA believes that embracing microcredentials programs will help develop workers with the skills the industry requires. The Council has done a lot of work consulting with their member companies. Theresa tells us a bit about what they're hearing, and how microcredentials can be used to upskill engineering staff and keep up with the new technologies in the industry.

Theresa Davis-Woodhouse:
There's been a lot of interest from industry in the microcredentials. Industry recognizes that they need additional training paths, and they especially need ones that deliver on demand, focused learning. The aviation industry is ready for training methods that are based on competencies and not just seat time. Cause seat time doesn't really equal learning.

So traditionally, our aircraft maintenance engineers, their license is Transport Canada based. And what usually happens is they go to school for two years; they come into the workplace and do another two years of what we call on the job training or learning or an apprenticeship. And so, in order to get into the workplace, the learning that they take in the college is very prescriptive. It's based on a certain number of hours and certain outcomes that is provided by Transport Canada. That doesn't give you a lot of room to move and learn new technologies. Some of these new workers are missing some of the latest technologies and they're missing their human skills or soft skills, those kinds of foundational skills.

Microcredentials give industry a way to upskill their employees in the flow of work, right? This helps them take advantage of the new technologies and equipment faster, it allows them to pivot when needed. An example of that might be before the pandemic, a company that was working on a certain component, some of them pivoted and did some healthcare. And they worked on things like respirators. So that ability to pivot needs that kind of in the flow,

upskilling done quickly. And the ability to rapidly deploy training linked to new technologies, new business processes, and new markets is pretty critical for our industry.

Emerging technologies and a changing operating environment combined with these persistent shortages of skilled workers in our industry, means we have to do more with less. Canada's aviation and aerospace sector was hit hard by the pandemic, as you probably know. We're in recovery and the industry is working to realign costs with the reality of reduced operating revenues. This means becoming more efficient, more adaptive.

Another contributor to the challenges faced by industry is that traditional college programs for aviation don't have the capacity to meet the demand for aircraft maintenance engineers. And that would be for your maintenance, your structures, or your avionics. And one way to assist industry is to multi-skill employees to make it easier for them to work on new areas, to better adapt to rapidly involving new technologies. It can address the sector wide need for multi-skilled workers to adapt to technologies and for fluid work environments. And this will help drive industry recovery and regrowth.

Linda Nazareth:
CCAA is leading an FSC-supported innovation project that is developing and testing a national microcredential training system. This system is based on the industry's national occupational standards and certification system. CCAA has developed a framework that will form the basis for upcoming testing of the training with employer partners. This training will be based in the workplace. Theresa told us the development of this framework was no small feat.

Theresa Davis-Woodhouse:
And we thoroughly consulted with our industry project partners before developing the framework. This framework is extensive, and it's based on national occupational standards, a competency dictionary that contains the competencies that have been identified as

important indicators of successful performance across 29 occupations within the industry, but then the industry competency-based training and four component instructional design. We'll also use our newly developed digital logbook. In addition to these approaches, it's the relationship between the mentor and the learner must also be acknowledged and is a critical component to the success of the workplace training program. In this case, the mentor is somebody in the workplace who can answer any questions, demonstrate a practical task if needed and ensure that the learner has the opportunity to work on the tasks and the equipment that helps support the learning that they're doing.

The first microcredential that we're developing is actually inspection. You might inspect before a flight takes off, you might be inspecting in a manufacturing company, inspecting parts or components. That is a large competency that can go across all the different sub sectors. And the microcredential will be approximately 60 hours I believe, when it's completed. And the amount of lessons and storyboards that we have developed for that is like about 160 different storyboards, so that we're hitting on all the different places where the inspection competency is used.

In the flow of work training is quite different than just the type of training you would do online and sit in front of a computer. This is really workplace-based training. The learner, they'd read a little theory, they might have to watch a video, then they'll go, and they'll actually do the task in the workplace. We'll have an evaluator check their work and their learning to make sure it's up to par. They might take one or two opportunities to do it, to get better at it. And then they would track it all in the logbook.

It has the added benefit of the employee not taking time off for training. It doesn't really interrupt production on the floor because it is in the flow of work, but they are short and sweet pieces, these micro-lessons. It doesn't really interrupt production. It's not like having to take somebody out of the workplace for a full

week to get them trained up. So, it helps your industry and if you invest in your employees, I mean, they're happier employees and it's a good retention tool to invest in them.

Linda Nazareth:
We wanted to spend this episode exploring microcredentials since there is growing enthusiasm and uptake of these rapid training programs, yet some key components of an effective microcredential system across Canada remain to be developed.

Microcredentials can build workers' skills with a relatively low time burden, provide a rapid response to employers' skills needs for their businesses, and thus help people better thrive in rapidly changing economies. Our guests showed us that the interest across industries is strong and highlighted the importance of industry involvement and buy-in.

We also heard about the challenges ahead, such as the lack of a shared definition. This is complicated by Canada not having a national education ministry to roll out microcredentials standards at a national level. Our guests also shared that while micro-credential offerings are shorter than typical post-secondary programs, they still take time and effort to get right, and the development process can be underestimated. Sharing knowledge and learnings across practitioners and regions is important. To tap the potential of microcredentials, employers, workers and students will need to be aware of these challenges and recognize them, and issues such as quality assurance and portability will need to be tackled. It is important for postsecondary institutions and employers to work together.

Increased collaboration will be the key in the coming years to unlocking the full benefits of microcredentials as a recognized training format in our labour market.

Linda Nazareth:
If you enjoyed this episode, please subscribe, and recommend the podcast to others who might enjoy it. And join us next time for our episode on developing a workforce for the green economy. Thanks for listening to this episode of the Future Skills Centre Podcast. I'm your host, Linda Nazareth, talk to you soon.

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