



# Nova Scotia Microcredential Framework

April 2023



# Acknowledgements

The Nova Scotia Microcredential Framework was created through a collaborative effort that included representatives from post-secondary institutions, industry sector councils, provincial government departments, the Nova Scotia Apprenticeship Agency, and the Maritime Provinces Higher Education Commission.

## Members of the Working Group

### **Apprenticeship:**

Nova Scotia Apprenticeship Agency

### **College:**

Nova Scotia Community College

### **Universities:**

Acadia University

Atlantic School of Theology

Cape Breton University

Dalhousie University

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Université Sainte-Anne

### **Industry Organizations:**

Atlantic Home Building & Renovation Sector Council

Automotive Sector Council of Nova Scotia

Association of Industry Sector Councils

Excellence in Manufacturing Consortium

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Nova Scotia Boatbuilders Association

Nova Scotia Construction Sector Council

Nova Scotia Tourism Human Resource Council

Ocean Technology Council of Nova Scotia

Trucking Human Resource Sector Council Atlantic

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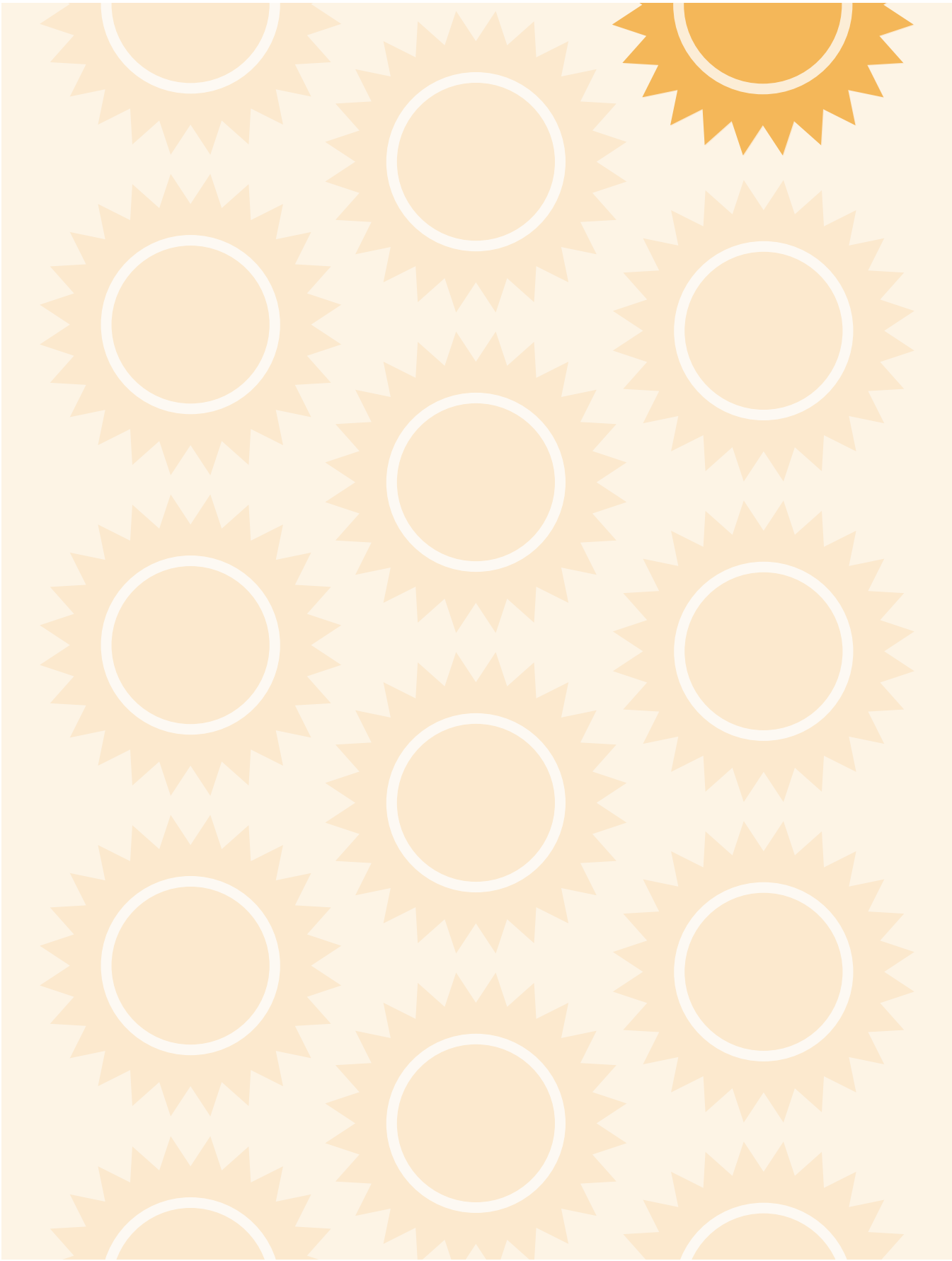
Education and Early Childhood Development

Labour Skills and Immigration

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# Introduction

## Context

The global and provincial labour market is changing. Many industry sectors have been hit hard by a combination of a shortage of workers, and a gap between the skills current workers have and the skills changing job roles require. As a result

- employers are looking for workers who have the right skills to fill new and emerging jobs
- the existing workforce needs quick and affordable ways to update their skills
- job seekers still learning their trade need ways to acquire the skills employers are looking for that will help them reach their professional goals

Microcredentials can help all of these groups.

Just as the name implies, microcredentials are short, fast, focused learning opportunities designed to provide a worker with in-demand skills, know-how, and experience. They are also recognized credits that complement existing educational offerings and encourage lifelong learning.

## Purpose

The concept of microcredentials is fairly new and, right now, is open to interpretation. That's why the Department of Labour, Skills and Immigration created the Microcredentials Working Group to establish a Nova Scotia Microcredential Framework so Nova Scotians would have a common, shared understanding of what the term means in this province.

This framework is not meant to be a “how-to” guide but will, instead, clarify what microcredentials are and why they matter.

The recommendations in the framework are based on research and best practices, as well as the collective experience of those who helped to develop it. The framework will provide helpful information for the following groups:

- Learners will better understand the terminology around microcredentials, how microcredentials are connected to the labour market, and how they can advance the learner's own career journey. When microcredential providers use this framework, learners will have credible information they can use in order to evaluate their educational and training options and make the choices that are right for them.

- Employers and industry groups will understand microcredentials and how they can address specific training needs. This framework also promotes the importance of collaboration and partnership between employers and education providers in microcredential development.
- Microcredential providers (including post-secondary institutions, other education providers, and industry) can use this as a blueprint to develop microcredentials and align their approaches with recommended practices. This framework notes that it's important for education providers to collaborate with employers when developing microcredentials.
- Government can use this framework to help support a consistent approach to microcredentials in Nova Scotia and to increase understanding and engagement within the provincial microcredentials environment.

## Approach

The Microcredentials Working Group developed this framework in 2021–22. The group's membership included leaders from industry sector councils and post-secondary institutions, as well as representatives from government departments and agencies that recognize the importance of having a quality microcredential ecosystem in Nova Scotia.

The group looked at microcredential frameworks in Canadian provinces and other countries, studied relevant literature, and interviewed Nova Scotian partners and subject matter experts in other provinces.

The group's goal was to develop a framework that would guide the development and delivery of microcredentials while still allowing microcredential providers to be innovative, agile, responsive, and quick to market. The group and its project partners believe they have achieved that balance with this framework which features the following components:

1. A provincial definition of a microcredential supported by guiding principles
2. A description of how microcredentials support inclusion, diversity, equity, and accessibility (IDEA)
3. Key elements for the consistent design of microcredentials
4. Guidance for a process to align microcredentials with employer needs and validate those microcredentials
5. Recommendations for authentic and effective assessment practice
6. Recommendations for sound quality assurance practices

Some working group members participated in subcommittees to co-author specific content for each of these components.

Once the draft framework was developed, the working group took it through an engagement process to ensure it was meeting the needs of its intended groups. This process included consultations with various industry/partners segments and the learner sector, as well as discussions with other Canadian jurisdictions and an exploration of new research and best practices.

The draft was then tested with some partner organizations who compared it to the results of their own microcredentialling processes.

The resulting framework is the product of significant engagement and collaboration. We hope you will find it a useful tool.

# 1. Definition and Guiding Principles

## Definition

This framework defines a microcredential as follows:

*A microcredential is a recognition of an assessed competency or skill earned through a short-duration or applied learning experience. Microcredentials can stand alone or connect to other credentials, and align with sector, employer, profession, community, or learner needs.*

In order to develop this definition, we studied relevant reviews, reports, and frameworks from other jurisdictions. Two Canadian reports<sup>1,2</sup> that included an exploration of global, national, and provincial understandings of the term “microcredential” also offered key insights.

The definition incorporates the five key points of convergence from *The Future is Micro: Digital Learning and Micro-credentials for Education, Retraining and Lifelong Learning* that notes microcredentials

1. are related to a specific or discrete competency or skill
2. are awarded on the basis of an assessment
3. are employer- or employment-relevant
4. can be connected to other forms of accreditation or can stand alone
5. are courses of short duration

The definition—as well as the framework itself—promotes a consistent approach to microcredentials in Nova Scotia that aligns with other provincial and international approaches.

## Guiding Principles

The Nova Scotia definition of microcredentials is supported by four guiding principles: relevance, trustworthiness, partnerships, and pathways.

These principles will help ensure we have a clear and common understanding of what microcredentials are and what can be accomplished through their use.

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1. Cuenco, M. (2022). *Microcredentials in flux: Challenges, opportunities and insights from FSC's portfolio* [Learning Bulletin]. Future Skills Centre. <https://fsc-ccf.ca/wp-content/uploads/2022/03/Learning-Bulletin-Microcredentials-in-flux-EN.pdf>

2. Gooch, M. A., Chaktsiris, M., Jae, K., Patterson, L., Suleman, S. Crawford Urban, M., Cukier, W., & Luke, R. (2022). *The Future is Micro: Digital Learning and Micro-credentials for Education, Retraining and Lifelong Learning*. <https://www.ecampusontario.ca/wp-content/uploads/2022/03/TheFutureisMicro-final-ENG.pdf>



All microcredential providers in Nova Scotia are encouraged to adhere to these principles for the benefit of all audiences.

## **Relevance**

Microcredentials represent specific skills and competencies that matter for learners, industry, and communities.

They are learner-centred, employment-relevant, and focused on learning opportunities that build competence and confidence. Current and potential employees who earn microcredentials will demonstrate new or improved skills, and earning these microcredentials may connect the learner to subsequent learning opportunities.

Microcredentials can also help meet the needs of communities and specific learner groups, government priorities, and educational institutions.

## **Trustworthiness**

Microcredentials are credible, verifiable, and recognized. Learners will need to complete an assessment in order to earn the microcredential.

Microcredentials are developed in collaboration with relevant partners. They are secure, trackable, and subject to a quality assurance process. Microcredentials focus on the assessment of competencies and skills. This promotes an equitable learning experience and allows recruiters to clearly see a candidate's skills and acquired learning.

## **Partnerships**

Microcredentials that matter for employers and the broader community are developed through communication, consultation, and collaboration.

Employers, communities, and/or education providers are encouraged to partner to develop, deliver, and harmonize microcredentials. This will support a portable and valid representation of competencies and skills, and advance the diverse needs of learners and communities.

## **Pathways**

Microcredentials make it easier for learners to access learning experiences and transfer that learning to employment.

These short, focused educational opportunities allow a wide range of learners to upskill, reskill, and explore new fields. Microcredentials can stand alone or connect to other credentials, which enables lifelong learning. Microcredentials have the potential to accelerate learners' career paths by recognizing past learning and lived experiences and increasing the portability of that learning across employers and educational institutions.

## 2. Microcredentials and IDEA

The Nova Scotia Microcredential Framework recognizes, embraces, and promotes an inclusive, diverse, equitable, and accessible (IDEA) approach to the planning, design, and delivery of microcredentials.

Microcredentials can build bridges between learners, job seekers, employees, education providers, and employers to create lifelong learners, engaged community members, and prosperous organizations and businesses. This benefits us all.

Microcredential providers are strongly encouraged to include IDEA principles, in addition to our definition and four guiding principles, when developing and implementing microcredentials in Nova Scotia.

### Inclusive

Microcredentials are inclusive when they are centred on the learner. This means microcredentials are

- designed and offered in a way that allows all individuals to participate, regardless of age, life stage, work experience, or skill level
- developed to advance learners' goals and meet employers' skills needs
- based on the principles of active learning, where participants are able to ask questions, reflect, and apply the learning to their real lives and workplaces

Providers should demonstrate that they have actively engaged with partners in the process of designing and implementing microcredentials. Partners include learners, employers, communities, and/or education providers who can help to determine skill needs, learning approaches, assessment choices, and approval processes. Collaboration is key when developing and implementing microcredentials that are inclusive.

### Diverse

Microcredentials promote diversity in the workplace by providing flexible, accessible and responsive upskilling and reskilling opportunities for all learners, including those from equity deserving communities.

Learning experiences designed for microcredentialing are

- delivered in a way that meets learners' diverse needs: learning experiences are flexible, responsive, accepting, respectful, and supportive
- delivered in a learning environment where learners are encouraged to share their different perspectives and backgrounds and to apply and recognize skills they have gained through work and life experiences

Microcredentials can help employers have more representative workforces by offering flexible learning, upskilling, and reskilling opportunities at all stages of an employee's life cycle.

Employers who wish to support and promote equity-deserving community members can use microcredentials to offer meaningful learning pathways and advancement opportunities in their organizations.

## Equitable

Microcredentials can offer individuals who have experienced barriers to post-secondary education and career advancement timely, flexible learning that can be directly applied to jobs and post-secondary pathways. Learners who earn microcredentials are able to demonstrate to educational institutions and employers that they have the specific skills required to succeed in their educational or work pursuits.

Microcredentials create fair, flexible, and learner-centred opportunities that can be adjusted to accommodate individuals' life, work, and financial circumstances. By offering low-barrier learning environments and clear transitions into the workforce, microcredentials can introduce lifelong learning to individuals who have experienced obstacles to more traditional educational and career pathways.

## Accessible

Microcredentials offer learning that is flexible, individualized, shorter, and tailored to build specific skills. This may make them more accessible to learners who face barriers such as

- access to reliable transportation
- financial and time constraints
- work and family responsibilities
- lack of formal education and/or work experiences
- overall learning challenges

It is important that providers consult with learners about potential barriers when designing accessible microcredentials.

Microcredentials are portable and transferrable. They allow the learner to build a portfolio of demonstrated skills that quickly and accurately describes the learner's ability to function in particular jobs or educational pursuits and is easily understood by employers and educational institutions.

## 3. Key Elements

Educational providers are encouraged to use these key elements when describing their microcredential offerings to help learners evaluate and choose the right microcredentials for them.

Consistent microcredential design can also increase portability by ensuring other institutions and organizations understand and recognize the microcredential, which helps the learner move between learning experiences and employment.

### Core

- **Title:** This is the full name that describes your microcredential and should represent the competency/skill achievable in the learning experience.
- **Provider:** Name of organization delivering the microcredential.
- **Competency/skill:** Description of the competency or skill achieved through completion of the microcredential.
- **Assessment:** A description of the method and type of assessment(s) involved.

### Recommended

- **Delivery:** The method of delivery of the microcredential (e.g., in person, online, blended, requiring synchronous or asynchronous engagement).
- **Price:** Cost of the microcredential to the learner.
- **Partner endorsement:** Where applicable, microcredentials may state names of industry sectors, employers, institutions, or organizations that have collaborated on and/or endorsed the credential (e.g., a statement of support from industry may be included).
- **Award/recognition:** Where applicable, microcredentials should stipulate the type of recognition that can be given upon completion (e.g., credit toward course/program, credit toward vendor/industry certification, non-credit “badge,” pathways, or other recognition).
- **Prerequisites/pathways:** Competencies or skills that may be required for this microcredential. Where applicable, also note if another microcredential is required prior to beginning the credential, or if it is one step along a path to additional credentials.
- **Quality assurance:** The assurance that the microcredential is developed and delivered in an educationally sound manner (e.g., a statement of quality assurance processes applied).

## 4. Employer Alignment and Validation

Microcredentials should be centred on learners and relevant to employers. These short, focused, educational opportunities help learners access learning experiences and apply them to employment. Many microcredentials are developed through purposeful partnerships between employers and education providers to target specific skills the labour market needs, while others support lifelong learning or professional development goals. This section provides guidance on how to develop microcredentials that have clear connections to employers.

Employer alignment and validation are important for ensuring that microcredentials

- position learners for career success either by securing employment, performing better in an existing role, or changing/advancing their career
- offer a clear and consistent approach to competency/skill recognition for learners and employers
- increase employer confidence in and understanding of learners' competencies/skills

Recommendations are as follows:

- Employers are involved in as many stages of the development process as possible.
- Employers, labour market data, or other research identifies and/or confirms a demand for the competency/skill targeted by the microcredential.
- Employers confirm they believe the microcredential will address the identified demand.
- Where appropriate, there is alignment with existing professional or industry competency frameworks.
- Employers assess or make recommendations about the assessment used to validate the competency/skill.
- Where feasible, the assessment simulates the environment in which the competency/skill will be used.
- Where an established organization exists to represent employer needs, that organization is a preferred partner to support employer alignment and validation.

## 5. Assessment

Assessments are essential to the success of microcredentials because a credential is only as credible as the assessment on which it is based. Assessments ensure that a learner can demonstrate they have acquired the competencies and skills covered by the microcredential. The goal is to ensure that the assessment of what a learner knows and can do is sufficiently robust to warrant trust in the credential. The following are recommendations related to authentic and effective assessment practice.

### Core

- Assessment should be valid, reliable, practical, flexible, fair, and sufficient, and grounded in universal design for learning (UDL) and IDEA principles.
- A variety of assessment tools are recommended (e.g., exams/tests, including written, oral, practical/hands-on, etc.; portfolios; peer, industry, and self-assessments; simulations; demonstrations of skills; automated assessments; or expert reviews).
- Assessments should be intentionally selected to measure the targeted skills or competencies to professional, educational, or industry standards.
- Assessments should be authentic in that they provide learners with an opportunity to demonstrate skills or competencies relevant to a specific workplace, educational, or other context (e.g., consulting with industry and educational provider partners as appropriate).

### Recommended

- Assessments should assess proficiency in the competency or skill and provide important practice and feedback in the learning process.
- Consider flexibility of assessment design to provide a variety of approaches that create more equitable, accessible, and inclusive learning environments (e.g., assessments may need adjustments to assess prior learning, or for use with learners whose first language is not English).

## 6. Quality Assurance

Microcredentials are still a fairly new concept in Canada, and this means learners and employers/industry have varying perceptions of their value and quality. Having a strong quality assurance process will clarify expectations for all audiences and drive acceptance of microcredentials in this province.

It is recommended that providers of microcredentials do the following:

### Administration and Oversight

- Identify the coordinating or administrative unit or person responsible and accountable for the overall management of development, delivery, and quality of microcredentials in your organization.
- Clearly define the credential approval process, which should be efficient to facilitate just-in-time development.
- Make use, as appropriate, of existing quality frameworks within your organization or from similar/partner organizations.

### Development

- Follow a development process founded on educationally sound practices that
  - validates that a skill/competency can be taught and assessed
  - includes clearly defined and appropriate skills/competencies
  - includes competency-based assessment
  - is designed to optimize the learner's experience
- Incorporate culturally responsive teaching and UDL guidelines for curriculum design, development, and delivery to create more equitable, inclusive, and accessible learning environments.
- Ensure the targeted competencies/skills the microcredential is meant to deliver, the program content, and the manner of assessment (see also Assessment) are all aligned.
- Involve subject matter experts (e.g., employers, community, education providers) to ensure alignment and validation.
- Where applicable, examine options for prerequisites and pathways (e.g., a microcredential is required prior to beginning the credential, or is one step along a path to additional credentials).

## Delivery

- Ensure you have the appropriate technology/infrastructure to deliver the microcredential.
- Where applicable, ensure instructors/facilitators have the appropriate training to deliver and assess the microcredential.
- Clearly communicate expectations and requirements to learners.

## Ongoing Quality Assurance

- Establish a regular schedule to review microcredentials to ensure they remain relevant, current, and are effectively teaching the targeted competencies/skills. This review should include regular feedback from learners, employers, community, professional associations, instructors/facilitators, and graduates, as well as an analysis of program data (e.g., enrolment, completion rates, number of credentials issued, time to completion, learner evaluations, and completion surveys).



# Glossary of Terms Used in this Framework

**Badge** *(or digital badge):*

A digital representation of a microcredential that contains structured information (called metadata) that is standardized for easier sharing and can be evaluated and authenticated via embedded links.

**Community:**

A specific geographic region or municipality, or a group of individuals sharing common need or interest.

**Competency:**

The specific and measurable combination of knowledge, skills, and attributes that result in an individual being able to perform an activity or task to a defined level of expectation or standard.

**Competency-based assessment:**

A process of collecting evidence of a learner's progress. The assessment allows the learner to demonstrate that they have acquired the skills and competencies associated with the microcredential in as realistic a setting as possible.

**Credential** *(or digital credential):*

An umbrella term that describes a document that attests to the learner's achievement of specific learning outcomes or to a defined level of knowledge or skill they have achieved relative to a given standard. A digital credential is a digital record of achievement with attached metadata that provides information about the source and the value of the microcredential.

**Culturally Responsive Teaching (CRT):**

Practices that connect learners' lived experiences and ways of knowing to the educational program content in ways that support engagement, achievement, and empowerment.

**Education provider** *(or microcredential provider):*

Refers to an organization that provides education, either as a main or ancillary objective, including public post-secondary educational institutions, other education providers, or industry.

**Employer, alignment and validation:**

Employer is defined as a singular organization or group of organizations, an industry sector council, a governing body, or association. Alignment is defined as learning experiences that have been developed to target specific skills gaps, needs, career essentials, and/or workplace demands. Validation is confirmation from an employer that the microcredential being developed relates to an identified need.

**IDEA:**

Inclusion, diversity, equity, and accessibility.

**Labour market:**

A generalized concept about jobs and the people who do them, usually referring to the interaction between supply (number of people available for work) and demand (number of jobs available).

**Microcredential:**

A recognition of an assessed competency or skill earned through a short-duration or applied learning experience. Microcredentials can stand alone or connect to other credentials and align with sector, employer, profession, community, or learner needs.

**Partnerships:**

Communication, consultation, and collaboration between employers, communities, and/or education providers in the development and delivery of microcredentials.

**Pathways:**

Learners' developmental journeys and movement between learning experiences and employment.

**Portable/portability:**

A credential that can be used in a variety of environments.

**Universal Design for Learning (UDL):**

A framework to improve and optimize teaching and learning for all people based on scientific insights into how humans learn. UDL guidelines offer a set of concrete suggestions that can be applied to any discipline or domain to ensure that all learners can access and participate in meaningful, challenging learning opportunities (CAST, Inc. 2023).



