

Tracking Online Education in Canadian Universities and Colleges:

National Survey of Online and Digital Learning 2019 National Report

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Most importantly, we thank our responding institutions. We recognize that the completion of this survey is voluntary. As in 2017 and 2018, this year's survey required a collaborative effort from many different people within the institutions to provide all the information requested. We are truly indebted to everyone who participated in the survey. One of the main aims of conducting this research is to ensure our work adds value to our responding institutions.

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EXECUTIVE SUMMARY

The results presented in this report were informed by the 2019 survey and data collection from Canada's publicly funded post-secondary institutions.

The overall institutional response rate was 70% for all types of institutions. Since there was a higher response from the larger institutions, responding institutions represent 90% of the student population base and 95% of all online enrolments.

The 2019 questions are similar to those asked in previous surveys. Many responding institutions have shared that the questions asked in the National Survey have contributed to their improved tracking of participation in online and digital learning. The 2019 survey results for online offerings are representative of our entire roster of institutions and provide the most accurate count of institutions with online offerings to-date; however, many institutions still struggle to provide data specific to their online enrolment activities.

Online learning at post-secondary institutions across Canada is pervasive and perceived as highly important. New technologies, delivery methods, and types of credentialing are emerging and many institutions are investing in expanding and evolving their practices in response. Although most institutions reported investment in the development of online offerings, the results illustrate that a minority of institutions are at the stage of implementing their plans for online education. Faculty training and support for teaching online continues to be an identified barrier to the expansion of online, although the need for pedagogical training for teaching online is recognized.

Over the three years that the survey has been conducted institutions have reported that they have refined their internal tracking systems in response to the questions asked in the survey. These improvements in tracking at the institutional level have revealed a need to examine the collective tracking of enrolments and other data at the provincial/territorial and national level. The results also showed a need for better consensus surrounding definitions related to online learning, particularly as technologies and offerings evolve over time. In future years of the survey, we will be working with institutions to develop strategies for consistent tracking of enrolments and trends in online offerings among institutions over time.





Key findings:

- Online learning continues to steadily increase.
- Digital learning is in an ongoing state of evolution; therefore, definitions will also need to evolve to reflect changing practice. There remains a need to improve upon foundational definitions for online learning (especially blended learning).
- Numerous institutions are exploring the use of alternative credentials; however, there appears to be ambiguity and a lack of consensus on how to define various alternative credential offerings.
- There is a growing understanding of the importance of tracking online enrolment data among Canadian post-secondary institutions; however, many lack the internal tracking systems that can provide reliable data.
- The use of open educational resources (OER) continues to be emergent and experimental. Many institutions are exploring a formal strategy for OER, suggesting the need to continually track this area in the coming years.
- The results continue to illustrate a paradox between the stated perception that online education is important for institutions compared to the implementation status of strategies for online learning.





INTRODUCTION

The 2019 Canadian National Online and Digital Education Survey is operated by the Canadian Digital Learning Research Association (CDLRA)/Association Canadienne de Recherche sur la Formation en Ligne (ACRFL), a federally incorporated not-for-profit organization. CDLRA/ACRFL was established to engage in research and publish information regarding online and digital learning in the Canadian education system. Dr. Tricia Donovan serves as the Executive Director, and Dr. Tony Bates and Dr. Denis Mayer serve as Directors of the Board.

This report represents the third annual study on tracking online and digital learning among publicly-funded, post-secondary institutions in Canada. The survey universe consists of all Canadian publicly-funded, post-secondary institutions. In 2019, a total of 234 institutions comprised the roster and included CEGEPs, colleges (including polytechnic institutions), private but publicly subsidized colleges in Québec, and universities. The 2019 survey had a response rate of 70% (164 of 234 institutions) with the responding institutions representing 90% of all students taking for-credit courses and 95% of all online enrolments in Canada.

Prior to the launch of the 2019 survey, institutions received a preliminary survey, which guided the development of new topics for inclusion in the survey. Several potential questions regarding enrolments were dropped as a result of this preliminary survey, while new questions on alternative credentials and online course registrations by level and location of study were added to the survey for 2019.

The criteria for inclusion in this survey is that the institution is a publicly-funded post-secondary institution in a province or territory of Canada. This includes universities, colleges, polytechnics, CEGEPs and private subsidized colleges in Québec.

The post-secondary system in Québec differs somewhat from the post-secondary systems in other provinces and territories. Unique to Québec, there are two college designations: CEGEPs and private subsidized colleges. When the term 'college' is used in this report, it does not include private subsidized colleges or CEGEPs in Québec: these types of institutions were analyzed separately. CEGEP stands for *Collège d'enseignement général et professionnel* and these are public institutions. Private subsidized colleges are private institutions, which are subsidized through the Québec government. Both CEGEPs and private subsidized colleges offer pre-university and technical programs of study, leading to a diploma of college studies (DCS).



DEFINITIONS

Consensus on the foundational definitions related to online learning is advancing, yet considerable work remains due to the dynamic nature of online education.

For the 2018 survey, CDLRA/ACRFL worked with multiple academic organizations and the responding institutions themselves to develop a set of consensus definitions (presented below) for *distance education, online or blended/hybrid*. These definitions were used in 2018 and again in 2019 as the majority of respondents reported that their internal definitions matched the consensus definitions.

The definitions that were developed are becoming accepted among institutions, reducing the ambiguity associated with differing internal definitions among institutions. Institutions have reported that the development of common definitions in 2018 has helped them to better track and report data. Comments from the 2019 survey further suggest that an ongoing effort to refine common definitions will be necessary as institutions expand their initiatives and as online learning continues to evolve.



2019 Survey Definitions

Distance education courses are those where no classes are held on campus — all instruction is conducted at a distance.

Online courses are a form of distance education where the primary delivery mechanism is via the Internet. These could be delivered synchronously or asynchronously. All instruction is conducted at a distance.

Blended/hybrid courses are designed to combine both online and face-to-face teaching in any combination. For the purposes of this questionnaire we are interested in those courses where some, but not all, of the face-to-face learning has been replaced by online study.

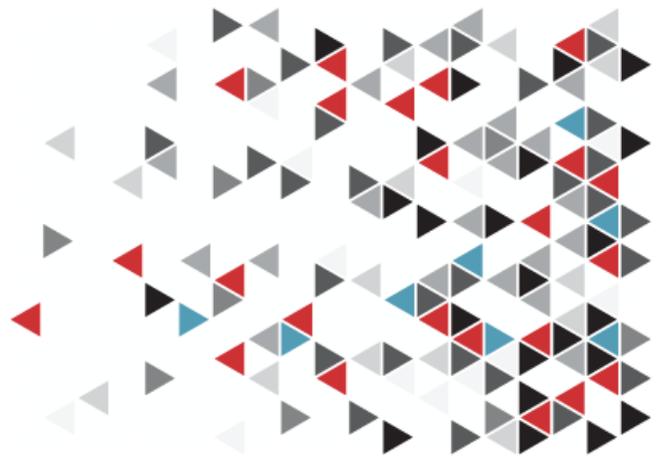


The comments below highlight the need for further work on definitions in future years of the survey:

We have identified a need for developing an institutional definition of a blended course offering; however, we are not at the point in our consultations to articulate this officially. (Large university)

We use an institutional definition that is different from yours. We require that a substantive portion of the course is delivered online, but they could still retain the full class time in the schedule. This is often used in courses where content is delivered online, with the face-to-face experience being fundamentally altered to focus on cases or simulation. (Large university)

We have not effectively defined blended or hybrid learning at our institution, so the teaching done in this mode is inconsistent in form, and spread across individual instructors with interest in it. We do not have a way to code or track this form of learning. (Large university)





ONLINE LEARNING

Online learning is the primary delivery modality of distance education and is pervasive in universities and colleges across Canada.

The vast majority of Canadian post-secondary institutions offer online courses for credit, with almost all universities and colleges across Canada delivering courses online. Online offerings have remained consistent and, in 2019, there were no institutions that moved away from delivering courses online.

Distance education courses and programs in Canada are primarily offered online. In 2018, when asked about the main delivery technology, all but two of the responding institutions with distance education offerings, reported that they use the Internet as their primary delivery format. In 2019, the proportion of institutions reporting that they offer distance courses for credit was consistent with the results from previous years of the survey and was reflective of the overall results for online learning.

The distance delivery methods are principally asynchronous course situations enabled through D2L although there is increasing use of synchronous learning (web-based; WebEx or Zoom) sessions within asynchronous courses. (Large university)

Online is the primary distance education delivery mode, but we also use video-conferencing, live-streaming and independent studies modes of delivery. (Large university)

Our College has four methods of distance education. 1) OntarioLearn - consortium with all 24 Ontario Colleges to share access to online programming. 2) online, in-house on LMS (D2L) - currently, we have one program consisting of 8 courses using this model. 3) independent study - manual is mailed to the student and communication is conducted with the instructor via email. 4) Contact North - synchronous format - virtual classroom - offering one post-secondary program plus additional credit course. (Medium college)

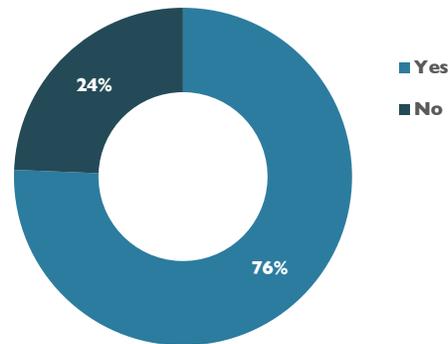
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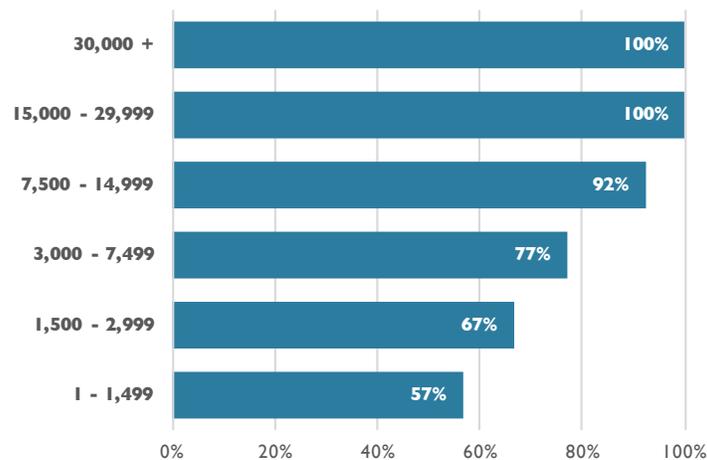
Using data from the 2019 survey, the 2018 survey, and independent confirmation, we can provide a measure of online offerings for our entire roster of 234 publicly-funded institutions. Of the 234 institutions included in our roster, 177 institutions (76%) offer some form of online learning and 57 institutions (24%) do not.

FOR-CREDIT ONLINE COURSE OFFERINGS



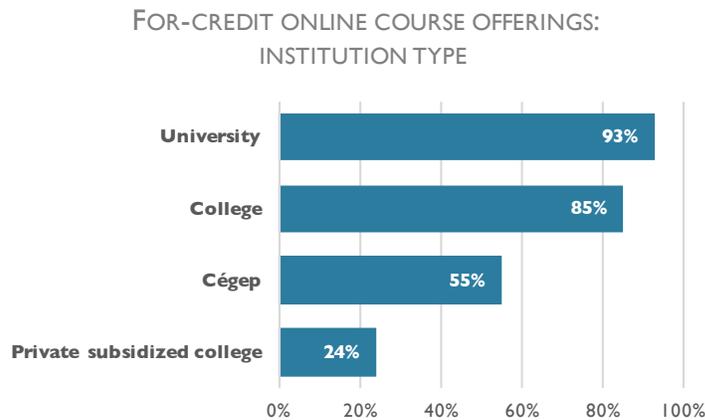
There continues to be a strong relationship between online offerings and institutional size: in 2019, all but one institution with more than 10,000 enrolments offered online courses for credit. However, it is important to note that even among the smallest-sized institutions, the large majority have online offerings.

FOR-CREDIT ONLINE COURSE OFFERINGS: INSTITUTION SIZE





Universities (93%) and colleges (85%) were most likely to offer online courses while CEGEPS (55%) and private subsidized colleges (24%) were least likely to have online courses.



Institutions were also asked to share details about their online program offerings:

- 79% reported that they have programs that can be taken completely online
- 69% reported that they have programs that can be taken as a mix of fully online and on-campus courses
- 5% reported that they do not offer any programs that can be taken either fully or partially online

An additional 8% of institutions reported that they offer other types of programs that can be taken online. The open-ended responses provided some examples of these other online programs including OntarioLearn programs (which are shared online college courses), online programs that are partially remote or that serve multiple campuses using video conferencing, and hyflex courses (learners choose whether they want to attend class online or in-person).





Some institutions shared additional information in the open-ended comments, offering a glimpse of the variety of approaches and strategies being employed in online and digital learning.

Our university offers fully online courses and programs including for-credit certificate programs. Courses incorporate the disciplinary and research strengths of the faculty with appropriate and effective pedagogical and technical approaches to support the achievement of outcomes. (Large university)

Our courses are primarily delivered online in an asynchronous format, using a variety of media. A small number of courses are synchronous delivery using a web. (Large university)

We have two delivery methods: distance learning and virtual classroom. Distance learning is to provide training in two groups simultaneously: one with the teacher on the spot and the other in another remote group. In the case of the virtual classroom, a teacher teaches simultaneously individually distributed students over a wide area. (CEGEP)

The Distance Courses (synchronous) courses that we offer all have a live classroom component on campus and students who join from a distance. (Large university)

Although we offer distance courses where no session is given on campus, we also consider the courses offered in formal multi-site as distance courses. The multi-site courses are usually taught by videoconference, usually about 2 remote sites which may include one or both of the institution's campus. (Large university)

We offer the following DE delivery formats. 1) Fully online-mainly asynchronous (LMS) with some synchronous components; 2) LIVE (Live Interactive Video Education)-f2f classes streamed to regional colleges and homes across the province via the Internet; and 3) blended - LMS (Moodle) and f2f/Zoom synchronous. (Large university)

”



ONLINE ENROLMENT DATA

The data revealed a need to investigate the collective tracking of enrolments at the provincial/territorial and national level.

Online course registrations grew by around 10% between 2016-17 to 2017-18. This result, based on online course registration data among institutions who reported in both survey years, is broad-based with gains seen in all regions of the country, among all sizes of institutions, and among all types of institutions. However, the largest gains by region (14%) were in Ontario, which probably reflects the impact of earlier annual provincial government funding of online course development starting in 2014.

Survey respondents were asked a number of enrolment questions in both the 2018 and the 2019 survey. In a pre-survey conducted before the 2019 data collection, institutions noted that the data they were best able to reliably provide were the full-year number of course registrations. Using information for the 2018 and 2019 survey on 'total student course registrations in online courses', we were able to compute an estimate in the change in online course registrations over the 2016-17 and 2017-18 period.

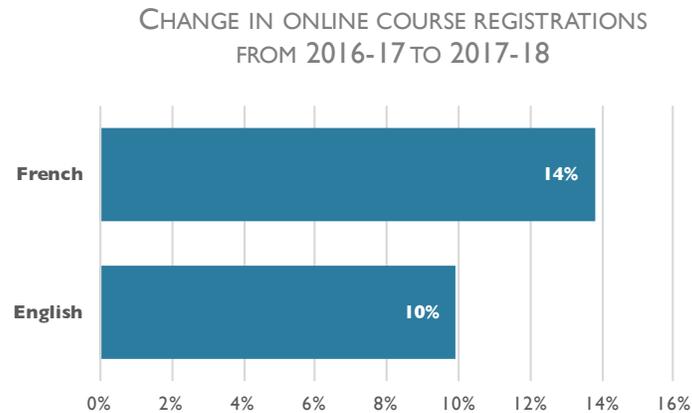
There are a number of caveats to keep in mind when examining these results. The first is that collecting consistent student enrolment and registration data is far from easy, depending on institutional decisions on coverage by credit status, full- or part-time, which divisions of the institutions to include, etc. The assumption being made here is whatever processes the institution has chosen to apply, it remained consistent between the two years.

A further consideration is that while the estimate is based on over a hundred reporting institutions, these do not reflect the totality of all Canadian higher education. We were able to calculate growth rates for 101 institutions, who provided data for both 2018 and 2019. This compares to the 125 responding institutions in 2019 with online offerings, and the 177 institutions known to offer online courses. The available data are representative of higher education institutes in Canada by type and size.





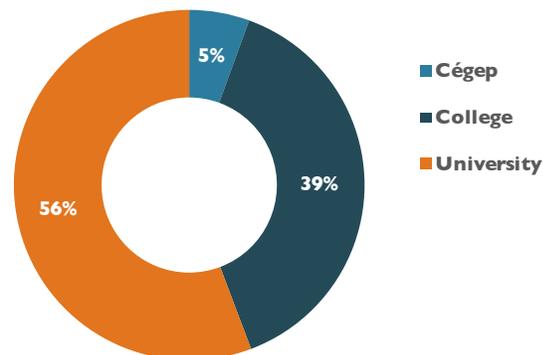
Francophone institutions had a greater growth rate for online course registrations (14%) than Anglophone institutions (10%) over the 2016-17 to 2017-18 period. The greater rate of growth for the francophone institutions comes on a much smaller base (they represent about 15% of all online course registrations), so this does not translate into a larger overall increase.



CEGEPs had, by far, the largest percentage increase in online course registrations over the study period, nearly doubling; however, this has to be examined in context. Most CEGEPs have relied on Cégep@distance for their online courses in the past and are now looking to grow their own offerings.

The nearly doubling of online course registrations represents only 5% of the growth in these course registrations.

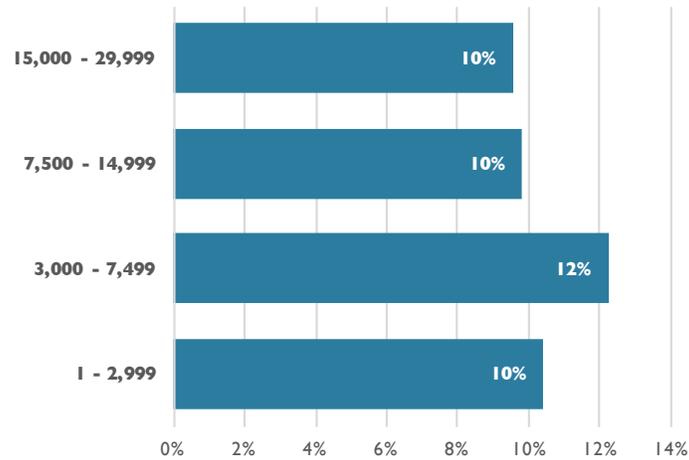
SOURCE OF INCREASE IN ONLINE COURSE
REGISTRATIONS 2016-17 TO 2017-18





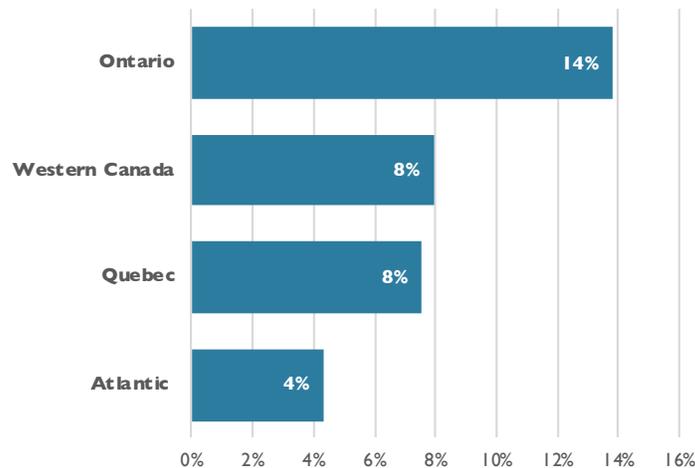
Growth was very similar across all sizes of institutions. Both the largest (over 7,500 total enrolments) and the smallest (under 3,000 total enrolments) grew at around 10%. Institutions between 3,000 and 7,499 enrolments did grow slightly faster, but this difference was small (12% versus 10%)

CHANGE IN ONLINE COURSE REGISTRATIONS
FROM 2016-17 TO 2017-18



Online course registration grew in every region of the country. The greatest growth was seen in Ontario (14%), with Western Canada and Québec showing an 8% growth rate. The Atlantic provinces still grew but at a lower (4%) rate.

CHANGE IN ONLINE COURSE REGISTRATIONS
FROM 2016-17 TO 2017-18





ONLINE COURSE REGISTRATIONS BY LOCATION

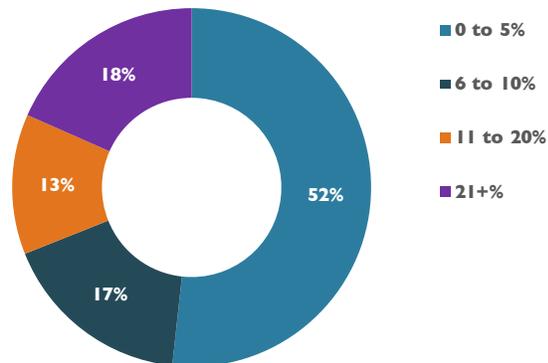
Institutions that track course registrations by location reported that the majority of online students reside within their province.

A large majority (over 85%) of institutions reported that online education is strategically important for attracting students from outside their traditional service area. The 'location is no longer a barrier' nature of online education means that institutions can potentially recruit students into their online courses and programs without the need for them to be in close geographical proximity to the campus.

Institutions were asked to provide the proportion of their online students that resided within the same province as the institution, as well as the proportion of online students from outside of the province. Over one-third of institutions with online courses do not track this information and were unable to provide any response. A second group did not have exact data but were able to provide estimates, leaving only 39% of institutions with online offerings reporting that they tracked this data and were able to provide actual numbers.

Among those institutions that track, or could estimate, the location of their online students, the majority (52%) reported that only 5% or less of their online students are coming from outside of the province. A further 17% stated that between 6 and 10% of their online students are from outside the province and 13% reported that between 10 and 20% of their online students are residing outside of the province. Less than one-in-five institutions (18%) have 20% or more of their online students that live outside of the province.

PROPORTION OF ONLINE STUDENTS FROM OUTSIDE OF PROVINCE



The impact of these remote online students on the total institutional enrolment is small at best. If, for example, an institution is attracting 20% of their online students from outside of the province, and online offerings comprise 20% of all of their offerings, these students represent only 4% of their total student body. Ultimately, the majority of online students are from the same province in which the institution is located.



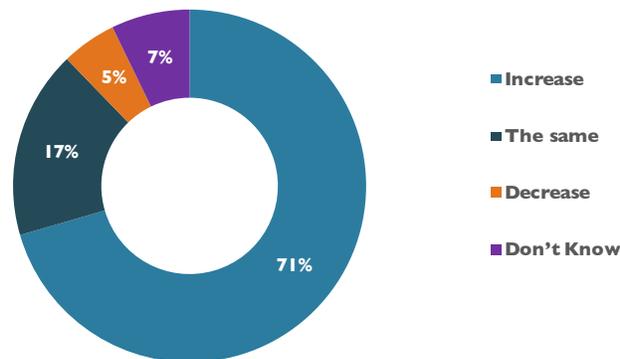
EXPECTATIONS FOR ONLINE ENROLMENT

The majority of institutions expect online enrolments to increase in the coming year.

Institutions reported that they expect their online enrolments and total enrolments to increase in the next year, with a slightly larger increase expected in online enrolments.

Institutions with online offerings were asked to compare their current online enrolment level to that of the previous year and to predict what change, if any, they would expect in those levels for the next year.

EXPECTED CHANGE IN ONLINE ENROLMENTS FOR NEXT YEAR



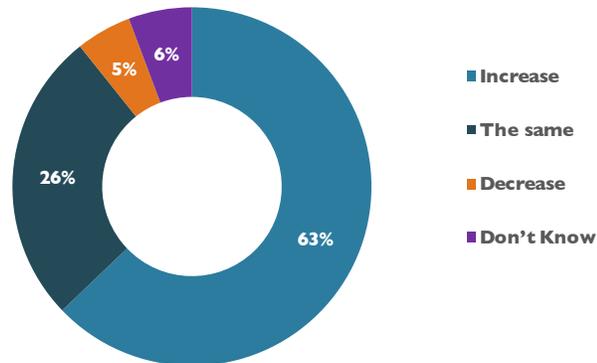
The results indicate that the majority of institutions (71%) expected online enrolments to increase and only 7 institutions (5% of the 139 institutions that responded to this question) expected a decrease. A further 17% of institutions expected online enrolments to stay the same. These results are consistent with the results from 2018, indicating a continuing expectation of growth among online enrolments.





Institutions were also asked to predict change in total for-credit enrolments (the sum of their online and in-person courses) for the next year. When considering overall for-credit enrolments, fewer institutions (63%) predicted growth in their total enrolments, compared to their online growth expectations.

EXPECTED CHANGE IN TOTAL ENROLMENTS FOR NEXT YEAR



Institutions continue to predict growth in online offerings, which is consistent with the findings from previous years. The expectation for growth in online enrolments exceeds the expectations for growth in enrolments overall.

One large university included additional detail in an open-ended comment that provides insight into what may shape expectations for online enrolment:

Non-traditional students (> 25 years, full-time workers with children with disabilities, first generation) are growing rapidly. The site must meet the training needs and learning throughout the life of its own graduates by providing training to develop skills, promote their careers, access to management positions, redirect their career or achieve the training requirements of their professional bodies. Demographic decline and the situation of almost full employment in the region ensures that institutions must be creative and flexible in their training offers and better understand the needs of their students.





ONLINE COURSE REGISTRATIONS BY LEVEL OF STUDY

The proportion of undergraduate and graduate enrolments in online university courses is similar to the proportion of undergraduate and graduate enrolments in the overall student body.

Institutions reported that tracking the level (undergraduate or graduate) of online students at a university is an aspect of online education that they regularly measure. Over 80% of all responding universities reported that they track this information and could provide counts of course registrations and unique online students by level. Several others did not have exact data but were able to provide estimates. Among the institutions tracking this data, the same issues that impact the ability to create high-quality national enrolment estimates (as described in the online enrolments section) apply here.

A particular concern in reporting enrolment numbers by level is that, while institutions appear to have a consistent approach that they apply within their institution to measure the proportion of online students by level, there remains considerable variability between institutions. Differing standards and definitions of what constitutes a 'for-credit' student, the date of data collection, and what internal definition is used for an 'online' course all impact the ability to compare numbers from one institution with those from another.

While there remain concerns about reporting specific enrolment *numbers*, one aspect that can be reliably reported is the *proportion* of students at each level within individual institutions. A total of 41 universities track enrolment data by level and were able to provide course enrolment counts for both their online and overall student body. The proportion of course registrations for this group of 41 universities that represent online courses is slightly above 10%, meaning that, on average, 9% of their course enrolments are composed of undergraduate-level online courses, and 1% of graduate-level online courses, with the remaining 90% made up of courses delivered on campus.

Among these universities, the proportion of graduate students enrolled in online courses (10.3%) is very similar to the total proportion of graduate students enrolled at the institution (10.9%).





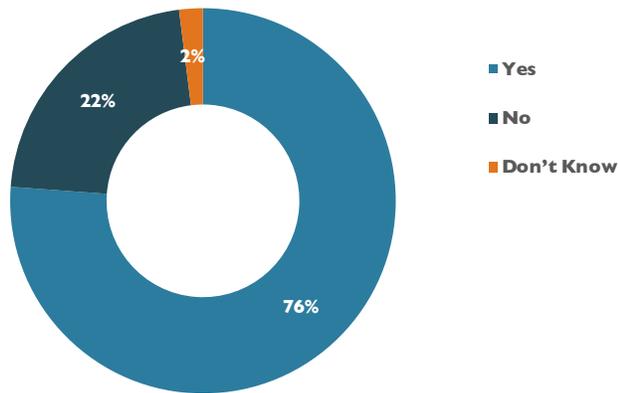
BLENDED/HYBRID COURSES

Blended/hybrid learning is widespread and expected to increase.

Blended learning is prevalent in Canada and is offered at the majority of universities and colleges. Many institutions described strategic plans or initiatives to advance blended/hybrid course offerings and approximately one-half of institutions expect blended/hybrid enrolments to increase for next year.

Of the 151 institutions that responded to the question of offering blended or hybrid courses, 76% reported that they offer courses using a blended/hybrid delivery methodology.

BLENDED OR HYBRID COURSE OFFERINGS



The open-ended responses provided by institutions detailed their initiatives to increase blended/hybrid offerings.

The university is beginning to have discussions at the upper academic level (deans and higher) to determine how blended learning can meet strategic initiatives. (Large university)

We are working with faculty to develop more online courses in general and blended/hybrid options to offer more flexibility for students. (Large university)

We are in the process of developing more blended/hybrid courses through an intentional team-based approach where specific programs have been prioritized for this work. The courses have not been implemented yet. (Large college)

As part of a strategic initiative, our college has developed over 150 hybrid and online courses. Phase 2 of this initiative will result in the development of another 60 hybrid and online courses. (Large college)

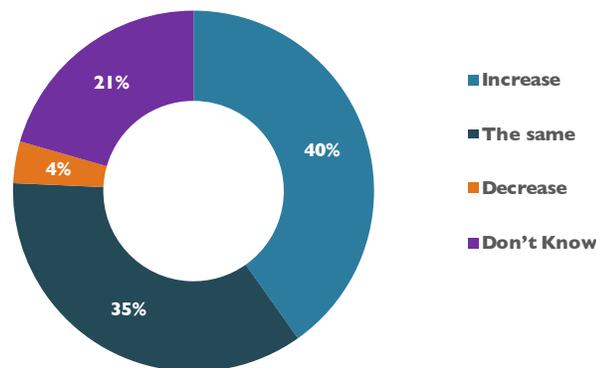


The results of the 2019 survey continue to indicate that all types of institutions are offering blended/hybrid courses. Universities and colleges were most likely to offer blended/hybrid courses and private subsidized colleges in Québec were the least likely to have this offering.

- 89% of universities reported offering blended/hybrid courses
- 78% of colleges reported offering blended/hybrid courses
- 56% of CEGEPs reported offering blended/hybrid courses
- 20% of private subsidized colleges in Québec reported offering blended/hybrid courses

Institutions with blended/hybrid courses were asked to compare their current registrations in blended/hybrid courses to that of the previous year and to identify whether any change had occurred. Three-quarters of institutions reported that they had the same number of blended/hybrid registrations (35%) or an increase in blended/hybrid registrations (40%) over the previous year.

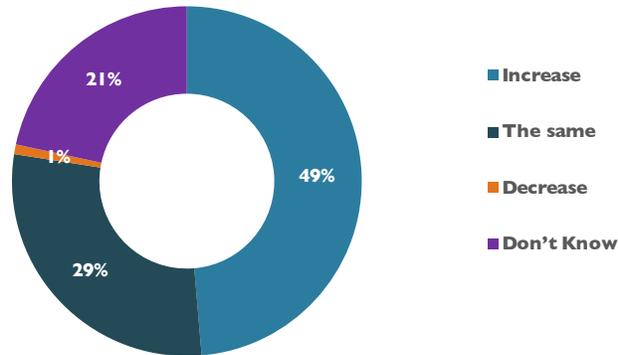
CHANGE IN BLENDED ENROLMENTS FROM LAST YEAR





Institutions were also asked to predict what change, if any, they would expect in blended/hybrid enrolments for the next year. Nearly half (49%) expected registrations in blended/hybrid courses to increase and 29% expected their numbers to stay the same.

EXPECTED CHANGE IN BLENDED ENROLMENTS FOR NEXT YEAR



Of the institutions that responded that they were not yet offering blended/hybrid courses, the majority reported that they plan to in the future. Additionally, one CEGEP shared it had offered its first hybrid/blended course in the 2018/2019 school year. Further, some institutions acknowledged that they are aware of instructors employing blended/hybrid models in their teaching, but that they had little or no data on these practices.

A medium-sized college provided insight into how they operationalized increasing blended learning at their campus:

In 2018 we established the blended learning initiative (BLI). The BLI provided instructors interested in blended learning with an opportunity to learn in a community of practice with like-minded educators. The community of practice included faculty, peers, teaching and learning staff, and a facilitator. Together the group explored design processes, approaches, and strategies aimed at using blended learning to positively impact student learning outcomes. 10 projects were funded with a grant of \$5000 intended to provide support for design, professional development, and related scholarship.

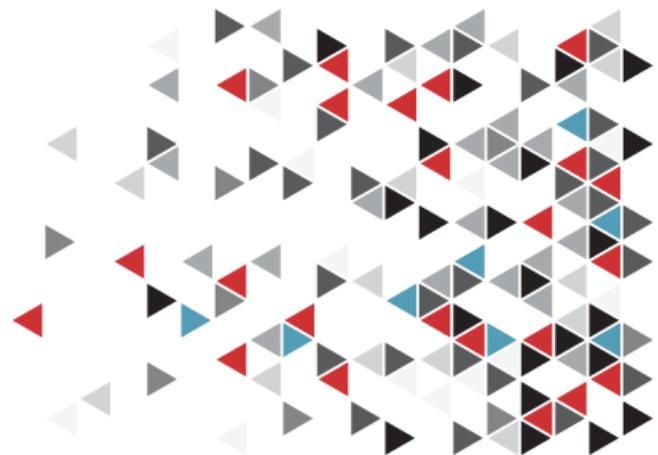
In terms of better tracking blended/hybrid offerings, one institution indicated they have created a course descriptor in their student information system to identify blended/hybrid courses to improve “communication with students and timetabling which would also enable them to support improved institutional data capture with regard to hybrid course availability”.





In terms of better tracking blended/hybrid offerings, one institution indicated they have created a course descriptor in their student information system to identify blended/hybrid courses to improve *“communication with students and timetabling which would also enable them to support improved institutional data capture with regard to hybrid course availability”*.

Overall, the majority of institutions offer blended or hybrid courses and three-quarters expect growth in these offerings over the next year. Open-ended responses showed that institutions are investing their resources into developing blended and hybrid programs. Despite this growth, there also remained a sense of ambiguity among some institutions about what constituted blended or hybrid learning. For instance, one institution commented that they offer *“face-to-face programs supported with an LMS”*. It’s also important to note that blended/hybrid learning is a dynamically emerging practice and some ambiguity is to be expected as blended/hybrid learning continues to evolve. Further refinement of the definition for blended/hybrid learning is needed so that institutions are better able to identify and track blended/hybrid offerings, especially as these offerings continue to develop and expand over time.



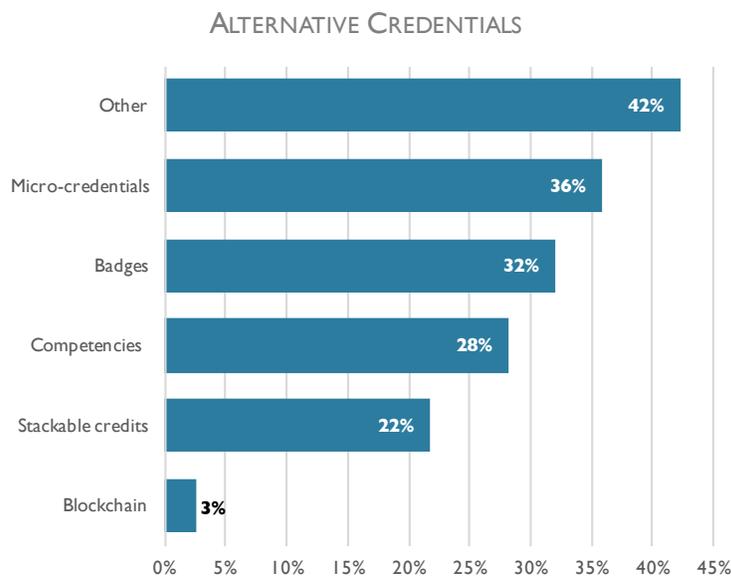


ALTERNATIVE CREDENTIALS

Institutions are experimenting with the implementation of alternative credentials. Due to the emergent nature of these offerings, there is a need to develop consensus definitions.

New to the 2019 survey were questions on alternative credentials such as micro-credentials, stackable credits, badges, blockchain, and competencies (from competency-based learning). Essentially, alternative credentials are offerings beyond traditional degrees, diplomas, and certificates. As institutions continue to develop and implement alternative credentials, operational definitions are needed to support institutions in classifying and tracking such offerings.

Of the institutions that responded to whether they offer alternative credentials, nearly one-half are experimenting with these offerings.



Institutions used their open-ended responses to describe these 'other' alternative offerings. The majority of institutions that responded to the question on alternative credentials shared that they are 'exploring' their use for professional development and to meet the needs of employers.

Additionally, there appeared to be some uncertainty as to whether certifications qualified as micro-credentials. Responses describing other types of alternative credentials also included continuing education certificates, professional certifications, and certificates for non-credit courses.



The open-ended responses also revealed that many institutions are uncertain about the definitions of the different types of alternative credentials: it appears that institutions may offer some of the alternative credentials listed in the survey but found it challenging to classify their offerings as such.

Instructors use badges as incentives within courses, but we are unclear if this meets the definition of 'alternative credential' for purposes of this survey. (Large university)

Micro-credits, but not micro-credentials. (Medium college)

MOOC certificates of completion. (Large university)

It has been discussed, but not yet fully explored. We piloted a skills inventory project in 2017-18 to define approaches to micro or stackable credentials that would enlist PLAR [prior learning assessment and recognition] as a support mechanism prior to students entering the college. (Small college)



One institution highlighted the challenge of integrating alternative credentials in traditional post-secondary institutions:

We have deep experience with competency-based applied learning that is personalized and packaged for specific workplace environments. It is a continuing challenge to wedge this kind of learning into the post-secondary paradigm of 'courses', 'programs', and 'credentials'. We typically offer it without credit in 'General Studies' where it shows up on transcripts as a completed course with a grade of 'mastered'. (Large college)





Of those institutions that are actively offering alternative credentials, many have piloted, or are conducting further research of fit and appetite for this kind of credentialing. The institutions that are exploring the use of micro-credentialing indicate they are looking at it in a variety of ways that span the spectrum of professional development, non-credit, nano-programs, co-curricular assessment, certificates of participation/completion through to recognition of graduate attributes. A few institutions noted they were considering micro-credentials and badging as part of their curricula review.

Presently, our institution's policy on certificates and diplomas is being reviewed in light of internal and external discussion regarding micro learning credentials. It is anticipated that credits for micro learning within, or in relation to, degree study will be easier to situate than non-academic micro learning. The Faculty of Engineering, the Faculty of Social Science, and the Centre for Continuing Education are leaders in this work. (Large university)

There is some interest at our university in using the blockchain for alternative credentialing and we believe this will be accelerated once an international open standard for higher education credentialing on the blockchain becomes available. Yes, we are discussing micro-credentials, both in terms of credit and noncredit programming. Also certificates that are non-credit but perhaps still Senate-approved to signal quality/integrity. (Large university)

Our college has made the development of badges and micro-credentials an institutional priority. In addition to local efforts, we are collaborating with other members of Polytechnics Canada to develop and issue shared common micro-credentials. We are not currently looking at blockchain. (Large college)

We recently piloted a central badging project, but found there wasn't the institutional appetite to adopt badging as a centrally-supported tool. We know of a few departments that are using badges on their own, but badging is still in the very early adoption phase here and is driven by instructor/departmental interest and ability to support the process. (Large university)

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Several comments referenced ‘preparing students for the workforce/workplace’ as the motivation to develop and offer alternative credentials:

The university is working to advance opportunities to extend its reach to a diverse audience through alternative credentials. The university is also committed to ensuring that students have the skills, competencies and credentials needed in the workplace. (Large university)

Monitoring the educational landscape as well as key industries directions with respect to alternative credentials - our provincial surveys/feedback are indicating SME and some larger enterprises are becoming less concerned with terminal credentialing in a field/discipline with more jobs geared towards skills/competency rather than a traditional credential (with higher levels of interest in micro-credentialing). (Medium college)

Continuing Education, given its mandate to enable workplace learning, is very interested in competency-based learning, badges, stackable credentials, and micro-credentials. (Large university)

Digital badges are widely used in services to business (not credited.) (CEGEP)



Overall, institutions are showing interest in alternative credentials; however, the feedback on alternative credentials suggests that such offerings are emergent and loosely defined. The survey team identified five types of alternative credentials that are regularly mentioned in current literature as being explored, yet the most common response from institutions was that they offer ‘other’ alternative credentials. The experimental nature of credential development at this stage may also be a contributing factor to the uncertainty around how to define such offerings. We will integrate further work on defining and categorizing alternative credentials in the 2020 survey to improve how these offerings are measured and tracked nationwide.

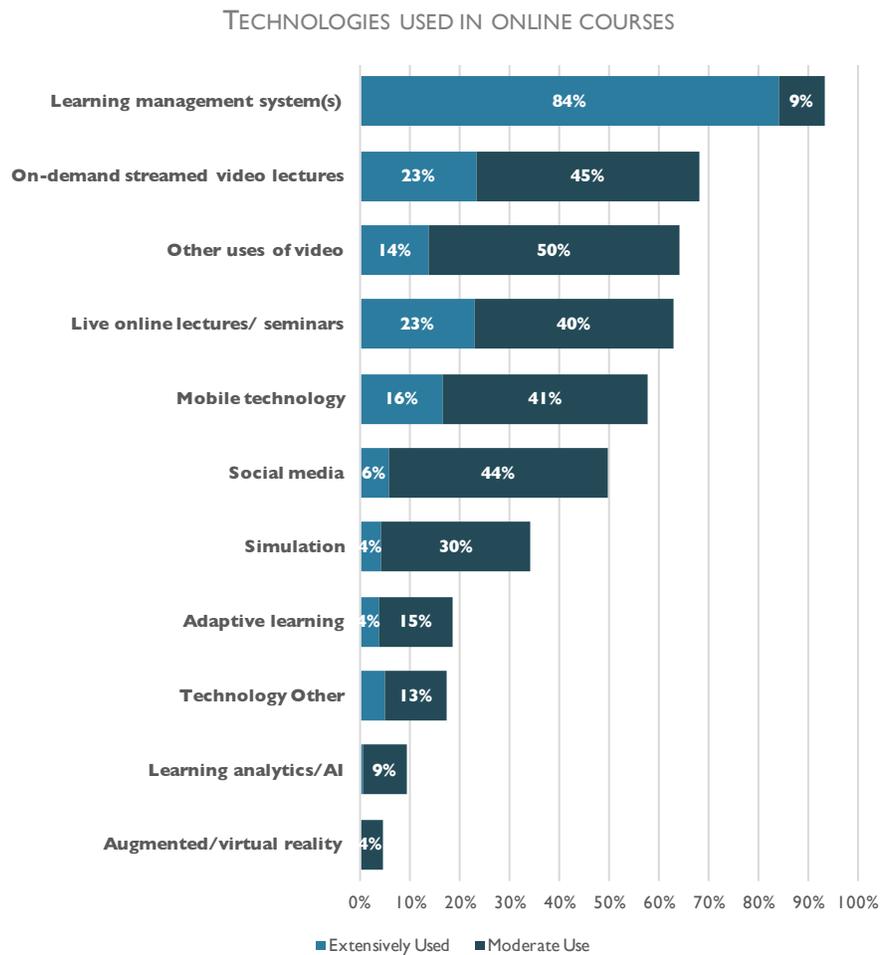




TECHNOLOGIES

Beyond LMS technology, which is status quo, video technologies have become an important tool for institutions.

As in previous years, Learning Management Systems (LMS) are the primary technology that is extensively used by institutions in their online courses. The results of the 2019 survey indicate that video technologies are also becoming an important tool for institutions with a majority of institutions reporting moderate to extensive use of on-demand streaming video lectures, live online lectures, and other uses of video. These results are comparable to the results from 2018. Mobile technologies and social media are also used moderately to extensively by roughly one-half of institutions that responded to the questions on technologies.





In 2019, 93% of institutions that responded to the questions on technology reported some use of LMS, with 84% of institutions reporting extensive use. This is consistent with the results of previous years and leads us to infer that LMS use has become the status quo among institutions in Canada. The next most popular technologies are those that are video-based.

Moderate use of mobile technology and social media was also reported by roughly half of the responding institutions, which is also consistent with the findings from 2018.

Institutions shared details on the technologies they were exploring in online and digital learning including lecture capture, voice over PPT, learning technology integrations, eportfolio, augmented reality, virtual reality, flipped classroom, high fidelity mannequins for health delivery, XR and learning analytics.

We have many of the tools mentioned but we do not track usage rates in any usable format. Instructors are free to use these tools as they see fit, and while we do have some policies around required usage of technology, we do not have such policies for many of the value-add tools you mention in this survey. Additionally, the usage of said tools is likely to change from term to term based on which instructors are teaching which courses and the success or failure of previous attempts to use the technology. (Large college)

Learning analytics will be used more in upcoming years. (Small college)

Padlet is a common tool used extensively in courses. Also, we are now implementing program mapping application that allows us to generate program reports that show learning outcomes, assignment & assessment types, and assessment of team-based learning across a program. (Medium university)

There are many LTIs (Learning Technology Interoperability) that have been integrated into our current learning management system to enhance student engagement and learning. (Large university)

In future planning to introduce AR and VR (Augmented Reality and Virtual Reality). (Large university)

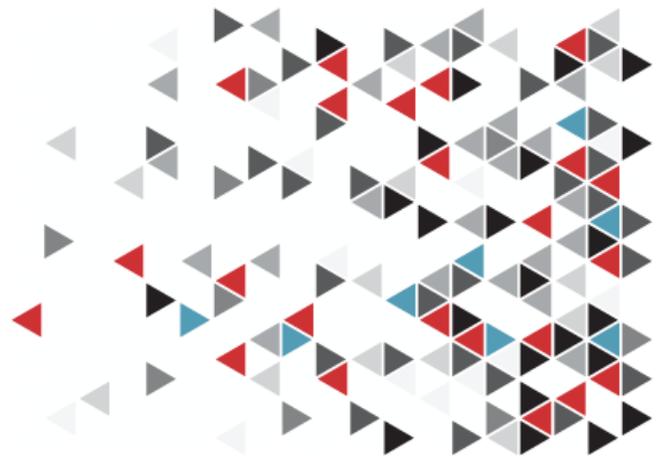
Increasing the use of Brightspace to further flexible offerings. Using surface hubs, lectora, crazytalk, powtoons, doodly. We are looking at connected classrooms through web-based video conference technology (e.g. Skype). Additionally, we're looking more into XR applications for simulated labs, and doing more with video content (lectures, etc.). (Medium college)





Video, mobile devices, and social media have become important tools for online instruction. Video-based technologies are second only to LMS technology with half of responding institutions using at least one type of video technology. Mobile devices and social media are pervasive throughout Canada and, perhaps, institutions perceive these technologies as an opportunity to reach students where they are already engaged. As the majority of institutions are taking advantage of mobile platforms, with capabilities that are increasing over time, it will be interesting to explore whether institutions develop initiatives to target students on these platforms.

iPads, phones - these are used by students to learn and study but not built into the curriculum. The Brightspace platform allows for the reformatting of material to accommodate the use of iPads and iPhones. (Large college)



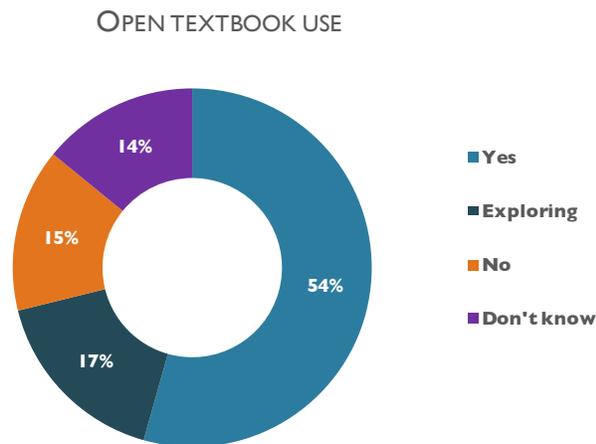


OPEN EDUCATIONAL RESOURCES

OER use is in an exploratory and experimental stage.

Open educational resources (OER) are resources useful for teaching and learning (text, media, and other assets) that are freely accessible and openly-licensed (such as a Creative Commons license), where there is legal permission for creation, use, and reuse of educational content. The majority of institutions acknowledge that the cost of materials may be a barrier to some extent for students and the use of OER is being explored across Canada; however, few institutions have a formal policy for OER or open pedagogy.

Of the 149 institutions that responded to the question on open textbook use at their institutions, 54% reported that they currently use open textbooks. An additional 17% are exploring their use.

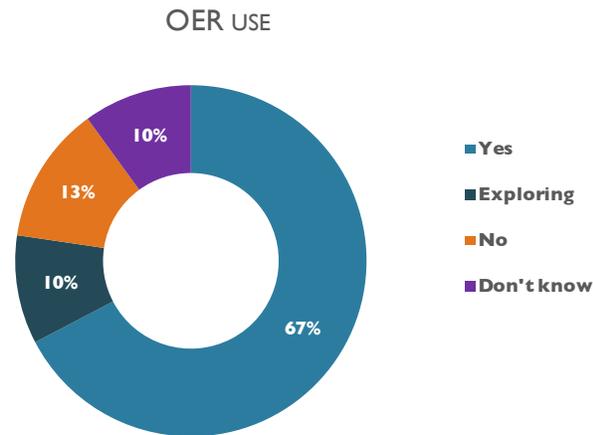


Government agencies in British Columbia, Alberta, and Saskatchewan continue to have projects that support the use of open textbooks¹ and the majority of institutions in these provinces use open textbooks. A shift in funding support in Ontario in 2019 removed these incentives for direct development from the central body.

¹ <https://bccampus.ca/2016/06/29/the-canada-oer-group-saving-students-money-from-coast-to-coast/>

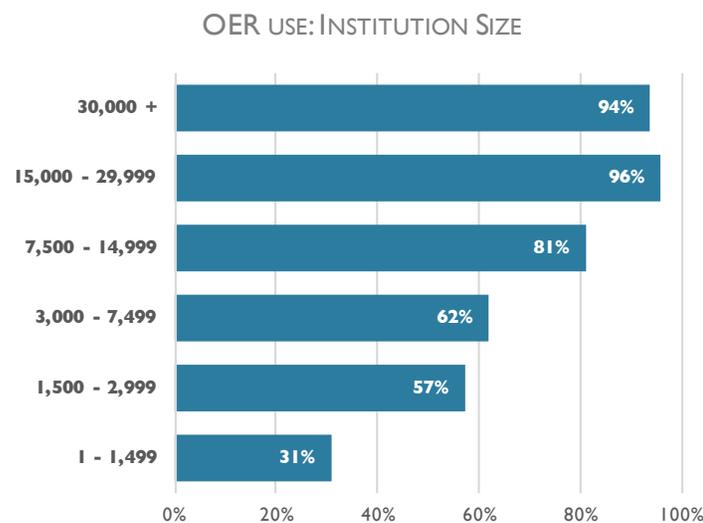


In the 2019 survey, institutions were also asked whether they use OER other than open textbooks. Of the 150 institutions that responded to this question, 67% reported that they use OER in at least some departments and 10% responded that they are exploring using OER.

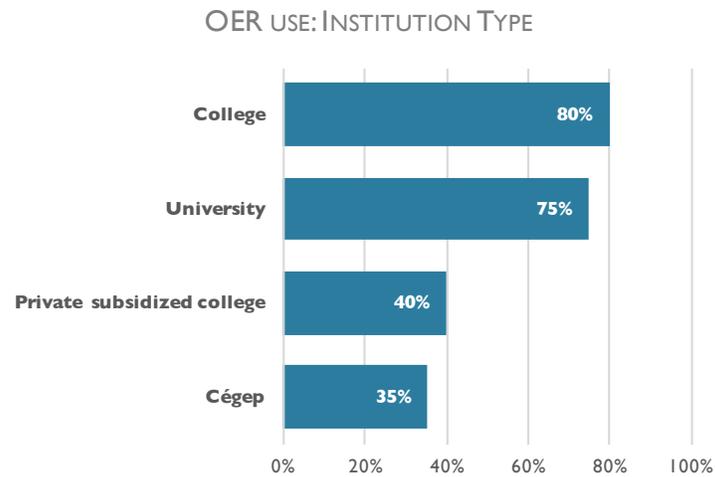


The results indicated that institutional size and type of institution are factors in the adoption of open textbooks and other OER.

Of the institutions with more than 10,000 enrolments, 92% reported that they currently use OER.

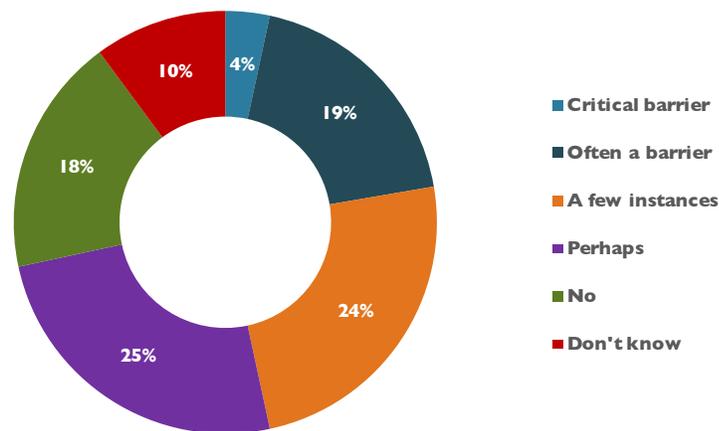


Universities (75%) and colleges (80%) are most likely to use OER. Roughly one-third (35%) of CEGEPs and 40% private subsidized colleges reported using OER.



Overall, the results from all responding institutions to the survey indicate that most institutions are concerned to some degree that cost is a barrier in preventing students from having the required material.

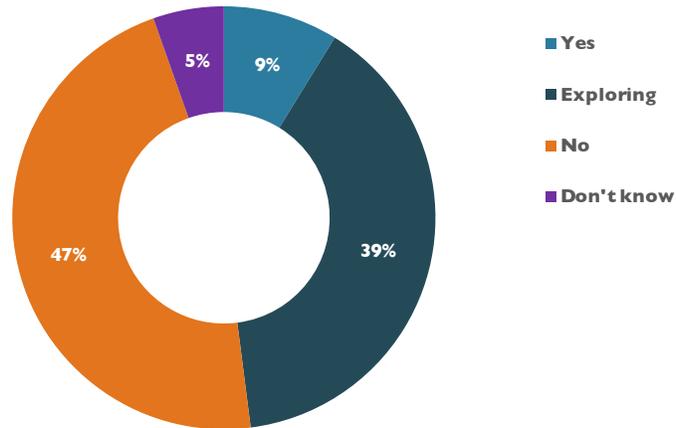
CONCERN ABOUT COST AS A BARRIER FOR COURSE MATERIALS



Despite the concern that the cost of course materials may be a barrier for students, few institutions (9%) reported having a formal policy or strategy for OER and/or open pedagogy; however, 39% of institutions reported that they are exploring or developing one.



FORMAL POLICY OR STRATEGY FOR OER OR OPEN PEDAGOGY



OER use and its adoption among Canada's post-secondary institutions continues to be in an exploratory and experimental stage. Since a significant number of institutions reported that they are exploring a formal policy or strategy for OER or open pedagogy, it will be interesting to see if OER use has expanded in Canada in several years. OER use is also a discussion point among policy-makers and the outcomes of decisions on OER among provincial governments will have an impact on OER development and uptake at the institutional level.





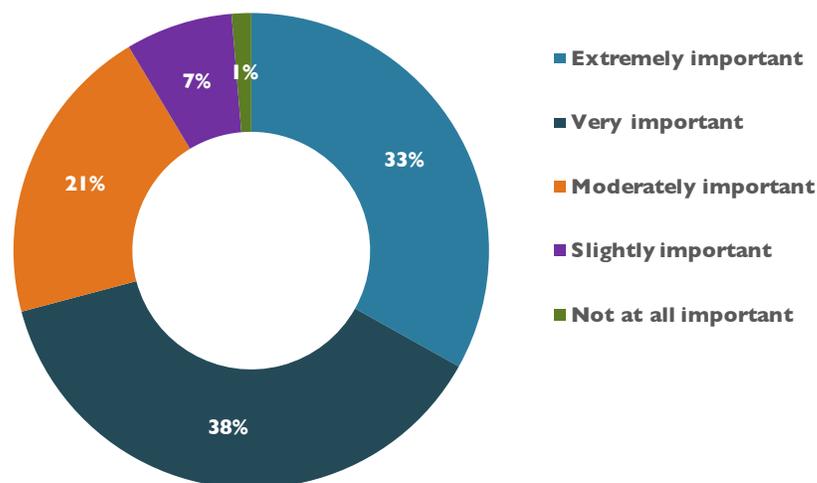
STRATEGIES AND PLANS

Online learning is perceived to hold an important role in the long-term plans of most institutions; however, institutions that are implementing a strategic plan are in the minority.

Consistent with the results from 2018, online learning continues to be a highly important part of institutional long-term plans, regardless of institution size; however, despite its perceived importance, few institutions reported having fully implemented a strategic plan for online learning.

Of the institutions that responded to the questions about strategies and plans, 71% of responding institutions reported that online learning is very or extremely important for the institution's long-term strategic or academic plan. Only two institutions reported that online learning was not at all important for their long-term plan.

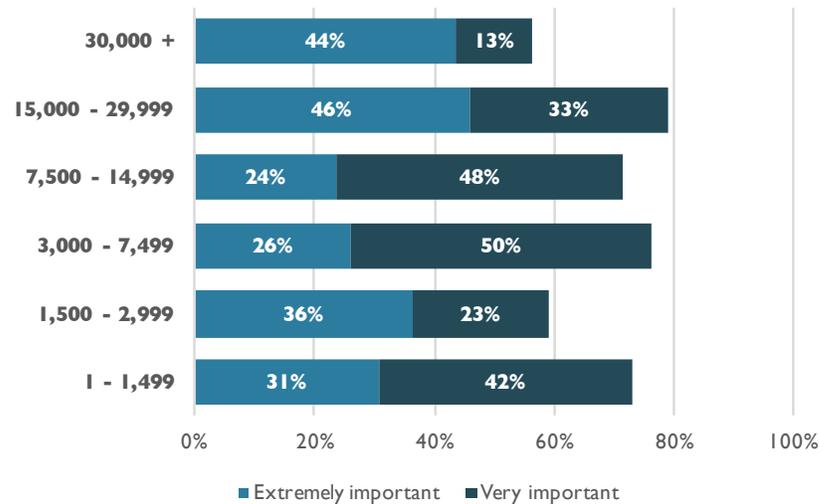
IMPORTANCE OF ONLINE LEARNING FOR LONG-TERM PLAN





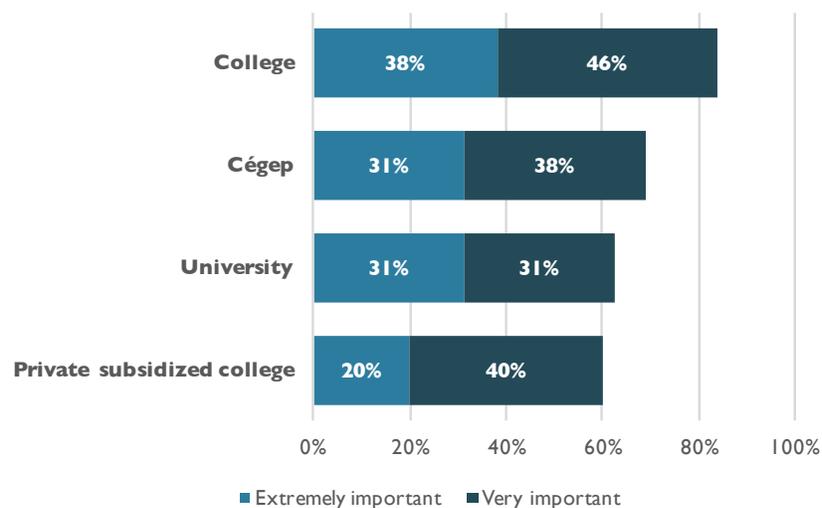
The largest institutions were the least likely to rate online learning as being extremely important or very important for their long-term plan.

IMPORTANCE OF ONLINE LEARNING FOR LONG-TERM PLAN: INSTITUTION SIZE



Colleges were most likely to report that online learning was important for their long-term plan, with 84% colleges rating this as very or extremely important.

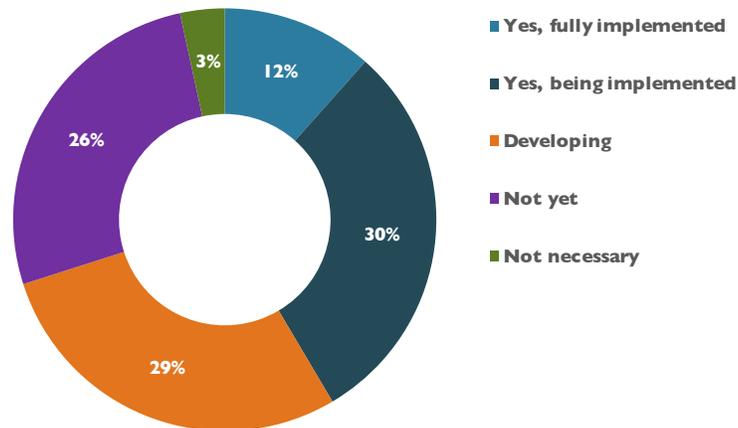
IMPORTANCE OF ONLINE LEARNING FOR LONG-TERM PLAN: INSTITUTION TYPE





The 2019 results show little progress over 2018: institutions that are implementing a plan to some degree remain a minority, while the majority of institutions are developing a plan or recognize a need for one.

STATUS OF STRATEGIC PLAN FOR E-LEARNING



Only 12% of institutions reported having a fully implemented plan; however, the majority (59%) reported being in the process of implementing or developing a plan. An additional 26% of institutions reported that, although they do not yet have a plan, they acknowledge a need for one. Only 5 institutions reported that they did not have, nor did they need, a strategic plan or institutional strategy for e-learning, hybrid learning and/or online learning.

Colleges (57%) and universities (41%) were most likely to report that they had a strategic plan for e-learning, hybrid learning, and/or online learning that was being implemented to some extent.



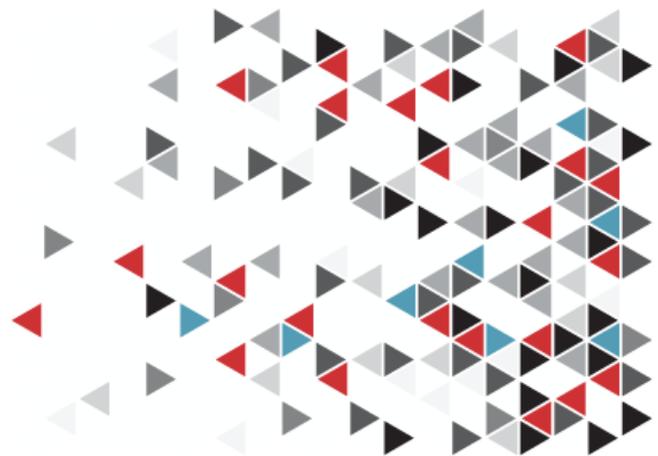


One large college shared that they were in the process of developing a strategy and how they hoped it would impact the institution going forward:

We are in the process of creating a blended learning strategy that may be part of a larger formal institutional digital learning strategy. By creating a strategy, we are hoping to provide a frame for blended learning at our institute that will help guide processes, policies, and systems that align. At a course level, we are creating more supports for instructors to create their own digital learning objects for curriculum.



In summary, while almost all institutions reported that online learning is important for their strategic plan, institutions that have implemented, or are in the process of implementing, a strategic plan remains in the minority. In particular, large institutions top the list for having online offerings, but they lag in placing importance on online learning as part of their long-term plan. The gap between the proportion of institutions who claim online learning holds importance for their long-term plan and the proportion of institutions who are implementing such a plan remains an area of concern.





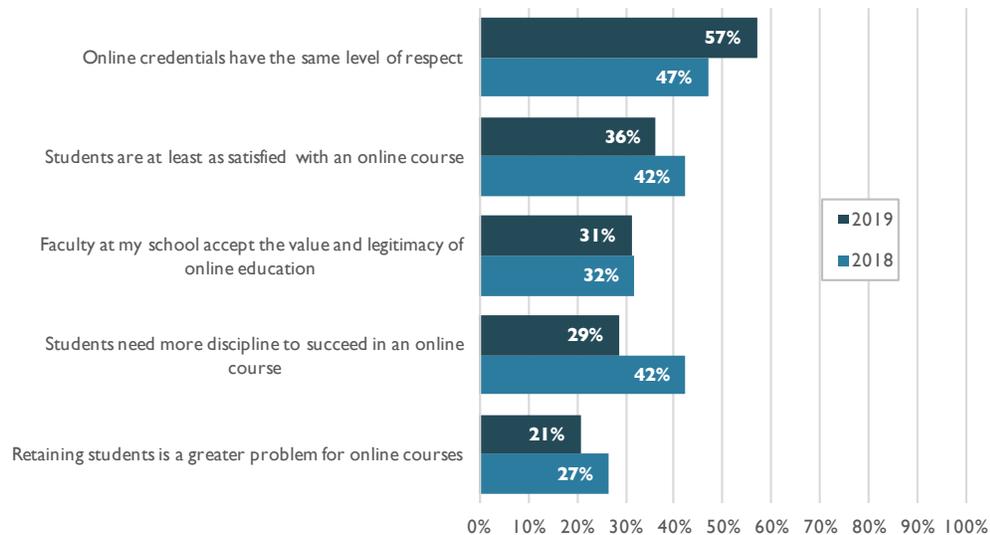
PERCEPTIONS OF ONLINE LEARNING

Canadian post-secondary institutions do not yet perceive online learning to be equivalent to face-to-face learning in several key areas.

Acceptance of online credentials across institutions is slowly increasing with a rise in the perception that online credentials have the same level of respect as face-to-face offerings. Additionally, a drop in the perception that students need more discipline to succeed in an online course suggests further acceptance of online learning by survey respondents. Although these changes are indicative of a positive shift in institutional perceptions of online learning, a significant proportion of institutions (and, in most cases, the majority) did not indicate agreement with these statements.

It is also important to note that the responses reflect perceptions at the institutional-level and that faculty or students may hold different views.

PERCEPTIONS OF ONLINE LEARNING: 2018 AND 2019



Overall, a slight majority of institutions agree that online credentials have the same level of respect as face-to-face courses. Only about one-third of institutions agree that students are at least as satisfied with online courses as they are with face-to-face courses and that faculty accept the value and legitimacy of online courses. The majority of institutions do not agree that retaining students is a greater problem for online courses.

Considering that the majority of institutions stated that online learning is important to their long-term plan, further investigation is recommended to explore the mismatch between the importance of online learning and the perceptions surrounding its quality. Future studies that explore the characteristics and perceptions of online students, the perceptions of faculty, and the outcomes of online learning may yield interesting results.

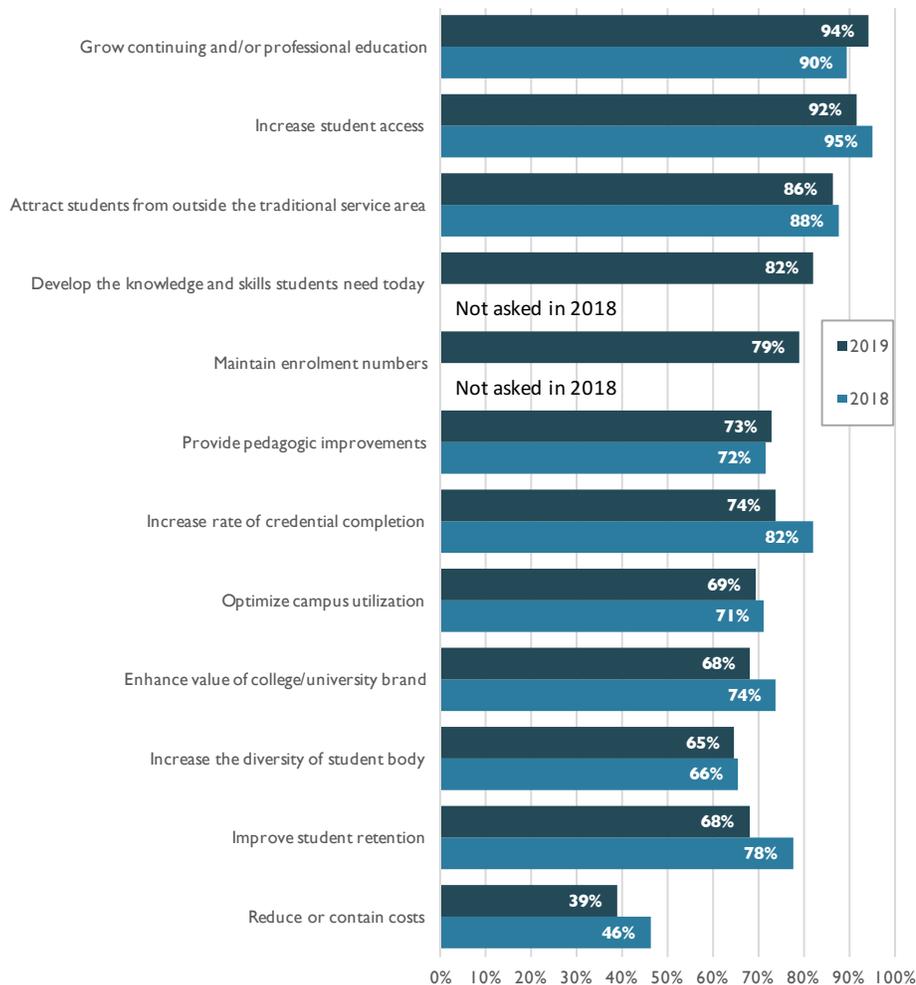


STRATEGIC IMPORTANCE OF ONLINE LEARNING

The majority of institutions agreed that online learning holds strategic importance, particularly for reasons related to growth and access.

Matching the results from 2018, the three most cited reasons why institutions considered online learning to be strategically important were: to grow continuing and/or professional education, to increase student access, and to attract students from outside the traditional service area. Again, as in 2018, institutions were least likely to select ‘to reduce or contain costs’ as a reason for offering online learning.

STRATEGIC IMPORTANCE OF ONLINE LEARNING: 2018 AND 2019





Small institutions reported different reasons for offering online courses when compared to larger institutions. The smallest institutions (less than 1500 enrolments) were most likely to select ‘enhance value of college or university brand’ as being a very important reason for offering online courses. The smallest institutions also placed the most importance on offering online courses to maintain enrolment numbers while the largest institutions (30,000+) placed the least importance on offering online courses to maintain enrolment numbers.

The open-ended comments from institutions provided some insight as to why smaller institutions may perceive offering online courses to maintain enrolment numbers as more important than larger institutions:

In Quebec, with the advent of eCampus, distance learning becomes a strategic issue for all Quebec universities and puts pressure on smaller universities. (Large university)

Our college has a mandate to support learning for all people in our region, regardless of where they are physically located. Despite that, we are still relatively immature in our ability to provide effective online learning to our community. (Small college)

Online learning allows us, along with other flexible formats, to welcome more learners, retain current students, and keep students on grad track. (Medium college)

This is a key issue in the development of our college in a context of population decline and geographic dispersion. Can also meet manpower needs in small communities. (CEGEP)

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Notably, attracting students from outside the traditional service area was ranked as the third-most important reason for institutions in 2018 and 2019; however, the data on online enrolments within and outside the province indicates that online students are likely to reside in the same province as the institution. Furthermore, attracting students from outside the traditional services area increased in importance as institutional size decreased. If smaller institutions are offering online courses with the hope of attracting non-local students in order to increase or maintain their total enrolments, then the feasibility of this strategy must be carefully considered. For instance, an institution may choose to offer a unique program that students would be unlikely to find at their local institutions.

As an example, one institution with a strong reputation in a niche area articulated how their online continuing education program presented a strategic opportunity for attracting out-of-province and international students:

We are seeing a greater number of students from out of province and some from out of country... there is considerable opportunity in the international community for persons to take online courses before coming to campus. (Large college)



Although a high proportion of institutions have reported agreement with the strategic importance of online learning, a concern arises when comparing their responses to the implementation status of their strategic plan. There is a discrepancy between the high degree of agreement for why online learning is strategically important and the minority of institutions that have fully implemented (12%) or are in the process of implementing (30%) a strategic plan for online learning.

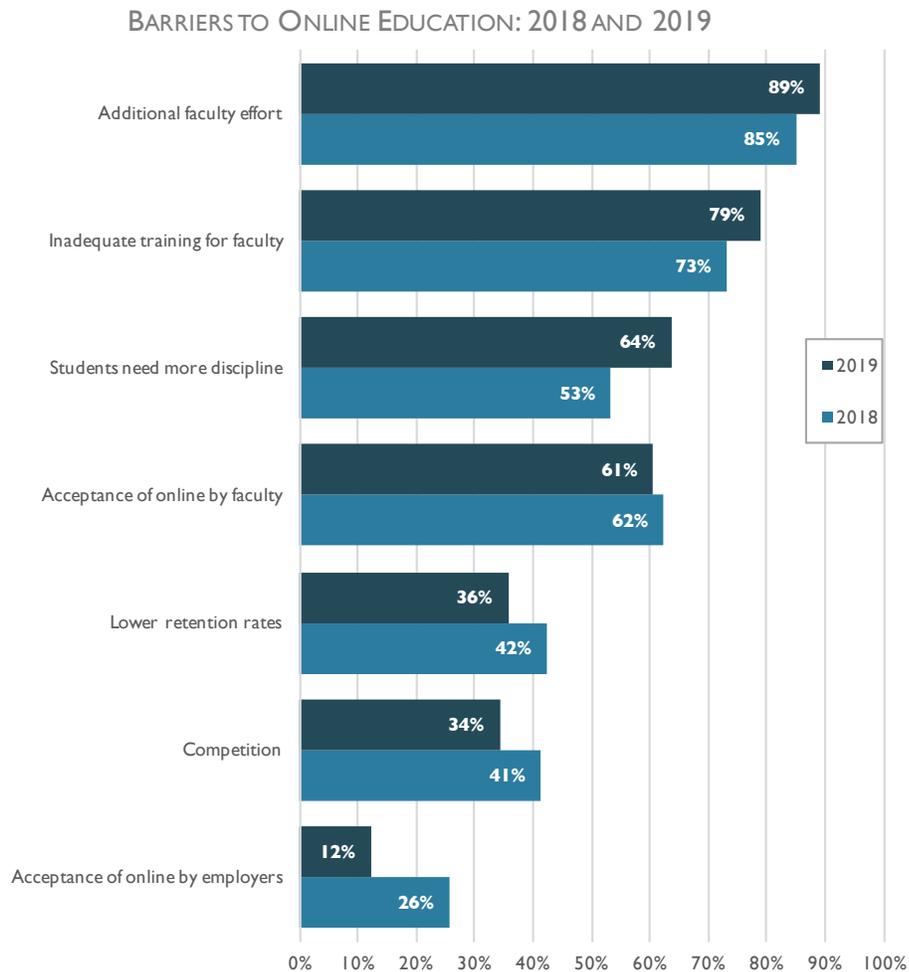




BARRIERS TO THE ADOPTION OF ONLINE EDUCATION

Training and support for faculty in the delivery of online and digital learning is central to overcoming the primary barriers to the adoption of online education.

As in 2018, institutions reported that the most significant barrier to the adoption of online learning was the additional faculty effort required. Following that, inadequate training for faculty was the second most significant barrier. A majority of institutions also reported that acceptance of online learning by faculty and the perception that students need more discipline to succeed in online are barriers to online education.





Three of the four top barriers to online education are directly related to faculty. Ultimately, it is the institutions themselves that make the clear case for providing faculty support and training, particularly given the value being placed on online learning at the institutional level.

The open-ended comments also highlighted issues related to sessional faculty and teaching online:

We are slowly trying to get more faculty on board developing and teaching online courses. A high percentage of courses are taught by sessionals. We are also trying to increase the importance of having a Centre for Teaching and Learning. (Large university)

Professional development [for teaching online] is provided to FT faculty, but not consistently available to sessional instructors. (Small college)



Interestingly, the perceived importance of concerns about inadequate training and pedagogical knowledge available for faculty in online learning tended to decrease as institutional size increases.

On the whole, the issue of faculty support and training for teaching online is significant and needs to be addressed in the development of strategic plans for expanding and improving online offerings. Additionally, approximately two-thirds of responding institutions reported that a barrier to online education is that students need more discipline to succeed online, the data on perceptions of online learning shows a decrease in this same perception. Future studies that investigate perceptions around student discipline and online education would help to determine the extent to which this is a barrier.





PROFESSIONAL DEVELOPMENT FOR ONLINE TEACHING

Professional development for teaching online is available at most institutions, but it is primarily voluntary.

In 2018, and again in 2019, the top barriers to online learning were related to faculty effort, inadequate faculty training, and the acceptance of online learning by faculty. To further investigate these factors, the 2019 survey included questions about the expectations for professional training and development for faculty teaching online courses. The results showed that faculty are rarely required to take part in training or professional development for teaching online.

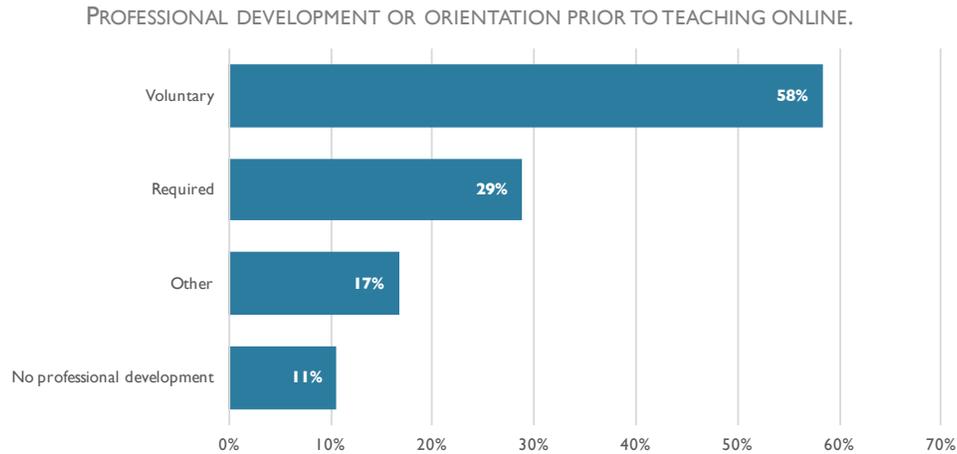
Only 29% of the responding institutions reported that they require faculty to participate in professional development or orientation *prior to teaching their first online course* at their institution. Notably, smaller institutions are more likely to require professional development or orientation related to teaching online: 53% of responding institutions with enrolments between 1,500 and 2,999 require professional development or orientation before teaching while 19% of institutions with enrolments greater than 30,000 require professional development.

More than one-half (58%) of institutions reported that professional development or orientation is provided for faculty who will teach online, but it is voluntary. Again, institution size is a factor in whether voluntary professional development is made available to faculty before teaching online; however, this is more characteristic of larger institutions to have voluntary professional development available. Findings show that 72% of responding institutions with enrolments greater than 10,000 provide voluntary professional development or orientation related to teaching online.

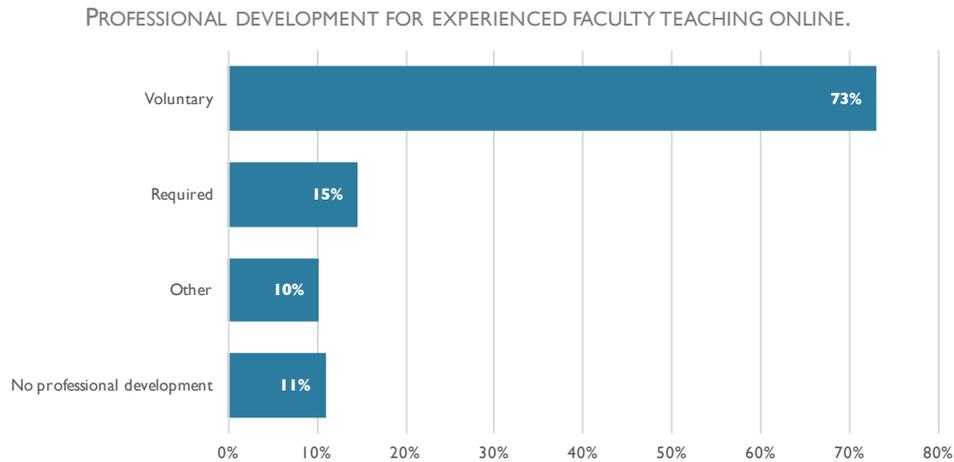




Only 12 institutions reported that they have no professional development for faculty prior to teaching online.



For experienced online faculty, only 15% of institutions require professional development with 73% offering voluntary professional development.





The open-ended comments highlighted that institutions recognize the need for professional development for faculty teaching online. At the same time, these comments illustrated that such professional development is rarely mandated.

Professional development is mandatory; however, this does not always occur prior to teaching online due to scheduling, last minute hires, etc. (Medium college)

This varies by academic unit. There are central services that provide 1:1 orientation and professional development. (Large university)

An orientation module is currently under development. (Large university)

Professional development is provided but not required PRIOR to start of teaching. (Medium college)

Required for faculty teaching in continuing and online learning, voluntary for on-campus faculty wanting to teach online. (Large college)

Staff work with some faculty to develop their online course so they may get extensively trained. Other faculty do not and so may not get any individualized training. There are also voluntary PD workshops in online teaching. (Large college)

Both full-time and part-time faculty are obligated to participate in professional instructional development at the outset of their career with the college. An orientation to teaching with technologies and to the college LMS is included in these programs. (Large college)

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Essentially, most institutions recognize the importance of professional development or orientation to support faculty in teaching online and offer such training; however, it is most often voluntary and not required. Considering that the majority of institutions are reporting inadequate faculty training for teaching online as a barrier to online education, it is important to note that only a small portion requires such training.



FUTURE DEVELOPMENTS

Institutions are invested in expanding online education in response to student needs.

A critical part of the research process was to ask respondents to share their thoughts about future developments regarding e-learning, hybrid learning, and/or online learning at their institution. The open-ended comments reinforced the quantitative findings and provided insight into institutional values. The common themes found in the comments were:

- Investment in the growth and development of digital learning
- Strategic planning to develop online offerings that better meet student needs,
- Plans for offering faculty training and support for teaching online.

Many institutions commented that they are invested in expanding, improving, and diversifying their online offerings.

The comments described efforts to further develop existing online initiatives as well as plans to implement new technologies and online offerings.

We expect the adoption of blended learning to continue at our institution. We anticipate that the online learning experience at our institution will be enhanced, with specific efforts to increase student engagement and success. It is also likely that online learning course offerings will increase as the institutional models for developing and delivering online courses are refined and refocused to student centered online course models. Additionally, our institution is the midst of reviewing its Learning Management System to ensure that we understand the requirements of our students, faculty, TAs, and staff. A significant consideration in the review is how does this key tool support our blended/online teaching. (Large university)

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We are continuing to invest heavily in the design, development and delivery of hybrid and online learning. We are also providing enhanced efforts on the scholarly research related to hybrid and online teaching and learning. (Large college)

We want to improve our services and diversifying our online training offering (CEGEP)

We want to increase our online training catalog for adult education in the next 2 years. (CEGEP)

We are looking to add technologies to support all of our courses not only for online or blended. We are adding crowd sourced marking generally, introducing more video conferencing with synchronous meetings for both instructors and students, working to allow more seamless integration of video and audio resources (especially for students) into course work. iClicker now allows us to poll synchronously or asynchronously in outside the physical classroom (though no one is doing that yet). We're working with the library to place more course specific materials into courses and to provide links to course reserve materials. (Large university)

We will continue to grow hybrid and online learning. (Medium college)

We will be launching hybrid courses (joining on-campus and online students into one course section) that are designed to ensure successful completion of completely online students. (Large university)





Institutions frequently mentioned strategic planning in their remarks about future developments. In particular, a number of institutions mentioned tailoring online offerings to the needs of students. The comments specifically highlighted workforce and accessibility needs as being matters of importance.

We continue to collaborate with faculty and other departments at our institution to develop new online courses and programs relevant to today's economy and workforce. We are recommending to subject-matter experts (SMEs) that they research and try to use open resources e.g. images, diagrams, wherever possible when creating content. (Large university)

Incorporation of UDL/accessibility principles is an important priority in regard to online course development and design. (Medium university)

Our university will see growth in programs available using delivery methods (as opposed to individual classes) to promote accessibility and flexibility. (Large university)

We have to wonder about the needs and expectations of students. We offer synchronous online courses. The low admission leads us to ask us about these offerings. Ongoing evening or weekend or asynchronous courses might be more responsive to student needs. (CEGEP)

Our college has intentions of having more online learning programming made available but in adult education as well as in professional development. (Medium college)

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Several comments acknowledged the need for better faculty training and support for online education.

At a course level, we are creating more supports for instructors to create their own digital learning objects for curriculum. (Large college)

Currently developing resources to support teaching and learning with technology through various pathways and entry points, including workshops, drop-ins, and consultations. (Large university)

Using our institution's teaching and learning framework as a guide, we are reviewing the ways in which we support and assist faculty in the development of effective teaching practices and learning opportunities involving the effective integration of technology, regardless of delivery method. We see further work in this domain of faculty development. (Large university)

Currently, the professional development provided for faculty prior to teaching online is voluntary but the intent is to create a more formal mandatory certification program. (Large college)

Pace of development is dependent on instructional design resource enhancement to support faculty in developing high quality courses, as well as adjusting workload allocation to faculty to allow for course development. Development of online programs to attract international students is a priority. (Large university)

We are trying to hire an instructional designer to support faculty who teach online or to help guide those who are contemplating the switch. However, finding a qualified individual is not easy. (Medium university)

”

Overall, the open-ended comments relating to future developments reiterated that online and hybrid offerings are expected to grow. Within the comments, institutions also emphasized that developing online offerings that address students' personal and workforce needs is a matter of importance. Additionally, numerous comments suggested a need for better faculty training and support for teaching online. Considering these institutional plans for expanding and improving digital learning, it will be interesting to investigate whether there are noticeable shifts in the quantitative data in these areas in several years.



CONCLUSIONS

Online learning is pervasive and the primary delivery modality of distance education in Canadian post-secondary institutions. Many institutions are invested in growing online and blended/hybrid offerings. As new technologies and practices related to online education emerge, institutions are experimenting with different delivery methods to better meet the needs of students. A variety of strategies are being employed: new technologies, OER, blended/hybrid learning, and alternative credentials.

Tracking the implementation and progress of different aspects of online education, including enrolments, at a national level is challenging due to lack of consensus on definitions, the dynamic and evolving nature of online offerings, and lack of standardization approaches among institutions for reporting data on enrolments.

The lack of standardization in reporting enrolments applies to enrolments, in general, and online enrolments in particular. Numerous institutions still struggle to provide data for online enrolments; however, the research team has received feedback from institutions that this survey has had a positive impact on improving institutional systems for tracking enrolments. Standardized methods of collecting and tracking data on online education, at the institutional level and the national level, are critical to identify trends over time and to measure progress toward institutional goals.

Emerging technologies, resources, and offerings

Most institutions in Canada offer some sort of online education with LMS technology being the primary technology used to support online offerings. While the use of LMS technology is the status quo, other technologies are emerging in popularity. In particular, the majority of institutions that responded to questions on technology reported using video technology (synchronously and asynchronously) in course delivery. Mobile technology and social media also continue to be used in roughly one-half of responding institutions.

Open textbooks and other OER are used by the majority of institutions, particularly larger colleges and universities. The majority of institutions also recognize that there is a need for these resources to reduce cost barriers for students. Despite significant use of OER, few institutions have a formal policy or strategy in place for the implementation and development of OER and open pedagogy. While the proportion of institutions using OER has remained unchanged from the 2018 survey, the results of the 2019 survey indicate that a sizeable minority of institutions are exploring the development of a strategy for OER. Clearly, there is increased interest in the use of open textbooks, OER, and open pedagogy.



A significant proportion (nearly one-half) of responding institutions reported that they are experimenting with alternative credential offerings; however, the results show considerable ambiguity surrounding the classification and definition of various offerings. Future efforts are needed to establish common definitions for alternative credential offerings such as micro-credentials, stackable credits, badges, blockchain, and competencies to better track the development of these offerings over time.

Strategic planning and objectives

The majority of institutions reported that online learning is a highly important part of their long term plan; however, a paradox is evident when considering the inconsistencies in tracking enrolments to measure progress, the low proportion of institutions that are at some stage of implementing a strategic plan for online learning, and the overall lack of mandatory training for faculty that teach online. Training and support of faculty remains a key barrier to the adoption of online learning and, although most institutions have some sort of professional development available, it is typically voluntary.

Interestingly, the perceived importance of concerns about inadequate training and pedagogical knowledge available for faculty in online learning tended to decrease as institutional size increases. The largest institutions were also least likely to rate online learning as being extremely or very important to their long term plan. Further investigation of the driving forces for adopting online learning based on institutional size, type, and location may reveal significant differences impacting the development and implementation of online initiatives.

Considering that the perceptions of online learning showed increased acceptance of online offerings along with the descriptions of initiatives to develop online education in the open-ended comments, it will be interesting to follow the state of implementation in the coming years. Such plans will continue to be dynamic by their very nature, yet the gap between the perceived 'need for' a strategic plan focused on online and digital learning and the status of a plan remains telling.

A large majority of institutions selected 'attracting students from outside the traditional service area' as one of the most important reasons for offering online learning; however, the online enrolment data for students by location indicated that out-of-province students do not greatly impact the total enrolment numbers. Again, standardized methods for tracking enrolments would prove beneficial for an ongoing investigation of this finding considering the importance being placed on attracting online enrolments from out-of-province students.



Recommendations

Of the utmost importance is resolving the year-to-year inconsistencies surrounding online enrolment data. To accurately track how online education is changing over time, at the national level, standardized tracking methods are critical. Our survey team will further investigate the inconsistencies around online enrolment data, with plans to deliver a special report that explores this issue in depth.

Since online learning is a dynamic area of development, ongoing inquiry as to whether and how definitions need to evolve is important to reflect changing practice and to establish dynamic, yet common, descriptions of online offerings. The refinement of definitions going forward will help to effectively measure the impacts on student learning as online, hybrid, and alternative credential offerings continue to develop at institutions nation-wide. We encourage dialogue within and across institutions, provincial, territorial and national organizations to further develop a shared understanding of online and digital learning activities.

When gathering data for the 2019 survey, some institutions suggested that their enrolment data does not vary significantly from year to year. For this reason, they asked our research team to consider requesting enrollment data every two to three years instead of on an annual basis. Gathering data that encompasses several years' worth of enrolment data would also enable our research team to measure the accuracy of predictions on growth.

After conducting this national survey for three consecutive years, we have improved our methodology, uncovered critical challenges in gathering enrolment data, noted emerging trends in online learning across the country, and increased the tracking of online learning in the post-secondary sector. Institutional stakeholders have mentioned how the survey results are influencing strategic decisions and reinforcing decisions to proceed with initiatives in this area. We look forward to presenting trends and discoveries as our survey continues to provide opportunities to examine the collected data longitudinally. As we plan for the 2020 survey, we recognize the opportunity to explore some of the key findings from 2019 in more depth and we welcome feedback and discussion surrounding topics of interest to institutions, government, faculty, and other members of the Canadian higher education community.





METHODOLOGY

The universe of interest for this study is all publicly-funded post-secondary institutions in Canada.

Almost all universities in Canada are funded provincially. There were multiple changes to the roster of institutions between 2017 and 2018, and only one change between 2018 and 2019. Based on feedback from Québec following the 2017 survey, three Québec institutions that were previously treated as constituent components of the Université de Montréal were added as independent institutions. Also, in 2018, the scope was expanded to include federally-funded post-secondary institutions, adding The Royal Military College of Canada (which has university status) to the roster.

A further change in 2018 was the decision to treat francophone colleges within Anglophone universities as a separate roster entry, as they offer separate academic programs and require a separate questionnaire in French. This resulted in an additional five university-type institutions compared to those included in the 2017 roster. Finally, one provincially-funded institution changed its status from a college to a university between 2017 and 2018. There was only a single change in the roster between 2018 and 2019 when the activities of the institution formerly known as Cégep à distance were integrated with Collège de Rosemont.

Beginning in 2018, 'private subsidized colleges' in Québec were added to the roster. These establishments are recognized as a public interest and approved for subsidies by the Minister responsible for Higher Education that are fully accredited within the province.

Institutions that are not included in the roster include Canadian private for-profit universities, most of which are very small, as well as fully private career colleges and institutes.

The 2019 roster includes:

- 82 universities and Francophone colleges of Anglophone universities
- 80 colleges outside Québec
- 51 CEGEPs
- 21 private subsidized colleges in Québec

The resulting roster includes 152 colleges and 82 universities for a total of 234 institutions.



Questionnaire design and distribution

The initial questionnaire design for 2017 was based on surveys used in the U.S. by the Babson Survey Research Group, that were modified to meet the Canadian context. From 2017 to 2018 several questions were dropped where the information was not likely to change significantly from year to year. The 2018 survey also reflected the additional work on definitions and included questions to allow institutions to compare their definitions with those of the survey team. While the bulk of the survey remained the same from 2018 to 2019, some changes were made for 2019, adding additional questions on open resources, faculty professional development, and the location of online students

All changes to the survey have been tested in pre-surveys. The definitions and enrolment questions in 2018 were tested in a pre-survey that went to all potential participating institutions for feedback and comment. This outreach was also used to update the contact information for each institution. A second pre-survey was conducted in 2019 asking institutions what information they tracked and could supply for proposed enrolment tracking questions.

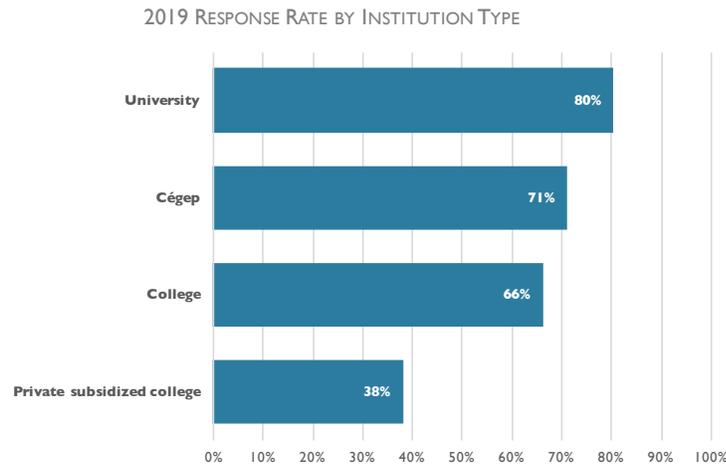
A survey invitation was sent to the Provost/VP Academic or Vice-President Education or Directeur général for each institution on the roster, with copies to the other institutional contacts. The questionnaire content was identical in both Anglophone and francophone versions of the questionnaire.

The questionnaire itself was a fillable PDF file, that could be shared among multiple people at the institution. Members of the project team actively followed up with institutions to answer any of their questions and to encourage them to participate. The project was also promoted through post-secondary educational networks or provincial organizations.

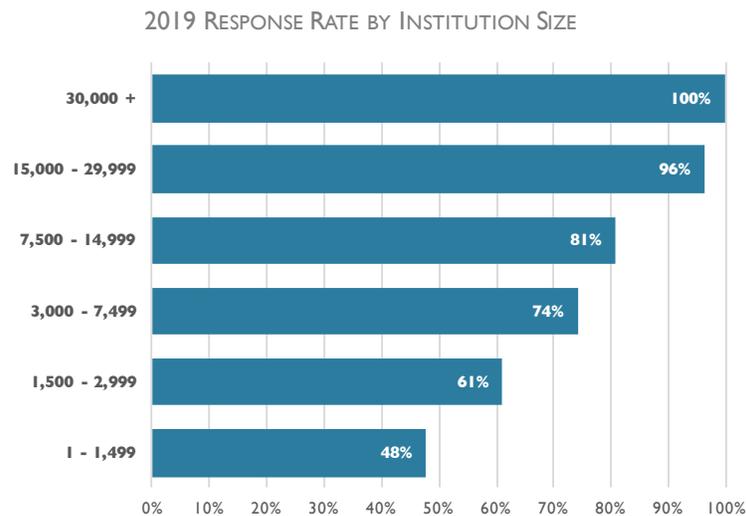




The overall institutional response rate was 70% for all types of institutions. Responses were highest from universities (80%) and lowest from the 21 private subsidised colleges in Québec (38%).



The response rate tended to be lower from the smaller institutions; nevertheless, close to half of even the smallest institutions responded. Since there was a higher response from the larger institutions, the questionnaire responders represent institutions with 90% of the student population base and 95% of all online enrolments.





Overall, especially considering that this was a voluntary questionnaire, the responses provide an excellent, representative sample of colleges and universities across all provinces, and across all sizes of institutions, representing 70% of all institutions and 90% of all students studying for institutional credit at Canadian publicly-funded post-secondary institutions.

Questions on course registrations

Survey questions addressing numbers of course registrations and numbers of students have been revised each year based on feedback from responding institutions. The 2017 questionnaire included several enrolment questions, which proved difficult (or impossible) for many institutions to answer. The 2018 survey scaled this back considerably to include only six questions: three on overall enrolments and three on online enrolments. A pre-survey conducted ahead of the 2019 main survey provided even more feedback, resulting in a further reduction in the number of questions to only four: two on overall enrolments and two on online enrolments.

The fact that it remains difficult for many institutions to provide data consistent with the survey questions is to be expected. The lack of a universal reporting requirement, the differing reporting standards for each province, and the wide-ranging internal tracking requirements for the institutions themselves have resulted in multiple systems designed to meet specific institutional and governmental agencies reporting objectives.

A further complication is that, while the question of ‘how many students?’ may sound simple, it is anything but. Provinces and institutions can have widely ranging definitions of what constitutes a ‘student’. Questions arose and included: Should institutions count all students or convert part-time counts into full-time equivalents (FTE)? Should institutions count all students or only students taking for-credit courses or programs? Do students in continuing education or other non-core programs count as part of the main institution? Should institutions count only those being supported by a particular program or all of the students, regardless of their support?

All of these factors lead to considerable variability in what each institution can measure and report, making reliable comparisons across institutions extremely difficult. However, it is possible to compare the same data element across time for the same institution, provided that an identical question is being asked at each point in time. The year-to-year comparisons in this report use an identical question on total online course registrations over the academic year.



BACKGROUND TO THE 2019 NATIONAL SURVEY

Collectively, the National Survey aims to cover all types of publicly-funded post-secondary institutions within every province and territory. The inaugural survey was launched in 2017 and, over time, we have modified the questions in response to suggestions from responding institutions.

Since our inception, we have developed, and are continuously revising, a comprehensive roster of all publicly-funded post-secondary institutions. This is part of an ongoing effort to build a strong relationship between the research team and every post-secondary institution in our roster. We strive to acknowledge and portray the diversity in post-secondary institutions in our endeavors.

From its outset, the survey has been a bilingual undertaking, acknowledging that the provincial post-secondary system in Quebec differs significantly from other provincial and territorial jurisdictions. We also recognize that there is a significant number of francophone institutions across Canada.

Each year, we review the responses, suggestions, and advice that responding institutions share with us. In early 2019, we sent a preliminary survey to determine whether institutions would be able to provide data on new areas of interest. Our research team collected, analyzed, and integrated responses from the preliminary survey into the 2019 Canadian National Survey of Online and Digital Learning. The survey launched in April and data collection concluded in July. We received a small number of responses in August and included these in the data analysis.

We invite you to reach out to our research team to offer feedback and suggestions for future surveys and research projects that investigate digital learning at post-secondary institutions across Canada.





2019 PRIMARY RESEARCH TEAM

Nicole Johnson is the newly appointed Research Director of the Canadian Digital Learning Research Association. She was the primary author for the 2019 National Report and works closely with Dr. Tony Bates, Dr. Jeff Seaman and Dr. Tricia Donovan. She is currently an online PhD student in the Education and ICT (e-learning) program at the Open University of Catalonia in Barcelona, Spain, while residing in Abbotsford, B.C. Nicole completed her Master of Educational Technology degree online through UBC and also holds Bachelor degrees in Education and Human Kinetics from UBC. Additionally, Nicole is currently part of a research team at Royal Roads University that is exploring the nature of academics' online participation over time.

Dr. Tony Bates is currently a Senior Advisor at the Chang School of Continuing Education, Ryerson University. He is also a Research Associate at Contact North | Contact Nord. He has 50 years of experience in using technology for teaching, including teaching online, managing online programs, conducting research into educational technologies, and consulting on digital learning strategies and management. Tony has pioneered the Canadian National Survey and is a Director of the Board, CDLRA/ACRFL.

Dr. Jeff Seaman has worked in education information technology his entire career and currently serves as Director of the Babson Survey Research Group. His experience includes creating and running the Computing Resource Center at the University of Pennsylvania, Chief Technology Officer at HighWired.com, Vice President of Engineering for Vista Associates, and Chief Information Officer for Lesley University. He has taught at multiple institutions and served on numerous academic technology advisory boards including Apple Computer, IBM, and Microsoft.

Dr. Tricia Donovan is currently the Principal, eCampus at NSCC. She has over twenty years of experience with online, distance and digital education with colleges, universities and consortia. She was the Executive Director, eCampusAlberta for 15 years and works closely with the eCampus organizations across Canada and in partnership with WCET in the United States. She has experience in working with online and digital learning strategic planning, quality assurance in online learning and consultation. Tricia also serves as Project Lead for the National Survey and is a Director of the Board.





2019 EXECUTIVE CONSULTANTS

The Canadian National Survey is made possible through the dedication and commitment of our team of Executive Consultants. Their collective experience and understanding of the Canadian post-secondary system, and of research in online and digital learning, is unparalleled.

Dr. Denis Mayer, is currently serving as interim Board Chair for the Higher Education Quality Council of Ontario (HEQCO) and is a board member of the Canadian Digital Learning Research Association. Formerly at Laurentian University he led Continuing Education and Student Affairs and was involved in distance and online learning regionally, provincially and nationally. He chaired the board of the Canadian Virtual University, the board of the Canadian Association for Distance Education and was a board member for the Ontario Council for University Lifelong Learning and Contact North. He now does consulting in distance education and online learning.

Dr. Brian Desbiens currently is coaching CEO and Senior Executive teams at six institutions (University, College, Health Care and educational support agencies) in Ontario. He is a Research Associate at Contact North | Contact Nord. He is a past President of Sir Sandford Fleming College and worked in the college system for 36 years. He is an Adjunct Professor in the Higher Education Department of the Ontario Institute of Education at the University of Toronto and teaches Leadership in the doctoral program.

Éric Martel is currently Director of distance learning at Université Laval. He is also a Lecturer in the Department of Management at Université Laval and has been teaching undergraduate and graduate online courses since 2002. He has over ten years of experience in managing online programs, recruiting students in online programs and developing online courses.

Dr. Ross Paul spent more than 35 years in senior academic administrative positions in Canadian colleges and universities including presidencies at Laurentian University and the University of Windsor. He has written extensively on leadership and management issues and is best known for his books *Open Learning and Open Management: Leadership and Integrity in Distance Education* (1990) and *Leadership Under Fire: The Challenging Role of the Canadian University President* (2nd edition, 2015).

Vivian Forssman has expertise in online learning strategy, program development, learning design, and technology operations. She is currently part of a team focused on climate change with the BC Professionals Adaptation Network Project. From 2013 – 2017 she served as the Director of the Centre for Teaching and Educational Technologies at Royal Roads University, providing pedagogical and technical support for faculty; implementing learning technologies; and improving curricular alignment through program mapping services. She holds an MBA from the University of Cape Town, and undertook doctoral research focused on technology policy in higher education, through Simon Fraser University, in the period 2004-2008.

Russ Poulin is the Executive Director, WICHE Cooperative for Educational Technologies (WCET), Vice President for Technology-Enhanced Education, Western Interstate Commission for Higher Education (WICHE). Russ has more than 20 years of experience focused on the practice, policy, and advocacy of technology-enhanced learning in higher education. Russ, and WCET, have partnered with CDLRA/ACRFL and have worked in concert with eLearning consortia in both the United States and Canada. He has received recognition from the Presidents' Forum, Excelsior College, and the National University Technology Network for his contributions to policies for technology-enhanced postsecondary education. Poulin received a bachelor's degree from the University of Colorado Denver and a masters from the University of Northern Colorado.



ROSTER OF INSTITUTIONS

Alberta

Alberta University of the Arts
Athabasca University
Bow Valley College
Centre Collégial de l'Alberta - Campus Saint-Jean
Grande Prairie Regional College
Keyano College
Lakeland College
Lethbridge College
MacEwan University
Medicine Hat College
Mount Royal University
Norquest College
Northern Alberta Institute of Technology (NAIT)
Northern Lakes College
Olds College
Portage College
Red Deer College
SAIT Polytechnic
University of Alberta
University of Calgary
University of Lethbridge

British Columbia

British Columbia Institute of Technology
Camosun College
Capilano University
Coast Mountain College
Collège Éducentre
College of New Caledonia
College of the Rockies
Douglas College
Emily Carr University of Art and Design
Justice Institute of British Columbia
Kwantlen Polytechnic University
Langara College
Nicola Valley Institute of Technology
North Island College
Northern Lights College

Okanagan College
Royal Roads University
Selkirk College
Simon Fraser University
The University of British Columbia
Thompson Rivers University
University of Northern British Columbia
University of the Fraser Valley
University of Victoria
Vancouver Community College
Vancouver Island University

Manitoba

Assiniboine Community College
Brandon University
Canadian Mennonite University
Manitoba Institute of Trades and Technology
Red River College
The University of Winnipeg
Université de Saint-Boniface
University College of the North
University of Manitoba

New Brunswick

Collège communautaire du Nouveau-Brunswick
- Campus d'Edmundston
Maritime College of Forest Technology
Mount Allison University
New Brunswick College of Craft and Design
New Brunswick Community College
St. Thomas University
Université de Moncton
University of New Brunswick -St. John

Newfoundland and Labrador

College of the North Atlantic
Memorial University of Newfoundland

Northwest Territories

Aurora College
Collège Nordique francophone



Nova Scotia

Acadia University
Canadian Coast Guard College
Cape Breton University
Dalhousie University
Gaelic College
Mount Saint Vincent University
Nova Scotia Community College (NSCC)
NSCAD University
Saint Mary's University
St. Francis Xavier University
Université Sainte-Anne

Nunavut

Nunavut Arctic College

Ontario

Algoma University
Algonquin College
Brock University
Cambrian College
Canadore College
Carleton University
Centennial College
Collège Boréal
Conestoga College Institute of Technology and
Advanced Learning
Confederation College of Applied Arts and
Technology
Durham College
Fanshawe College
Fleming College of Applied Arts and Technology
George Brown College of Applied Arts and
Technology
Georgian College of Applied Arts and
Technology
Glendon College
Humber College
La Cité
Lakehead University
Lambton College
Laurentian University

Loyalist College of Applied Arts and Technology
McMaster University
Mohawk College
Niagara College
Nipissing University
Northern College
OCAD University
Ontario Tech University
Queen's University
Royal Military College of Canada
Ryerson University
Sault College
Seneca College
Sheridan College
St. Clair College
St. Lawrence College of Applied Arts and
Technology
The Michener Institute of Education at UHN
Trent University
Université de Hearst
University of Guelph
University of Ottawa
University of Toronto
University of Waterloo
University of Windsor
Western University
Wilfrid Laurier University
York University

Prince Edward Island

Collège de l'Île-du-prince-Edouard
Holland College
University of Prince Edward Island



Québec

Bishop's University
Campus Notre-Dame-de-Foy
Cégep André-Laurendeau
Cégep Beauce-Appalaches
Cégep de Baie-Comeau
Cégep de Chicoutimi
Cégep de Drummondville
Cégep de Granby Haute-Yamaska
Cégep de Jonquière
Cégep de l'Abitibi-Témiscamingue
Cégep de l'Outaouais
Cégep de la Gaspésie et des Îles
Cégep de La Pocatière
Cégep de Lévis-Lauzon
Cégep de Matane
Cégep de Rimouski
Cégep de Rivière-du-Loup
Cégep de Saint-Félicien
Cégep de Saint-Hyacinthe
Cégep de Saint-Jean-sur-Richelieu
Cégep de Saint-Jérôme
Cégep de Saint-Laurent
Cégep de Sainte-Foy
Cégep de Sept-Îles
Cégep de Sherbrooke
Cégep de Sorel-Tracy
Cégep de Thetford
Cégep de Trois-Rivières
Cégep de Victoriaville
Cégep du Vieux Montréal
Cégep Édouard-Montpetit
Cégep Garneau
Cégep Heritage College
Cégep John Abbott College
Cégep Limoilou
Cégep Marie-Victorin
Cégep régional de Lanaudière
Cégep Vanier College
Centre Matapédien d'études collégiales
Champlain Regional College
Collège Ahuntsic
Collège André-Grasset
Collège Bart
Collège Centennial
Collège d'Alma
Collège de Bois-de-Boulogne
Collège de Maisonneuve
Collège de Rosemont
College de Valleyfield
Collège Ellis
Collège Gérald-Godin
Collège international des Marcellines
Collège international Marie de France
Collège Jean-de-Brébeuf
Collège Laflèche
Collège LaSalle
Collège Lionel-Groulx
Collège Marianopolis
Collège Mérici
Collège Montmorency
Collège O'Sullivan de Québec
Collège Shawinigan
Collège Stanislas
Collège TAV
Collège Universel - Campus Gatineau
Collégial international Sainte-Anne
Concordia University
Dawson College
École de musique Vincent-d'Indy
École de sténographie judiciaire
École de technologie supérieure
École nationale d'administration publique
École nationale de cirque
École Polytechnique de Montréal
HEC Montréal
Institut de technologie agroalimentaire
Institut de tourisme et d'hôtellerie du Québec
Institut national de la recherche scientifique
McGill University
Séminaire de Sherbrooke
TÉLUQ
Université de Montréal



Université de Sherbrooke Université du Québec
à Chicoutimi
Université du Québec à Montréal
Université du Québec à Rimouski
Université du Québec à Trois-Rivières
Université du Québec en Abitibi-Témiscamingue
Université du Québec en Outaouais
Université Laval

Saskatchewan

Carlton Trail College
Collège Mathieu - Saskatchewan
Cumberland College
Great Plains College
La Cité Universitaire francophone de
l'Université de Régina
North West Regional College
Northlands College
Parkland College
Saskatchewan Polytechnic
Southeast College
University of Regina
University of Saskatchewan

Yukon

Yukon College





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