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Challenges and Opportunities for Competency-based Education in Ontario

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According to a 2026 survey, 48% of Ontarians expect they will need to retrain or upskill[1] within the next five years to stay competitive in their careers — a pattern that is more pronounced for younger Ontarians (66% of those aged 18–29 and 61% of those aged 30–44) (Sheppard & Coletto, 2026).[2] This demand is shaped by waves of disruption, such as artificial intelligence, US–Canada trade tensions and high unemployment rates (Financial Accountability Office of Ontario, 2025; Li & Dobbs, 2025; Mehdi & Frenette, 2026; Ministry of Labour, Immigration, Training and Skills Development, 2025a). These factors, in conjunction with the shift to adaptable teaching and learning methods introduced during the pandemic, have contributed to an increased demand for flexible learning pathways among postsecondary students in Ontario (eCampus Ontario, 2024; Effah et al., 2023; El Galad et al., 2024; Janzen & Pizarro Milian, 2023).

Three key dimensions of flexible learning are mode, place and pace, which include considerations of the methods of instructional delivery, the location of learning and the timelines attached to learning activities (Roberts, 2002). Flexible learning can improve access to postsecondary education (PSE) for diverse student populations, such as mature learners[3] with work and family responsibilities (Berdahl, 2026; Effah et al., 2023; El Galad et al., 2024; van Rhijn et al., 2023). HEQCO's 2019 report called for improvements to Ontario's education and training system, including enhanced access to flexible, adult-focused training programs that enable learners to adapt and thrive (Pichette et al., 2019). Competency-based education (CBE) offers the opportunity to advance this goal.

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[1] Retraining or reskilling refers to developing workers' skills to prepare them for an entirely new role, often in a completely new sector (World Economic Forum [WEF], 2018). Upskilling refers to the process of expanding workers' capabilities to improve their performance in their current role, while helping them adapt to a rapidly changing economy (WEF, 2021).

[2] n=1,006. This was a random sample weighted according to census data to ensure that the sample aligned with Canada's population according to age, gender, educational attainment and region (Sheppard & Coletto, 2026).

[3] This population is substantial and growing: In 2023-24, 24.3% of Ontario postsecondary students at the bachelor's level and below were 25 and older — an increase of 2.5 percentage points from five years earlier (2018-19) (Statistics Canada, 2025). For this statistic, we included domestic and international enrollments from both colleges and universities from the following International Standard Classification of Education (ISCED) categories: "Post-secondary non-tertiary education," "Short-cycle tertiary education," "Bachelor's or equivalent" and "Not applicable." ISCED is developed and maintained by UNESCO, and it serves as a way of comparing different international education programs from early childhood to doctoral levels (Eurostat, n.d.). The "not applicable" category includes programs or training that do not fit into ISCED's existing categories, such as English-as-a-second-language programs, continuing education or microcredentials.

CBE is an educational delivery model rooted in accessibility and learner flexibility. CBE focuses on the mastery of observable combinations of knowledge, skills and behaviours (known as competencies), and it allows learners to progress based on a performance-based assessments, rather than simply time spent in class (American Institutes for Research [AIR], 2021; Competency-Based Education Network [C-BEN], 2021; Freeze & Minjares-Montoya, 2021). In 2018, HEQCO investigated the state of CBE programs across North America and found that CBE has the potential to better serve lifelong learners (Pichette & Watkins, 2018). Our current report serves as an update to this work. With growing interest and investment in lifelong learning opportunities, like microcredentials (Ministry of Colleges, Universities, Research Excellence and Security [MCURES], 2025) and continuing education (Lastra, 2026), we explore CBE's role as another avenue for flexible and practical training.

Through a literature review and interviews with CBE practitioners and experts in Ontario, Alberta and the US, we explored the meaning of competencies and the defining features of CBE. We synthesized information about CBE learners, program trends and lessons learned while implementing CBE in these jurisdictions. Overall, we found that CBE should be understood as a continuum, where features of CBE and traditional programs often coexist. Findings also revealed that CBE is a model that can be beneficial to some learners, courses and programs. Implementing CBE may require significant changes to institutional roles and operations. In Ontario, CBE adoption is relatively new, and it operates on different scales. Amendments to policy frameworks related to institutional funding and student loans could facilitate growth in CBE programming.

Research Questions and Methodology

This report uses data from interviews and environmental scanning to explore the following research questions:

- How is CBE defined by CBE practitioners and experts?
- How are postsecondary institutions implementing CBE in Ontario? What can we learn from other jurisdictions?
- What challenges and opportunities exist for CBE programs in Ontario?

We conducted an environmental scan of academic and gray literature and institutional websites to understand patterns in CBE in Ontario, other Canadian jurisdictions and the US since 2018. Our environmental scan identified well-established CBE programs in Alberta and the US,[4] so we added these jurisdictions to our analysis. Our searches focused on the defining characteristics of CBE, examples of CBE programming and fields of study and the demographic profiles and experiences of CBE learners. In addition, we examined relevant policy frameworks for postsecondary students and institutions, including the Ontario Student Assistance Program and the Ontario Qualifications Framework, to situate our discussion of the possibilities for and limitations of CBE implementation in Ontario.

Additionally, we conducted eleven semi-structured interviews on Zoom between June and October 2025. Interviewees[5] were based in Ontario,[6] Alberta[7] and the US.[8] They were affiliated with colleges, universities and a professional agency, which provided well-rounded perspectives about CBE development, implementation and consultation. Their roles included provosts, vice presidents, deans, directors, professors and program managers and coordinators. Each interview lasted around an hour, and included questions related to descriptions of CBE, connections to industry and employers, experiences with CBE implementation, plans for CBE expansion, outcomes data and challenges and opportunities associated with CBE. We transcribed the interviews, then thematically coded them using NVivo 15.

[4] For example, as of 2020, there were over 1,000 CBE programs in the US (AIR, 2021).
[5] We intentionally sought out individuals who could comment on CBE program development, delivery and consultation — also known as a purposive expert sampling technique (Bullard, 2024). This method ensured that interviewees had relevant expertise and represented a diversity of roles, jurisdictions and perspectives. We used snowball sampling to recruit additional interviewees, where we asked existing interviewees to refer or recommend potential new participants (Ungvarsky, 2025).
[6] Ontario-based interviewees were affiliated with Collège La Cité, the G. Raymond Chang School of Continuing Education at Toronto Metropolitan University, Humber Polytechnic, Sault College, Tyndale University and the University of Ottawa.
[7] Alberta-based interviewees were affiliated with Bow Valley College.
[8] US-based interviewees were affiliated with the Competency-Based Education Network (C-BEN), the University of Kansas and Western Governors University.

Findings and Discussion

Our findings are divided into two parts. The first part presents definitions of CBE and competencies, followed by descriptions and examples of each CBE feature. We also provide an overview of CBE learner profiles, perceptions and outcomes. Here, we use a blend of literature review and interview findings from Canada- and US-based CBE practitioners and experts. The second part describes the current state of CBE programming in Ontario, including challenges and opportunities associated with CBE implementation. Finally, we share advice from CBE practitioners and experts.

Understanding CBE

We rely on a definition of CBE from Competency-Based Education Network (C-BEN), an international leader in CBE. They are a US-based network of CBE service providers. C-BEN's primary goal is to connect education to workforce needs, and they offer training and expert consultation for people around the world looking to implement CBE (C-BEN, 2025). Their CBE definition is learner centred with a focus on transparency, mentorship and pacing:

> Competency-based education combines an intentional and transparent approach to curricular design with an academic model in which the time it takes to demonstrate competencies varies and the expectations about learning are held constant. Students acquire and demonstrate their knowledge and skills by engaging in learning exercises, activities and experiences that align with clearly defined programmatic outcomes. Students receive proactive guidance and support from faculty and staff. Learners earn credentials by demonstrating mastery through multiple forms of assessment, often at a personalized pace. (Freeze & Minjares-Montoya, 2021, p. 4)

This definition includes the mastery of competencies. At the root of CBE is the idea of competence. Being competent requires "being able to perform a task or activity consistently over time and in different situations" (Green & Levy, 2021, p. 9). Competence exists on a continuum of proficiency — from beginner to expert levels — where progression takes time and practice (Green & Levy, 2021). Interviewees referred to competencies as observable combinations of knowledge, skills and behaviours[9] applied in authentic (workplace-aligned) contexts, which must be demonstrated at a mastery level (see Figure 1):

Figure 1

Competency Definition

Sources: Bushway et al. (2018), Freeze & Minjares-Montoya (2021), Green & Levy (2021), HEQCO interviews with CBE practitioners and experts (n=11).

Notes: This figure depicts the definition and end goal of "competencies," including how and where they are achieved. Competencies are observable combinations of knowledge, skills and behaviours that are achieved through demonstration of mastery in applied or authentic contexts. Competency mastery prepares learners to be recognized for their ability to perform a job function.

Competencies are most often associated with workplaces[10] and are typically demonstrated in applied or authentic environments (Bushway et al., 2018). As an interviewee explained:

[9] This can include transversal competencies (or soft skills), such as collaboration, time management and networking. These non-technical competencies are sought after by employers, and are important for learners' professional success (Rueb, 2024).
[10] While interviewees described a strong relationship between competencies and the workforce, there are other applications such as its use in K–12 education. The scope of this report is CBE in PSE; however,

> A competency is a job function. It's something you do in the real world. It has to have a connection to a job role.

Interviewees described how CBE learners must demonstrate competencies in real-world or simulated environments — for example, in a lab setting for a competency-based engineering course. For online CBE programming, interviewees explained how learning exercises and assessments include scenario- and problem-based learning that mirrors real workplace situations. Some interviewees explained how competencies are created using backward design, where the desired competencies are identified first, acceptable proof of mastery is chosen next and the approach to instruction and assessment is decided last (see also Conrad & Openo, 2018; Freeze & Minjares-Montoya, 2021; Patterson & Hepburn, 2025; Wiggins & McTighe, 2005).

Academic achievement standards differ between traditional and CBE programming. CBE's competencies typically require higher thresholds for passing and can only be obtained once they are demonstrated at a mastery level. Interviewees indicated that this level differs by institution, with the minimum threshold ranging between 75–100% — compared to course-passing requirements between 50–60% in traditional programs.[11]

Approaches to competency evaluation vary. Some institutions use all-or-nothing benchmarks (a binary approach), while others use rubrics with stratified competency scales (a scaled approach) (see also Specht-Boardman, 2025). Typically, these competency binaries and scales are then mapped onto letter grades or grade point averages (GPAs). Some interviewees explained that competency is the baseline requirement and mastery is an optional add-on for continued advancement. CBE learners often have competency portfolios where they compile and showcase artifacts that demonstrate their competencies (Rampersad & Gentner, 2025).

CBE Features

Setting high performance benchmarks that learners must demonstrate is one of the driving forces behind CBE. There are additional characteristics of CBE that centre

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CBE in K–12 often shares features such as individualized learning and competency-based assessments (see, for example, Blankenberger et al., 2024; Gagnon, 2024; Rix, 2023).

[11] Professions that require licensing or certification also have their own knowledge and skill standards that graducates need to enter practice (MCURES, 2024a).

around an individualized learning experience, employer backing and faculty mentorship. In theory, CBE programs[12] include all of the following features, but in reality, not every program has each feature.[13]

Recognition of Prior Learning and Experience

Some institutions use an assessment-first approach, where learners can demonstrate their competence upfront through a performance-based assessment (see also Freeze & Minjares-Montoya, 2021). This validation process facilitates the possibility for learners to progress through their programs more quickly. Prior Learning Assessment and Recognition (PLAR) is an existing framework that works within the structure of traditional PSE in Canada and the US,[14] which is time bound. PLAR recognizes the skills learners obtained in particular contexts. CBE also recognizes skills, but they are recognized regardless of where they were acquired or how long it took to develop them. This recognition is accomplished through performance-based assessments.[15]

Self-pacing

CBE programming does not use seat-time requirements (Freeze & Minjares-Montoya, 2021). Interviewees explained how all content is available to learners on day one, and learners are aware of the competency assessments needed to progress through to completion. Unlike traditional programs where students learn content and take assessments as a cohort, CBE students progress through their programs on a timeline that works for them. While expedited completion times are possible, an interviewee explained that the emphasis in CBE is pacing, not necessarily acceleration:

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[12] We use “CBE programs” to refer to all examples where some or all CBE features are present.
[13] The following descriptions and examples of CBE features emerged from literature review and interviews and are not specific to particular jurisdictions or institutions.
[14] All Canadian jurisdictions use this process in some way, but their practices, policies and pathways vary (Canadian Information Centre for International Credentials, 2023). This process also exists in the US, but it is more commonly referred to as Prior Learning Assessment (PLA) or Credit for Prior Learning (CPL) (Council for Adult and Experiential Learning, 2026).
[15] See Appendix A for more information.

> In CBE, while people commonly focus on the ability to accelerate, in practice most learners are attracted to CBE because of the flexibility and not necessarily the acceleration. The typical CBE program enrollee is someone who works, is the caregiver for their family and cannot attend campus during traditional hours or consistently meet other synchronous requirements.

They described CBE as a way to remove the clocks and calendars associated with learning and to offer a pathway to PSE that many people would not be able to access otherwise.

Authentic Assessments with Multiple Attempts

CBE programs test for particular competencies using authentic assessments, which are designed to emulate real job tasks (Finley, 2017; Freeze & Minjares-Montoya, 2021). Authentic assessments help learners build toward the mastery threshold. An example of authentic assessment raised in the interviews was a nursing student being assessed on their ability to accurately take a patient's blood pressure. Another pillar of CBE is allowing learners multiple attempts to pass a competency assessment (Specht-Boardman, 2025; Tkatchov et al., 2020), which stands in contrast to the high-stakes assessments common in traditional programs where there is typically only one testing opportunity. In between assessment attempts that do not meet the mastery level, coaches provide learners with support and detailed feedback in areas that need improvement (Freeze & Minjares-Montoya, 2021).

Employer and Industry Involvement

Employers and industry partners play essential roles in CBE programming. Some institutions conduct job-task analyses, where they gather information to understand the responsibilities, knowledge and skills required for specific jobs (Craig & College of New Caledonia, n.d.; Patterson, 2023). This process relies on interviews with industry experts who share the competencies workers need for roles in particular industries. Employer involvement in CBE programs can take different forms,[16] such as participation in program advisory committees (PACs).[17] Employer input informs the

[16] See McGillivray et al. (2022, pp. 27–43) for a summary of employer partnership types and examples, which range in complexity and commitment between the institution and employer.
[17] PACs make recommendations to ensure program content is relevant and meets workforce requirements and that graduates have the skills necessary to enter the profession (Colleges & Institutes

creation of competency profiles for each CBE program, which ultimately helps to equip learners for success in their field (McGillivray et al., 2022). Interviewees explained that workforce-relevant CBE programming helps to address the common mismatch between curriculum and employer expectations.

CBE helps address growing employer appetite for candidates' proof of applied skills rather than credentials alone or skills-based hiring (Nazareth, 2026; WEF, 2025). Although it is not widely adopted currently (Sigelman et al., 2024), skills-based hiring aligns with CBE's validation of skillsets and the cultivation of job-relevant competencies (Franklin & Lytle, 2015; Glover & Garrison-Duncan, 2025; Rege & Parsons, 2024; Zelihic, 2025). Currently, employer understanding of CBE is limited; however, researchers note that when employers are introduced to CBE, their confidence in the model improves because learning is demonstrated and verifiable (Glover & Garrison-Duncan, 2025).

Faculty as Mentors

In traditional programs, faculty typically have numerous responsibilities, such as advising students, developing course materials, teaching courses and grading assessments. In CBE, the faculty role is different. In some cases, their role is deconstructed, where the tasks traditionally assigned to one faculty member are divided across different groups of subject-matter experts. For example, there may be separate departments dedicated to areas such as curriculum and assessment, mentorship, course instruction and evaluation (Doherty, 2018; Lieberman, 2018). In other contexts, there may be a team of instructional designers, assessment specialists and educational technologists who develop a program's core competencies, but learners interact primarily with one faculty member (Lieberman, 2018). In this case, the faculty member has various roles — much like the traditional model — such as coach, evaluator and program co-designer (Ashby et al., 2018; Lieberman, 2018).

Canada, 2021). PACs are mandatory in publicly assisted Ontario colleges (MCURES, 2023a). While PACs are not required in publicly assisted universities, advisory boards may exist optionally in applied or professional programs (Universities Canada, 2025). However, at least one publicly assisted Ontario university has a Senate policy that requires PACs for undergraduate programs. Curriculum quality and program approval are overseen internally by university senates (Jones et al., 2004), with external review through the Ontario Universities Council on Quality Assurance (n.d.).

Interviewees most commonly highlighted the mentorship and evaluator roles of faculty, where a faculty member guides students' learning and assesses mastery of competencies (see also Ashby et al., 2018; Manske, 2025; WGU Labs, 2024). Using the example of a nursing student taking blood pressure, it is the faculty member's job to observe and assess them. If the student does not demonstrate the competency at a mastery level, the faculty member provides feedback and a personalized learning plan to address gaps and prepare them for re-assessment (Freeze & Minjares-Montoya, 2021; WGU Labs, 2024).

Completion Signals Mastery of Competencies

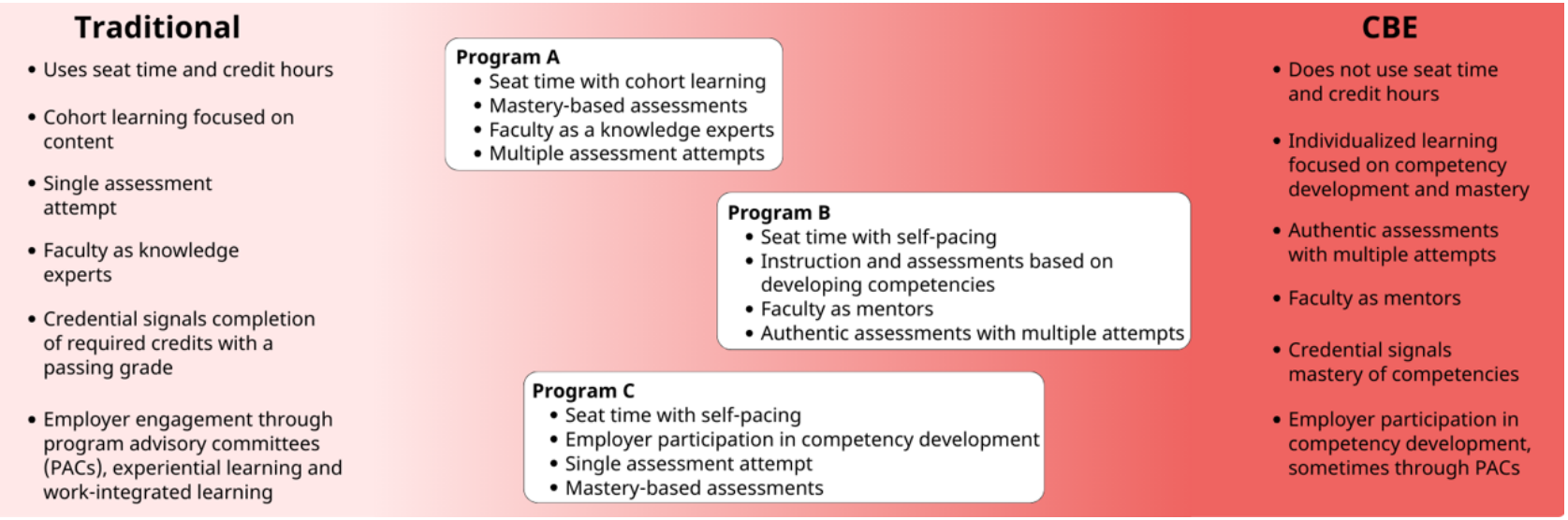
While credentials awarded in traditional programs signal completion of required credits with a passing grade, those awarded in CBE signal mastery of all competencies (C-BEN, 2023; Specht-Boardman, 2025). Interviewees shared that achieving mastery is demanding and rigorous. However, providing learners with tools like multiple assessment attempts, pacing and coaching allows learners the flexibility and support necessary to reach this level (Specht-Boardman, 2025).

Through literature review and interviews, we learned that CBE exists on a continuum — with all CBE features on one end, and traditional program features on the other. Figure 2 (see below) depicts three composites that exemplify different ways that CBE and traditional program features often coexist.[18]

[18] Features on the far ends of the continuum are not necessarily mutually exclusive. For example, faculty are knowledge experts in both traditional and CBE programs, but they often take on one-on-one mentorship or coaching roles in CBE programs.

Figure 2

CBE Continuum



Sources: C-BEN (2023), Finley (2017), Freeze & Minjares-Montoya (2021), HEQCO interviews with CBE practitioners and experts (n=11), Manske (2025), McGillivray et al. (2022), Specht-Boardman (2025), Tkatchov et al. (2020), WGU Labs (2024)

Notes: We generated the composites in the middle space (depicted as Programs A, B and C) from examples of CBE that emerged from environmental scanning and interviews. The composites exemplify how CBE programs often use some CBE features and not others and that the combination of features varies case-by-case. Note that "employer participation in competency development" was discussed most frequently in the interviews; however, we acknowledge that there are variations in employer involvement in CBE (see McGillivray et al., 2022). Also note that there are various faculty roles in CBE (Ashby et al., 2018; Doherty, 2018; Freeze & Minjares-Montoya, 2021; Lieberman, 2018; Manske, 2025; WGU Labs, 2024). Here, we have highlighted their mentorship or coaching role because of its prevalence in interviews and literature.

CBE Learner Profiles, Perceptions and Outcomes

Nearly all interviewees shared that non-traditional learners are the target demographic for CBE programs (see also Finley, 2017; Lindsay et al., 2018). They explained that most CBE learners are not entering their programs directly out of high school; instead, they are mature learners with some PSE and work experience (see also AIR, 2021). CBE's flexible and independent learning model can be appealing to learners balancing work and family commitments (C-BEN, 2021; Pichette et al., 2019). Because mature learners often have experience juggling multiple responsibilities, most interviewees suggested that CBE can be a good fit for those looking to upskill, reskill or complete a credential that they started earlier in life. An interviewee shared that some learners enter CBE programming through employer-sponsored training, where employers are looking to foster talent development among their staff (see also McGillivray et al., 2022).

Learners come to CBE programming with various backgrounds and experiences, and reports of their in-study perceptions are varied. Interviewees described excitement and enthusiasm among many CBE learners. They explained how learners appreciate transparency and knowing exactly what they need to achieve. Generally, interviewees indicated that learners valued the flexible, self-paced nature of CBE programming, with many reporting they feel relief in terms of time pressure and stress (see also Mohamed & Rampersad, 2025; Rampersad & Gentner, 2025). Some interviewees highlighted students' satisfaction at the end of their programs because they felt confident in their ability to meet employer expectations. However, others shared that some students felt apprehensive and confused about this fundamentally different way of learning and being assessed. Interviewees indicated that some learners, especially younger learners, are more successful within the structure of traditional programs. In-study perceptions from CBE learners themselves is an important area of future research.[19]

Information about CBE graduates is limited, but there is some evidence of personal and professional benefits. For example, researchers have found that CBE graduates felt more self-confident and independent after finishing their programs (Lindsay et al., 2018; Navarre Cleary, 2020) and experienced improvements in their marketability, career advancement and financial security (Navarre Cleary, 2020). US sources indicate that

[19] Some Ontario-based interviewees shared that they conducted internal surveys and focus groups among CBE learners, but data collection is limited overall.

CBE graduates experienced salary increases after finishing their programs (Lindsay, 2018; Navarre Cleary, 2020; Rivers & Sebesta, 2017; Western Governors University [WGU], 2025a).[20] Other US studies found that graduates of CBE programs had stronger financial and professional outcomes than graduates of traditional programs (Lindsay et al., 2018; Rivers & Sebesta, 2017). More data from CBE program providers is needed to place these outcomes in context.

CBE in Ontario

Programming Overview

CBE programming in Ontario is generally nascent. Ontario colleges and universities use the CBE model on various scales. For example, one college has implemented institution-wide CBE. Another college piloted CBE at the course level and then scaled this approach across the entire program. CBE programs in Ontario are offered in a variety of credential types, as online, hybrid and in-person delivery formats. About half of the Ontario CBE interviewees indicated that their programming operates within traditional, credit-based academic programs. The other half of interviewees reported that their institutions' CBE offerings operate through continuing education (CE), which allows for greater programming flexibility.[21] Competency-based CE offerings we encountered are in the form of non-credit microcredentials,[22] which target the development of specific, in-demand competencies within a short timeframe (see also Galindo et al., 2024; Pichette, 2026; Pichette et al., 2021; RBC Economics, 2025). An institution in Alberta has used a similar approach by offering non-credit, competency-based microcredentials in areas such as community studies and technology. They will soon launch for-credit, competency-based microcredentials.[23]

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[20] Beyond salary outcomes, we found examples of other student and graduate outcomes data from US institutions that offer CBE programs, such as two-year persistence rates, employer satisfaction scores, median time for completion, median tuition and median federal financial aid borrowed (Capella University & Whiteboard Advisors, 2022; WGU, 2025a, 2025b).
[21] CE in Ontario operates outside of the provincial PSE funding model.
[22] Microcredentials can be offered through cohort learning, independent learning or a blend of both (Pichette et al., 2021). Ontario- and Alberta-based interviewees described their institutions' virtual competency-based microcredentials designed for independent learning.
[23] They also offer competency-based certificate and diploma programming. Interviewees described how, over the past several years, their institution has converted traditional programs to a CBE model — a process they plan to continue incrementally over time.

Ontario CBE programs are career focused. Key fields of study include healthcare, trades, education, engineering and computer and information sciences. The first and most advanced application of CBE in Ontario is a distinct offshoot referred to as competency-based medical education (CBME). It is an outcomes-based approach to designing, implementing, assessing and evaluating medical education programs through the use of competencies (Royal College of Physicians and Surgeons of Canada, n.d.-a).[24] Another application of CBE in Ontario is faith-based CBE programming at a private institution.[25]

The Ontario-based CBE programs we encountered use some CBE features and not others (see Figure 2). In Ontario, the most commonly used CBE features include employer involvement, faculty mentorship and authentic assessments with high thresholds for progression and completion. In theory, CBE programs validate prior learning through learners' demonstration of competencies, but Ontario-based interviewees shared that their CBE programs were not at this stage. Currently, they award credit for prior learning through existing PLAR procedures but hope to be able to offer upfront performance-based assessments in the future. Additionally, there are different approaches to competency assessments. For example, multiple assessment attempts are sometimes present but, in some cases, if learners do not demonstrate mastery they have to re-enroll to be re-assessed.

Notably, traditional and CE programs using CBE features still use seat-time requirements. Traditional programs that use some CBE features operate within a 14-week semester. While learners can access the next assessments more quickly if they demonstrate competency, course credit is conferred at the end of the semester. Similarly in CE, competency-based microcredentials have fixed start and end dates, and completion can be accelerated if learners pass the assessment before the end date. In

[24] CBME is outside the scope of this report. See Appendix B for a summary of key facts about CBME.
[25] Interviewees explained how some programs at their institution use CBE features like mastery-based assessments and employer collaboration. Our environmental scan found additional examples of Christian faith-based CBE programs in the US and at private institutions in British Columbia and Saskatchewan. Some programs fall into the category of competency-based theological education (CBTE), which is "an approach to CBE that focuses on ministry or ministry-related professions for theological schools, with a special emphasis on human (character) and vocational (pastoral) formation" (Association of Theological Schools [ATS], n.d.-b). The ATS is a network of more than 270 theological schools in the US and Canada (ATS, n.d.-a) and they set the guidelines for CBTE (ATS, n.d.-b).

this context, re-enrolling in courses may be necessary for learners who need slower pacing.

Challenges and Opportunities

Existing PSE policy frameworks present a key challenge for CBE in Ontario. In theory, CBE programs should not have seat-time requirements (Freeze & Minjares-Montoya, 2021), but the qualifications framework for Ontario postsecondary institutions specifies the amount of time — instructional hours, semesters or years — required to complete each credential.[26] Consequently, the Ontario Qualifications Framework (OQF) shapes what programs look like in Ontario's publicly assisted institutions. These seat-time requirements play an important role in Ontario's student loan policy framework, the Ontario Student Assistance Program (OSAP), which is also time based.[27]

Institutions that offer CBE in other jurisdictions have developed creative workarounds to navigate the default of seat time. A US-based[28] interviewee explained how their institution developed an algorithm to convert competency units from the CBE model to traditional credit hours, similar to those in the OQF. This output allowed CBE programs to fit more neatly into established financial-aid frameworks. In Ontario, creating similar conversions that articulate how credentials obtained through CBE are equivalent to those obtained through traditional programming could help to improve access to CBE programs for students with financial need. Additionally, there are different tuition payment options available to US CBE learners, like subscription pricing,[29] which can bring costs down for learners who complete quickly. This model could offer an avenue for improved affordability for Ontario CBE learners.

At institutions, CBE programs can present challenges for faculty. Interviewees indicated that there can be a struggle for faculty to orient students whose educational experiences have largely been in traditional classrooms to the CBE model. In addition, interviewees shared that there was often reticence among faculty: Some did not understand how the model worked, and others struggled with the shifting power dynamic with employer

[26] See Appendix C for a summary of the Ontario Qualifications Framework's credential duration requirements.
[27] OSAP has a "period of study plus one" rule, meaning that students are OSAP-eligible only for the number of periods of study required to complete their program, plus one additional study period (MCURES, 2024b).
[28] See Appendix D for a summary of US CBE programming.
[29] See Appendix D.

involvement. Interviewees explained how faculty were often overwhelmed with their existing workloads and resistant to change a method they felt was already working (see also Ashby et al., 2018; Leiberman, 2018; Lescarbeau, 2023; Manske, 2025). Faculty contracts are also built around traditional definitions of workload. In Ontario colleges, for example, workloads for full-time teaching faculty are calculated through a Standard Workload Formula (SWF). SWFs use time-based metrics, such as time spent for preparation, teaching and grading (Ontario Public Service Employees Union [OPSEU], 2021). These agreements stipulate that 44 hours per week is the maximum amount of time allocated for these activities (OPSEU, 2021). An interviewee explained that SWFs can pose a problem for CBE: Faculty workload can vary week-to-week because of the time-variable nature of learner progression.

Institutions face operational challenges for CBE programs. Learning management systems (LMSs) do not always pair well with CBE (Kellogg, 2018; Nodine & Johnstone, 2015). When discussing the LMS their institution uses, an interviewee said:

> It's designed for a traditional model. It's not ideal for the CBE model with faculty coaches and the student interaction aspect, mapping competencies, tracking learners' journeys — that's been clunky.

LMSs designed for traditional programs include features like weekly modules and gradebooks with one-time assessments with corresponding grades. Inputting learner competency data and iterative feedback from coaches is difficult in this context. Some LMSs, like D2L Brightspace, do offer a competencies tool for mastery-based progression (D2L Knowledge, 2025). However, CBE practitioners may have to meet with their LMS providers to explore the full scope of functionality.

Despite evident challenges, interviewees in Ontario were passionate about the opportunities that CBE can offer learners — such as flexible learning and labour market preparation — with most describing their plans to expand CBE programs. With growing momentum, CBE can offer an alternative learning pathway conducive for upskilling and reskilling as Ontarians navigate labour market volatility (RBC Economics, 2025). CBE programs may be appealing to laid-off workers who need to pursue short, career-focused programs to re-enter the workforce and pay their bills (Handler & Frenette,

2022), and it complements existing government priorities related to workforce development initiatives.[30]

Advice from CBE Practitioners and Experts

Interviewees across all jurisdictions provided reflections on lessons learned with CBE program creation, delivery and consultation. Their key messages included discernment, collaboration and awareness building.

Not all courses or programs should be competency based

Most interviewees explained that CBE should be targeted, rather than widespread. Some courses or programs may not be suited to a CBE model and are best delivered using other models, including a more traditional approach. They also expressed that CBE should be intentional: It should be pursued for the benefit of student learning and should make sense to the jurisdiction of the postsecondary institution.[31] Once an area of study has been identified as potentially benefiting from CBE, interviewees suggested starting with one course or program at a time. They cautioned against starting with a broad-scale transformation of most or all programs to a CBE model. An interviewee explained how an experimental pilot can spark interest across the institution:

> Do one model and do it well. Try something small, then you can have a success story. Students will talk and say how well it worked for them. Then other instructors and faculty will hear that student response and will hopefully become interested in adopting CBE themselves.

Trying one model may include implementing some elements of CBE — rather than the whole model — to enhance students' learning experiences. Course and program

[30] There are provincial and federal programs, services and funding streams for adults and employers that support job-seeking, training, upskilling and reskilling. Examples of provincial initiatives include Better Jobs Ontario (Ministry of Labour, Immigration, Training and Skills Development [MLITSD], 2026), Ontario Bridge Training Program (MLITSD, 2025b) and the Skills Development Fund Training Stream (Employment Ontario, 2025). Examples of federal initiatives include the Canada Retraining and Opportunities Initiative (Employment and Social Development Canada [ESDC], 2025a), the Lifelong Learning Plan (Canada Revenue Agency, 2025) and the Reskilling Package to Train Workers (ESDC, 2025b).

[31] For example, when discussing CBE curriculum design, Bushway and colleagues (2018) recommend CBE providers start with a needs analysis. This process requires an exploration of how the proposed CBE program solves a problem for employers or the community, which involves consultation.

developers can use CBE features tailored to their own unique contexts (see also AIR, 2021).

Relationship building and training can ease the transition to CBE

CBE implementation at any scale requires significant changes to nearly all aspects of the traditional education model (Colleges & Institutes Canada, 2021; Curry & Docherty, 2017). Some interviewees promoted change management, which they described as a collaborative process of navigating system change among stakeholders (see also Colleges & Institutes Canada, 2021; Curry & Docherty, 2017; Manske, 2025; Nodine & Johnstone, 2015). This collaborative navigation takes different forms. For example, some interviewees shared that their institutions offer training workshops to help faculty adjust to CBE. Others explained how they have created communities of practice, where faculty and learners can come together to share their experiences with CBE. Communities of practice can provide a forum to work through challenges and showcase innovative teaching and learning practices (University of Colorado Boulder, n.d.).

CBE practitioners should tailor their explanation of the purpose and value of CBE to various audiences

Interviewees emphasized the need to communicate the goals and benefits of CBE across audiences that may be unfamiliar with it. This knowledge building is important for buy-in across groups, including learners, faculty, staff, employers and government. For example, an interviewee explained how their dialogue with government was framed around how their institution's CBE programs aligned with government priority areas. Creating audience-centred messaging helps each group imagine how CBE might benefit them (Kadlec et al., 2018).

Conclusion

CBE is a transformational approach to delivering PSE. As a learner-centred model, CBE's features can help meet the growing need for flexibility, particularly among non-traditional learners. However, there are challenges associated with this model. We found that Ontario CBE is constrained by time-based policy frameworks for credentials and student financial aid, as well as some faculty workload frameworks. Despite these constraints, some Ontario institutions are pursuing CBE through traditional and CE

programs. CBE practitioners in the US have applied promising strategies that could be considered in Ontario, such as subscription models and conversions that demonstrate equivalencies between CBE and traditional programs. In addition, our research identified ongoing collaboration, dialogue and training as tools to help groups learn about and consider CBE's feasibility and potential benefits.

Our research revealed CBE trends across the province, such as adoption at the course, program and institutional levels, various delivery methods and operation within traditional and CE spaces. However, characteristics such as learners' academic and labour market outcomes, employer, faculty and learner perceptions of CBE and enrollment trends are generally unknown. High-quality enrollment and outcomes data for CBE in Ontario would add to the evidence base for best-use cases of CBE for learners, courses, programs, institutions and employers. With growing evidence, stakeholders could then review the policy frameworks that define credential requirements and financial-aid provision.

CBE is an emerging teaching and learning approach in Ontario PSE, and it is one of many options that offer flexibility and help improve access. Ontario learners benefit from a variety of educational approaches, including traditional and CBE models. Access to different types of programs helps ensure that Ontarians can prepare to enter the workforce or advance their careers. Innovative models like CBE can help align learner competency development with labour market needs to ensure that Ontario has the skilled professionals it needs for a thriving economy.

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Appendix

Challenges and Opportunities for Competency-based Education in Ontario

Appendix A

Table 1

Differentiating Prior Learning Assessment and Recognition and Competency-based Education

Defining PLAR	• Prior Learning Assessment and Recognition (PLAR) is a process of earning academic credit based on demonstration of prior learning (MCURES, 2023b).[32] This kind of learning can be formal, informal, or experiential, and is usually done through study, work and other life experiences not recognized through the credit transfer process (Canadian Association for Prior Learning Assessment [CAPLA], n.d.; MCURES, 2023b).[33] PLAR is designed to evaluate and validate the experiences — both prior and current — of non-traditional students, who often come to PSE with learning from work, non-college, corporate or military training or self-study (Tate & Klein-Collins, 2015). • Successful applicants can receive credit towards a credential, advanced standing or course exemption, for example,[34] reducing the amount of time spent in class and the cost of education (CAPLA, n.d.; Tate & Klein-Collins, 2015). • PLAR helps learners reflect on, identify, articulate and demonstrate their past learning (MCURES, 2023b), usually through a challenge process[35] and/or portfolio assessment. [36]

[32] PLAR is one of many terms used to describe the process of recognizing prior learning. Other similar, commonly used terms include recognition of prior learning (RPL) and prior learning assessment (PLA).
[33] Workplace-based tasks (e.g., computer skills, bookkeeping) are examples of informal learning considered for PLAR.
[34] Other purposes include self-knowledge, for employment, licensure, career planning and recruitment (CAPLA, n.d.).
[35] Various written and non-written evaluation methods are used to directly test knowledge and award credit without requiring the applicant to enroll in a course. Not all courses can be challenged, so applicants must consult with the institution from which they want recognition to determine eligibility (CAPLA, n.d.).
[36] The applicant provides a collection of materials that documents their learning achievements and connects them to personal, educational or occupational goals (MCURES, 2023b). Compiling a chronological record of significant learning experiences, a life history paper, a resume and records of past learning achievements can help an applicant demonstrate their prior learning. These achievements can then be compared to the learning outcomes of academic courses or programs.

Distinguishing PLAR and CBE	• Both PLAR and CBE assessments are tools for granting credit recognition to learners (Bow Valley College, n.d.). • PLAR is a process outside of course delivery, while CBE is instructional delivery (Bow Valley College, n.d.). • CBE learners demonstrate their knowledge, skills and behaviours (competencies) through performance-based assessments.

Appendix B

Table 2

Competency-based Medical Education

Defining CBME	• Competency-based medical education (CBME) is an outcomes-based approach that involves identifying the abilities required of physicians and designing curricula to support the achievement and assessment of these predefined competencies (University of Ottawa, n.d.). • Key features include: ○ **Time variability**, in which progression is based on attainment of competence, not seat time (Frank et al., 2010); ○ **Continuous assessment**, rather than traditional evaluation schedules (e.g., midterms or final exams) (Frank et al., 2010); and ○ **Entrustable Professional Activities (EPAs)**, which are concrete, observable tasks that physicians are expected and trusted to perform, such as obtaining a patient's medical history and performing a physical (ten Cate, 2005).[37] Each EPA requires corresponding competencies. For example, when inquiring about medical history, a physician establishes rapport with the patient and asks questions relevant to addressing their concerns (Association of Faculties of Medicine of Canada,

[37] The Association of Faculties of Medicine of Canada (AFMC) has identified 12 EPAs that represent core clinical activities a student must be able to perform under indirect supervision. Examples include: obtaining a history and performing a physical examination adapted to the patient's clinical situation; communicating in difficult situations; and performing general procedures of a physician (Association of Faculties of Medicine of Canada, 2016).

	2016). CBME curricula are designed to provide students with the competencies required to perform EPAs (ten Cate & Scheele, 2007).
Key Developments in Ontario CBME	• In 1996, the Royal College of Physicians and Surgeons of Canada (Royal College) introduced **CanMEDS**, a competency framework that identifies and describes the abilities required of physicians (Frank et al., 2015). It is based on seven physician roles: professional, communicator, collaborator, leader, health advocate, medical expert and scholar. Each role includes specific competencies required to deliver high-quality care. CanMEDS is the foundation for all Royal College accreditation standards for specialty medical education in Canada. • In 2017, the Royal College began implementing the **Competence by Design (CBD)** model for medical residency training. CBD is a hybrid CBME model; it has a set duration for residency requirements but focuses on competency-based outcomes within that time (Royal College, n.d.-a). CBD uses EPAs as a framework for conducting workplace-based assessments and ensuring residents attain the competencies required to prepare them for practice (Royal College, 2020). • By 2024, most medical disciplines in Ontario were using the CBD model for residency training (Royal College, n.d.-b). The Royal College anticipates that all remaining programs will begin using this model by 2026.
Relevant Literature	• See literature related to improvements in skill, confidence and independence among CBME students or residents: Balmer et al. (2025), Chow et al. (2019), Duggan et al. (2022), Huffman et al. (2022), Kinnear et

	al. (2023), McCullough et al. (2018), Moreci et al. (2025), Osborn et al. (2021).

Appendix C

Table 3

Ontario Qualification Framework's Seat-time Requirements Per Credential Type

Credential Type	Typical Duration
Certificate I	At least 40 instructional hours.
Certificate II	240-500 instructional hours.
Certificate of Apprenticeship	Up to five years depending on the trade or occupation.
Certificate III	Two semesters or 600–700 equivalent instructional hours.
Diploma I	1,000 or more instructional hours.
Diploma II	Four semesters or 1,200–1,400 equivalent instructional hours.
Advanced Diploma	Six semesters or 1,800–2,100 equivalent instructional hours.
Post-diploma Certificate	Two semesters or 600–700 equivalent instructional hours.
Baccalaureate/Bachelor's Degree	Six, seven or eight semesters (normally 90–120 credits, or the equivalent).
Baccalaureate/Bachelor's Degree: Honours	Eight semesters or more (normally 120 credits or the equivalent). May be supplemented by required professional experience (for example, supervised practica, internships, work terms, co-ops)
Master's Degree	Three, four or five semesters (normally 45–60 credits or the equivalent).
Doctoral Degree	Three, four or five years in length, depending on the field and the speed at which individuals progress through requirements.

Source: MCURES, 2024a

Appendix D

Table 4

Competency-based Education in the US

CBE Program Overview	• There are longstanding competency-based programs in the US postsecondary system tracing back to the 1960s (Nodine, 2016; Postsecondary National Policy Institute, 2023). [38]
	• US CBE programs are most prevalent:
	  ○ at the undergraduate level;[39]
	  ○ at the course or program level — typically using only some features of CBE that work for specific contexts and goals (AIR, 2021);[40]
	  ○ through hybrid delivery (a blend of online and in-person instruction) (AIR, 2021);[41] and
	  ○ in program areas such as nursing, healthcare, business, education and IT (AIR, 2021).
	• Between 2018 and 2020, 128 US postsecondary institutions reported offering at least one CBE program, for a total of 1,057 CBE programs (AIR, 2021). In 2020, 82% of reporting institutions offering CBE expected the number of US CBE programs to increase in the next five years (AIR, 2021).[42]

[38] In 1968, the US Office of Education funded competency-based training programs for elementary school teachers (Nodine, 2016).
[39] According to the 2020 National Survey of Postsecondary Competency-Based Education (NSPCBE), 75% of respondents indicated that their CBE programming was at the undergraduate level (AIR, 2021).
[40] However, there are some institutions and programs that use most or all CBE features.
[41] According to the 2020 NSPCBE, hybrid delivery was the most prevalent (49%), followed by online only (38%) and in-person only (13%) (AIR, 2021).
[42] Future editions of the NSPCBE could indicate more current national trends in CBE adoption.

CBE Program Models	• **Course-based[43] models**:
	  ○ Are more common overall;[44]
	  ○ Students earn credit by demonstrating competencies within a course structure that uses clock or credit hours (US Department of Education, 2025).[45]
	• **Direct assessment models**:
	  ○ Are less common overall;[46]
	  ○ Require federal approval;[47]
	  ○ Do not operate within a course structure and have no reference to seat time. Student progress is solely measured by directly assessing students to see whether or not they can demonstrate mastery of a particular skill, knowledge set or content area (US Department of Education, 2025);
	  ○ A US-based interviewee provided an example of a direct assessment program with no semesters or courses. In this case, there were 120 competencies with 120 corresponding assessments. Once all assessments were mastered, the credential was completed.

CBE Pricing Models	There are three main pricing models for US CBE programs: 1. **Per unit** (the most common model),[48] where learners pay per competency or per credit (AIR, 2021).

[43] Also referred to as credit hour models (US Department of Education, 2025).
[44] According to the 2020 NSPCBE, 73% of responding institutions indicated that their CBE program used a course-based model (AIR, 2021).
[45] Title IV financial-aid requirements are based in credit hours. Institutions providing CBE programs must establish credit hours that are "based on an amount of expected educational activity that reasonably approximates not less than one hour of classroom instruction and two hours of out of class work each week" (US Department of Education, 2025).
[46] According to the 2020 NSPCBE, 21% of responding institutions reported that their institution had direct assessment approval (AIR, 2021).
[47] Institutions applying for direct assessment must "establish a methodology to reasonably equate each module in a direct assessment program to either credit hours or clock hours" (US Department of Education, 2025).
[48] According to the 2020 NSPCBE, 49% of responding institutions reported that they use per unit pricing (AIR, 2021).

2. **Subscription pricing** (the second most common model),[49] an emerging model where learners pay a set fee per amount of time, regardless of the number of competencies or credits they accumulate during that time (AIR, 2021).[50] The price of the program varies by student depending on their completion time, which offers the possibility to lower costs for learners who complete quickly (AIR, 2021).[51]

3. **Per credential** (the least common model),[52] where learners pay per degree or credential (AIR, 2021). This is most commonly offered in CBE graduate programs, undergraduate certificates or non-credit credentials (AIR, 2021).

[49] According to the 2020 NSPCBE, 22% of responding institutions reported that they use subscription pricing (AIR, 2021).
[50] A couple of US-based interviewees compared the subscription model to a Netflix subscription: Whether you watch a lot or a little, you pay the same amount every month (note that the set amount of time for CBE payments may not be monthly).
[51] However, AIR (2021) asked institutions to compare the costs of their CBE and traditional programs: Fifty-two percent of institutions reported the pricing as "about the same," 31% did not know, 10% indicated that CBE programs were less expensive and 8% said CBE programs were more expensive.
[52] According to the 2020 NSPCBE, 20% of responding institutions reported that they use per credential pricing (AIR, 2021). Note that 9% selected "other."