



Online Delivery Trends:

*Online, Hybrid, and Multi-Access Learning and Teaching
in British Columbia: Post-Pandemic Trends and Intentions*

Prepared for BCCAT by George Veletsianos, Valerie Irvine, and Nicole Johnson

BCCAT

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We acknowledge the traditional, ancestral, and unceded territories where we live and work, which span the lands of the lək̓ʷəŋən peoples and the Songhees, Esquimalt and W̱SÁNEĆ peoples, to those of the Sumas and Matsqui First Nations, who are a part of the Stó:lō Nation.

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EXECUTIVE SUMMARY

This project undertook an analysis of the evolving nature of online, hybrid, and multi-access learning within the British Columbia (BC) post-secondary education system. This evolution was triggered by the use of digital learning in response to the COVID-19 pandemic. Our objectives were to assess potential changes in the scope and nature of online learning in BC, understand stakeholder insights on learner preferences towards online and hybrid learning, and identify areas for further exploration and discussion.

Provincial and Canadian data on the volume and type of online and blended learning are generally sparse, primarily due to difficulties in collecting enrolment data categorized by delivery mode. However, recent Canadian research indicates that higher education institutions anticipate offering more online and hybrid options. This aligns with changing learner preferences and the growing demand for such learning modalities, as indicated by studies in the USA and UK. Understanding these trends in the BC context is crucial, since returning to in-person education while simultaneously catering to the growing demand for online learning presents considerable challenges for institutions primarily built around in-person instruction.

To develop a greater understanding of changing digital learning modes and learner preferences, we conducted interviews with 25 individuals. These included administrators, faculty members, staff from the BC Ministry of Post-Secondary Education and Future Skills, and staff from system support organizations. The data from these interviews were analyzed using the constant comparative approach, and categorized into themes.

Participants reported that learners demand more online and hybrid options, and expect that online, hybrid, and multi-access learning will become more prevalent in the BC post-secondary system. The data also indicated that learner preferences are shaped by a variety of factors and vary across learner subpopulations. Additionally, modality is messy and masks variability, and the “right mix” of modalities is unknown. Finally, we suggest that online and hybrid learning may enable access, and may provide opportunities for equity, diversity, inclusion, and decolonization.

The report recommends that institutions:

- Develop criteria for determining course and program modality.
- Collect and analyze disaggregated data on learner preferences, choices, and contexts using consistent definitions of in-person, online, hybrid, and multi-access learning.
- Support faculty members’ development of teaching skills in online, hybrid, and multi-access contexts.
- Increase capacity for research, teaching, and collaboration.
- Approach alternative delivery modes with anticipation and foresight.



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INTRODUCTION

The goal of this project was to investigate whether and how the role of online and hybrid learning is changing in the British Columbia (BC) post-secondary system as a result of educational programming in the province going almost completely online during the COVID-19 pandemic. The specific objectives of the project were to: (1) assess whether the amount and nature of online learning is likely to change in the BC post-secondary system, and in what ways; (2) determine whether faculty, administrator, and ministry and other system-wide participants have observed changes in learner preference for mode of course delivery; and (3) identify specific areas for further research and discussion.

While there are some common understandings of the terms “online learning” and “hybrid learning,” how the terms are defined in BC and Canada vary from institution to institution (Bates, 2018; Johnson, 2021). In this report, we use Johnson, Seaman, and Poulos’ definitions of *online learning* as “all instruction and interaction is fully online (synchronous or asynchronous)” and *hybrid learning* as “a blend of online and in-person instruction (online instruction is synchronous or asynchronous)” (2022, p. 98-99). We use *multi-access learning* to describe courses with synchronous online and in-person learners (Irvine, 2020).

Context

Online learning in BC prior to the COVID-19 pandemic was considered a niche approach at most brick-and-mortar institutions. It was common in some institutions (e.g., Thompson Rivers University and Royal Roads University), continuing education/studies departments, and in programs catering to non-traditional students such as executives and leaders. Data on the volume and nature of online learning in Canada are generally limited due to challenges in gathering course enrolment data categorized by modality (Bates, 2018). These challenges include lack of agreement or consistency in definitions of online and hybrid learning, and lack of common coding and reporting structures across institutions tracking enrolments by specific modalities.

In 2017, the Canadian Digital Learning Research Association (CDLRA) conducted a pan-Canadian survey of course enrolments and perspectives related to digital learning, and published a report with findings from 19 BC institutions (Bates, Desbiens, Donovan, Martel, Mayer, Paul, Poulin & Seaman, 2017). The report positioned Canada as a “relatively mature market for online learning” (p. 12) and, for the most part, identified BC as a leader within the Canadian online learning landscape. The BC post-secondary system includes Thompson Rivers University, which offers a large number of online programs and courses, and Royal Roads University, which is a predominantly hybrid and online institution. Having these institutions in the BC system, along with Athabasca University in Alberta with many of its courses transferable to BC institutions, may impact the amount of online programming that other BC institutions offer, or have offered in the past.

Reports by the CDLRA in 2018 and 2019 indicated that over time more institutions in Canada offered online courses for credit. Institutions were more likely to report greater faculty acceptance of online learning, and many institutions placed importance on having a strategic plan for online learning (Bates, Donovan, Seaman, Mayer, Martel, Paul, Desbiens, Forssman & Poulin, 2018; Johnson, 2019). By 2019, roughly three-quarters of institutions in Western Canada had implemented, were implementing, or were developing a strategic plan for e-learning (Johnson, 2019). Overall, these data indicate that Canadian institutions have a long history of offering distance and online education; however, innovative digital practices were not uniform across BC. Veletsianos, VanLeeuwen, Belikov & Johnson (2021) analyzed the qualitative data from the 2017-2019 CDLRA surveys and noted that innova-

tive digital practices tended to be “situated within individual contexts, and there are substantial variations in the ways that respondents describe innovation” (p. 111).

When COVID-19 was first declared a pandemic in March 2020, every post-secondary institution in BC had to grapple with a new environment in which remote learning was a necessity. By the summer of 2020, most institutions had announced that they would continue with online instruction for the 2020-21 academic year. In-person education resumed on a large scale in fall 2021, with health protocols in place such as vaccine requirements, physical distancing, and masking requirements. It is important to bear in mind here, as well as in the rest of the report, that context matters. Some programs, such as trades education, offered in-person components during the 2020-2021 academic year under different conditions, such as fewer students per session and more scheduled sessions. These conditions were designed to accommodate learning practices that were challenging to offer remotely.

BC’s massive shift to primarily online instruction for nearly 18 months allowed large parts of the population to experience some form of online instruction, thereby influencing the perceptions of learners, educators, administrators, and parents toward online learning.

However, the implementation of online learning in BC during the pandemic varied widely. While all institutions faced a slew of challenges, some institutions and educators were better prepared to pivot to online education, due to having invested in online learning or having taught online prior to the pandemic. In other instances, the shift was abrupt and ill-prepared, especially at the beginning of the pandemic. BC is not an outlier in this: the implementation of online learning since 2020 has had varying levels of success.

The rapid transition to online learning in the early phases of the pandemic was generally considered temporary, with the expectation that education would return to in-person modality sometime in the future. For these reasons, researchers have noted that the online teaching and learning during the pandemic can be better characterized as *emergency remote teaching/learning* rather than online teaching/learning (Hodges, Moore, Lockee, Trust, & Bond, 2020). This study adopts this nuanced understanding of changes in approaches to online learning.

The research literature on remote teaching and learning provides extensive descriptions of its impacts, ranging from learners’ and instructors’ behaviours and experiences to policy and design considerations. For example, summaries of surveys of learners enrolled in Canadian institutions during the pandemic (Houlden & Veletsianos, 2022) show that many learners found value in flexibility, and benefitted from opportunities to enroll in courses and credentials that were unavailable online pre-pandemic. Some learners who were new to online education came to see value in online learning, while others were disappointed with the quality of instruction they experienced, and with the lack of social interactions that characterized many pandemic-era emergency remote learning designs.

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LITERATURE REVIEW

While many factors impact students' choice of course modality, such as cost, availability, timetabling and perceived quality, the compartmentalization of institutions into online and on-campus makes it difficult to truly examine learner modality preferences. Some learners not only select their institution for its primary mode of access to education, but also report preferences based on their earlier experiences, or lack of experience, with a modality (Artino, 2010). Artino's research also indicated that a learner's interest in future online course enrolment may be predicted by their satisfaction in past online courses. Bailey, Ifenthaler, Gosper, Kretzschmar, & Ware (2015) studied 744 undergraduate Arts students in Australia and found that in-person students felt the campus environment was of high importance, whereas online learners felt the opposite.

O'Neill, Lopes, Nesbit, Reinhardt, & Jayasundera (2021) noted that the small-scale nature of past modality studies limits researchers' ability to understand students' stated motivations for choosing one mode over another, beyond flexibility and convenience. In their review of modality preference studies, they pointed to methodological limitations and described the literature as "fragmentary", while recognizing that multiple factors may influence learners' decisions to choose one modality over another. As most studies of modality preferences collect data from learners who have already registered in courses in a particular modality, typically in-person, it remains difficult to make generalizable inferences around modality preferences.

Complicating this matter more recently are issues of student agency and student mental health during the pandemic. Since the onset of the COVID-19 pandemic, most learners had little modality choice for their studies other than online learning. This was always true for some learners: for example, those with disabilities, those in rural areas unwilling or unable to relocate, and those with caregiving responsibilities that make them unable to leave their homes for extended times. For these groups, online learning is not solely a matter of preference, but also a matter of need. As many of these learners are enrolled in primarily online institutions - or are excluded from participating in post-secondary education at all, due to lack of online options - research that focuses on the preferences of students in in-person institutions runs the risk of excluding those who - often for reasons of equity and access - attend primarily online institutions.

Many studies of student mental health have highlighted increases in student anxiety and stress, and declines in mental well-being during the pandemic. This theme arises in analyses of student surveys across Canada (e.g., Community Health and Social Innovation Hub, 2022; Houlden & Veletsianos, 2022). Much has been said about remote learning being associated with declines in student mental health, but a recent synthesis of the empirical literature found no strong evidence to support this association (Moore, Veletsianos, & Barbour, 2022). Nonetheless, if learners perceive stress and anxiety as being associated with remote learning, given that they may have been concurrently experiencing both remote learning and declines in their mental health, their modality preferences may reflect that association.

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Nonetheless, if learners perceive stress and anxiety as being associated with remote learning, given that they may have been concurrently experiencing both remote learning and declines in their mental health, their modality preferences may reflect that association.

Commonly cited factors affecting learner preferences include:

- Opportunities to have face-to-face encounters in combination with streamlined feedback provision, in blended learning (Pechenkina & Aeschliman, 2017)
- Convenience and flexibility (Braun, 2008; Harris & Martin, 2012; Kowalski, Dolph & Young, 2014; Kuzma, Kuzma, & Thiews, 2015)
- Financial resources and ability to complete coursework at home (Braun, 2008)
- Lack of availability of in-person course, and preference for instructor (Kuzma et al., 2015)
- Previous satisfactory experience in an online course (Artino, 2010)

Research on Learner Modality Preferences since the Onset of the COVID-19 Pandemic

The results of research in the BC and Canadian contexts since the onset of the COVID-19 pandemic seem to suggest that institutions are anticipating offering more online and hybrid options in the future, and that learner preferences are changing. Multiple surveys of institutional leaders conducted by the CDLRA indicated an anticipated increase in the volume of online and hybrid options in the future (Johnson, 2020, 2021, 2022); BC institutions in particular reported that students may want more digital resources and technology in their courses and more flexibility in how they can access their courses. Ninety percent of respondents to the 2022 CDLRA National Surveys of Online and Digital Learning¹ believe that students want flexibility in their choices of learning modality. However, 62% of international students desired hybrid learning, compared to 32% of domestic students. This difference may possibly be due to visa requirements for international students.

The findings from the BC data in these studies are comparable to broader trends observed outside Canada.

- In a survey of 2,400 students in the USA, Capranos, Dyers, & Magda (2022) reported that students “show an increasingly positive view of traditional online instruction” (p. 9). A survey of 125 students at California State University by Mitra and Stanley (2022) found a positive association between the quality of pandemic online learning experiences and students’ interest in selecting an online course format in the future. Those who had positive experiences as well as supportive spaces for study were more likely to indicate a desire to enroll in future online courses.
- A series of recent surveys investigating students’ modality preferences have also found an increased interest in and desire for online and hybrid forms of learning delivery. Educause conducted a national survey of 820 undergraduate students in the US in the spring of 2022 (Robert, 2022). Preferences towards mostly or completely online modality increased from 9% to 29% between 2020 and 2022. The data also show a decrease during the same time period, from 35% to 29%, in the number of students preferring completely face-to-face instruction. The report notes that these preferences are “related to meeting personal needs”, including online courses providing easier access for students with disabilities or challenging work or care schedules. Respondents felt that the shift to online learning did not negatively affect their learning experience; however, those who prefer in-person instruction highlighted social isolation and disconnection from peers and educators as a particular concern.

¹The participants in the survey were from 82 universities, 80 colleges outside of Québec, 51 CEGEPs, and 21 private subsidized colleges in Québec.

- The seventh *Changing Landscape of Online Education* (CHLOE) report (Garrett, Simunich, Legon, & Fredericksen, 2022) surveyed 300 chief online officers at US institutions to explore shifts in modality interest and preference. The respondents believed that hybrid forms of learning are increasingly common for undergraduate, graduate, and adult students. This is a change from believing that adult learners prefer online learning while adolescent learners desire learning experiences in-person.
- The Digital Learning Pulse Survey of two-year institutions, drawing from all public degree-granting institutions in the United States (Seaman & Seaman, 2023), produced similar findings on shifts in attitudes towards learning modalities. Nearly 60% of the surveyed students reported wanting to take more online learning, and 55% wanted to take more blended learning.
- A survey of 33,726 United Kingdom (UK) university students (Killen & Didymus, 2022) found that 45% of respondents preferred a mix of on-site and online learning, 42% preferred mainly on-site learning, and 13% preferred to be mainly online. Sixty-eight percent also felt that online learning was convenient. Similar to the results of Seaman and Seaman's (2023) research, the majority of respondents felt that the overall quality of online learning was above average. On a seven-point scale, 26% of respondents rated the overall quality of online learning as "excellent", with 45% rating it as "good" and four percent rating it as "best imaginable". Killen and Didymus also note concerns around community, with only 28% of respondents agreeing that "online learning made them feel a part of the community" (p. 7).
- In a US study by Joosten, Pfeifer-Luckett, Baker, Schletzbaum & Craig (2021), learners were asked to report their preferred modality prior to, during, and after the pandemic. Prior to the pandemic, about 52% of 4,879 participants reported preferring in-person instruction; after the pandemic, this percentage dropped to 29%. The percentage of respondents preferring mostly on-campus instruction increased from 12% pre-pandemic to 21% post-pandemic. The percentage preferring blended learning (defined in this study as a balance of both online and in-person) increased from slightly less than nine percent to 17%. The percentage preferring mostly online increased only slightly from just under five percent to six percent, while the proportion of students preferring all online instruction increased from 23% to 27%.

These findings indicate that the student preference for online and hybrid learning may be growing in the wake of the pandemic. BC-specific data, however, are scant. This study is intended, in part, to explore whether this preference is also growing in BC. Understanding this is important because returning to in-person education while expecting and responding to more interest in online learning presents formidable challenges to BC institutions that are primarily designed and organized around in-person instruction.

The data collection for this project is structured to address two research questions:

- What might be the role, volume, and nature of online learning in the BC post-secondary system? Is it likely to change?
- Have institutions or organizations identified changes in learner preference in terms of mode of delivery?

Answers to these research questions enabled us to identify specific areas for further research and discussion.

METHODS

Ethical approval for this study was provided by the Research Ethics Boards of Royal Roads University and the University of Victoria. To address the research questions, we used a qualitative approach.

Participants

We invited 60 individuals to participate in interviews. The invitation was extended via a personalized email that included a description of the research and a consent form. The 60 individuals were in a wide range of positions at BC public post-secondary institutions and the BC Ministry of Post-Secondary Education and Future Skills (PSFS). Individuals were identified through institutional websites, BCCAT recommendations, BC articulation committee lists, and our personal networks. We recruited participants purposefully to ensure diversity – to represent a variety of institutions and, individually, representing the diversity of the human experience. The invitation to participate also included a note asking potential participants to recommend others at their institution. Twenty-five of the 60 invited individuals participated in interviews. Fourteen were administrators (e.g., registrar, dean, director, associate vice-president), eight were faculty members, and three were employed at the PSFS or a system support organization. Eleven interviewees were at colleges, nine were at universities, and two were at institutes.

Tables 1 and 2 provide more specific information about participants and their organizations. We present participant data in two separate tables to further disaggregate data and ensure participant confidentiality. Position titles have also been slightly modified to ensure

Table 1. Participant Positions and Organization Types

Participant	Position*	Organization type
Administrator 1	Associate Dean	College
Administrator 2	Vice President	Institute
Administrator 3	Institutional Officer	Research-intensive university
Administrator 4	Director	Institute
Administrator 5	Registrar	College
Administrator 6	Vice President	College
Administrator 7	Registrar	College
Administrator 8	Associate Vice President	College
Administrator 9	Associate Vice President	Teaching-intensive university
Administrator 10	Registrar	College
Administrator 11	Associate Vice President	Teaching-intensive university
Administrator 12	Dean	College
Administrator 13	Associate Vice President	Teaching-intensive university
Administrator 14	Registrar	Teaching-intensive university
Faculty 1	Instructor & Program Head	Teaching-intensive university
Faculty 2	Chair	College
Faculty 3	Professor	Research-intensive university
Faculty 4	Professor & Chair	Research-intensive university
Faculty 5	Instructor	College

Faculty 6	Instructor	College
Faculty 7	Instructor	College
Faculty 8	Instructor	Research-intensive university
Ministry/Stakeholder 1	Director	n/a
Ministry/Stakeholder 2	Director	n/a
Ministry/Stakeholder 3	Director	n/a

* The disciplines represented by administrators and faculty were health, business, education, trades, English, biology, chemistry, and human services.

Table 2. Organizations Represented in the Data

BCcampus
Coast Mountain College
College of the Rockies
Justice Institute of British Columbia
Kwantlen Polytechnic University (two interviewees)
Langara College
Ministry of Post-Secondary Education and Future Skills (two interviewees)
Nicola Valley Institute of Technology
North Island College
Northern Lights College
Okanagan College (three interviewees)
Royal Roads University
Selkirk College (two interviewees)
University of British Columbia (responsible for both Okanagan and Vancouver campuses)
University of Northern British Columbia
University of the Fraser Valley (two interviewees)
University of Victoria
Vancouver Community College
Vancouver Island University

Data Collection

One member of the research team interviewed participants on Zoom, using a semi-structured interview protocol that enabled triangulation of data across the three types of organizations. The interview consisted of broad open-ended questions aimed to gather data on the role of online learning, changes in learner preferences in terms of modality, and areas in need of further investigation. The interview questions are presented in Appendix A. Interviews lasted between 35 and 55 minutes, were recorded, and were transcribed verbatim using an automated speech-to-text transcription software (Otter.ai). Each transcript was read and edited for readability and analysis by the interviewer, prior to distribution to the three research team members for coding and analysis. Audio files of the interviews were then deleted.

Data Analysis

A constant comparative approach (Glaser & Strauss, 1967) was used to analyze the data. The three researchers read through all the transcripts to gain an overall understanding of the data. Each researcher read the transcripts independently and created codes and themes aligned with each of the research questions. The independently created codes were then compared, discussed, adjusted, and merged into larger themes. Throughout the process of data collection and analysis, the researchers met regularly to discuss findings and patterns. Following the researchers' independent and collaborative analysis, the lead researcher took responsibility for merging and synthesizing the final set of themes.

Credibility and Trustworthiness

We took multiple steps to minimize the incidence of bias in the analyses. First, we independently reviewed transcripts prior to discussion of initial codes, to avoid influencing one another's understanding of the data. Second, we purposefully invited as wide and diverse a sample of interviewees as possible, aiming for broad representation across institution types, geographic locations, disciplines, participant roles, and participant gender. Third, we compared data between participant groups, to check for differences and unique perspectives between participant roles. Fourth, we continued interviewing participants until we felt that there were sufficient data and that the data were adequately representative of the diversity in the BC post-secondary system. Fifth, we continued adding and analyzing data until we felt that we had reached thematic saturation, when ongoing analysis failed to generate new codes or themes.

Limitations

One possible limitation to our study is whether the interviewees sufficiently represent the BC post-secondary sector. We sought to address this challenge by incrementally adding participants to our sample to address any shortcomings in representation, and by recruiting individuals who represented different institutions, institutional types, geographic regions, participant roles, and disciplines. Although we do not have representation from every BC institution, by the end of the fifteenth interview, we were hearing very little that was new. We continued interviewing participants to confirm our suspicion that we were reaching saturation. By the twenty-fifth interview, we were confident that while additional interviews might yield some insights into local institutional realities, those insights were likely to already be reflected in the broader data. The number of interviewees in this study is consistent with methodological recommendations in the literature (e.g., Baker & Edwards, 2012).

Since this study relied on a single data collection method, there are limitations to the inferences that can be made, such as the degree to which findings are representative of the sector. Nonetheless, this study's qualitative approach can generate nuanced insights that other methodologies might fail to generate.

We did not collect data in a way that would allow us to conduct comparative analyses between different classifications, such as comparing responses from universities and from colleges, or research-intensive institutions and teaching-intensive institutions. We report themes that are present across participant responses; however, our in-depth interview protocol was not designed to identify patterns between different categories of respondents. Thus, comparative analyses are beyond the scope of this project.

RESULTS

We identified five thematic categories in the interview data, as shown in **Table 3**. We discuss each theme below, with findings supported by representative quotes.

Table 3. Thematic categories

Online, hybrid, and multi-access learning in the BC post-secondary system are expected to become more prevalent, but the “right mix” is unknown
In-person education is predominant, but modality is messy and masks variability
Learners are demanding more online and hybrid options, but shifts in learner preferences are shaped by a variety of factors and learner demographics
Modality preferences and online/hybrid enrolments relate to learner desire and need in the context of institutional offerings
Online and hybrid learning can enable access, and can provide opportunities for equity, diversity, inclusion, and decolonization

Online, Hybrid, and Multi-Access Learning in the BC Post-Secondary System are Expected to Become More Prevalent, but the “Right Mix” is Unknown

Nearly all participants expect online and hybrid learning to become more prevalent in the BC post-secondary system, particularly compared to pre-pandemic offerings. For instance, five participants mentioned that their institutions were working to figure out how much of their programming should be delivered in online, hybrid, or multi-access modes going forward. Five other participants noted that enrolment patterns at their institution indicated a high demand for online course offerings, as evidenced by waitlists for online course sections. Even though some participants noted their personal desire for returning to higher levels of in-person instruction, there was a broad recognition that online and hybrid learning in the province will not return to pre-pandemic levels, is becoming a normal part of operations, and is no longer limited to being offered by a few select institutions.

However, participants have not been able to determine the right mix of online, blended, and in-person courses at their institutions, and have not yet been able to reach the equilibrium that existed pre-pandemic. Administrator 11 cautioned that:

[Online and blended offerings] have changed every single semester since we started to go from completely online with a handful of things on campus. So we have not reached a stable state. So do not interpret this as where we're going to be. In fact, we may have not enough online because our demand for online is higher than what we're offering. We have higher fill rates in our online sections and more waitlists for online sections.

Another participant also urged caution: “It's going to take probably another two to three years for us to come down out of this COVID mindset as a system. And we're only in year one of that. So, we're still kind of finding out where we are. And it'll take a bit of time and patience” (Administrator 2). Transitory periods seem to be common:

In the years previous, we were exclusively online, as many institutions were. Our thoughts are, “okay, we've done it in-person, we were forced to pivot to online exclusively. Now, we're doing a little bit of both, because the nature of the content we teach is very interpersonal.” So, there is this desire to be in-person. Putting that all together for next year, our thoughts are like, “we can probably offer it in all formats.” So that's the direction we're hoping for - the powers that be permitting. (Faculty 7)

In-Person Education is Predominant, but Modality is Messy and Masks Variability

Early feedback on this study encouraged us to invite participants to report specific numbers or percentages of each type of course being offered, including in-person instruction, to develop a general sense of institutions' and programs' current balance of offerings. Nearly all participants provided estimates that we combined into Table 4. This table identifies the interviewee's understanding of the proportion of in-person, online, and hybrid education offered at their institution (for administrators), program (for faculty), and province-wide (for system-level participants).

Table 4. Percentage of Courses Offered by Modality, as Reported by Participants

Participant	Organization type	% Online	% In-person	% Hybrid (if separate)	Hybrid grouped with
Administrator 1	College	10	90		In-person
Administrator 2	Institute	35-40	60-65		
Administrator 3	Research-intensive university	10-15	85-90		In-person
Administrator 4	Institute	30-40	60-70		
Administrator 5	College	10-20	80-90		Online
Administrator 6	College	40	60		In-person
Administrator 7	College	15	85		Online
Administrator 8	College	30	50	20	
Administrator 9	Teaching-intensive university	20	80		In-person
Administrator 10	College	25	63	12	
Administrator 11	Teaching-intensive university	10-20	80-90		Online
Administrator 12	College	25	75		Online
Administrator 13	Teaching-intensive university	30	70		In-person
Administrator 14	Teaching-intensive university	Varies over the duration of the program			
Faculty 1	Teaching-intensive university	15	85		
Faculty 2	College	25	75		
Faculty 3	Research-intensive university	10	90		
Faculty 4	Research-intensive university	-	85	15	
Faculty 5	College	20-30	70-80		
Faculty 6	College	25	75		
Faculty 7	College	10	90		
Faculty 8	Research-intensive university		85	15	Online

Ministry/ Stakeholder 1 ^a	n/a	75	25		
Ministry/ Stakeholder 2	n/a	20	60	20	
Ministry/ Stakeholder 3	n/a	10-20	80-90		In-person

^a Estimate for Indigenous institutions only

In-person instruction is currently the predominant mode of course and program delivery, even when participants reported a higher-than pre-pandemic amount of online and hybrid courses. Administrator 12 said: “We’re seeing more blended. I suspect in health and social development [disciplines] we’re unlikely to see fully online programs. But certainly, more and more blended options are provided for students.” Participants also frequently described using a variety of modalities to address student and institutional needs. A faculty member noted that their institution also offers:

A streaming option, which is where we’ll have people teaching in one campus, and then it’s streamed to other campuses. And so, students come to a specific classroom and join in on that classroom. Students are able to hear the instructor and communicate with classmates. And so, several of our courses are offered that way, just because of lower numbers in the courses and also ensuring we can have faculty reach all our campuses. (Faculty 6)

While many participants discussed synchronous and asynchronous online delivery, the data gathered do not reliably indicate whether one format is more prevalent. Administrator 3 said:

There are some courses that are synchronous [where students] go online at the same time as the instructor. But more and more we’re sort of seeing that maybe the online can happen at the students’ own pace and the time of day that they want to review the meeting, or the course information, course materials and the lesson of that particular day. And so, in those instances, even though they’re stated as being synchronous classes, there are components of them still that might be asynchronous, or a student can select more than one synchronous interaction with that course.

This quote also illustrates the variability in participants’ definitions of modalities as blended or hybrid. This variability was most pronounced in definitions of hybrid learning. The hybrid learning experiences described at the program level included students’ ability to take some courses in person and some courses in an online or multi-access format. At the course level, participant descriptions of hybrid offerings ranged from mostly in-person experiences with some online components to multi-access designs which combined concurrent on-campus and online options – for example, some learners in person in the classroom, other learners attending a remote learning hub in-person, and others attending online using video conferencing tools. Another type of hybrid design included segmented course components offered in different modes. An administrator stated that their institution has “some courses that might be delivered online, but the exam is in-person. Or, and we still call them online, we can break down whether the course is online asynchronous with an in-person exam, or online asynchronous with a synchronous exam. It’s kind of complicated.”

These findings highlight two significant challenges. The first is the lack of common definitions of learning modalities. The second is that defining courses and programs solely by modality fails to capture the diversity of in-person and remote experiences within them. These inconsistencies may also affect how enrolments in online and hybrid courses are tracked. Table 3 indicates that hybrid offerings are at times identified separately (reported by four participants), grouped with online courses (four participants), or grouped with face-to-face courses (six participants).

These differing definitions make comparisons and benchmarks difficult, and present significant challenges for both institutions and governments. When data are not consistently categorized across institutions, it is difficult to accurately identify or compare enrolments and offerings in online and hybrid variants. Decision-making guided by such data may be problematic. Even if these data provide some insight into the prevalence of certain modalities, we urge readers to examine modality more closely if they aim to make comparisons across institutions. Institutions should also strive for a common and explicit definition of modalities, such as UBC's definitions of its course delivery modes.²

Learners are Demanding More Online, Hybrid, and Multi-Access Options, but Shifts in Learner Preferences are Shaped by a Variety of Factors and Demographics

Overall, participants reported that learners are demanding more online, hybrid, and multi-access learning options. Participants reported several factors shaping decisions to adopt modalities other than in-person learning, such as fiscal and physical space constraints, access to learning design and technical support, and students' off-campus access to the Internet. Some participants cited institutional surveys of learners that reported these changing demands, while others simply perceived this trend based on interactions across campus and on registration trends and waitlists.

The finding of increased demand for online, hybrid, and multi-access options was neither universal nor constant, and needs to be approached with caution. While learner preferences in BC institutions seem to be changing, this is highly contextual and is dependent on learners' "own personal situations and work and family life and so forth" (Administrator 14). Notably, opinions about learners' preferred modality varied at the individual level, by subject domain, by geographic region, and by institution. Administrator 1 stated that "you'll hear different students will prefer one way or the other" and Administrator 12 observed that "some students are really interested in just keeping everything face-to-face and other students would like a combination: some courses that are online [or blended] some that are face-to-face." Perceived shifts in learners' preferences within the same institution varied by program, as noted by Administrator 13: "It's also discipline-specific. We have some disciplines, for example our nursing program or our dental hygiene program, which definitely, you know, that everyone's preference was 'it's face-to-face and applied.' And then there were other programs that you could go back to sort of apply a blended or hybrid model." Administrator 12 highlighted the variance that might exist across institutions, when they noted that one institution's leadership may declare "this is our stance, but faculty are doing whatever the hell they want," while another institution may be able to say, "we're face-to-face' and walk away."

Our analysis also revealed that learner preferences may change depending on:

- individual contexts, e.g., commuting time; previous experience with quality of online, hybrid, or multi-access learning;
- type of learner population, e.g., first-year learner, Indigenous learner, international learner;
- program or subject, e.g., nursing vs. trades;
- type of institution, e.g., college vs. university; and/or,
- geography, e.g., rural vs. urban.

Variations in any of these contexts or experiences are likely to be reflected in differing learner preferences and enrolment patterns. Participants perceived that shifts in learner preferences may reflect the needs, concerns, desires, experiences, and idiosyncrasies of different kinds of learner subpopulations. There were twelve different subpopulations identified in the data: first-generation learner, high school learner, adult pre-college learner, first-year learner, graduate-level learner, Indigenous learner, international learner, adult professional learner, rural learner, learner with a family, working adult learner, and learner with disabilities³.

² See <https://students.ubc.ca/enrolment/courses/course-modes-delivery>

³ We provide some additional quotes in Appendix B to highlight perceptions of variations between learner subpopulations.

Administrator 3 noted:

Grad students were very similar in saying the same sorts of things, that they would prefer some online, but really would like the majority face-to-face ... grad students definitely want to have that face-to-face interaction with other grad students, as well as to be part of that lab, but also want to have a component of online. So there's no groups so far that we've looked at that say, 'I absolutely want to be in-person 100%.' They all want to have majority in-person, but the flexibility and the additional parts online for additional courses online.

Similarly, Administrator 14 notes that parents appreciate flexibility:

And so just the convenience and the ability to what we've heard from students is that they're actually willing to take an additional course if they can fit it in, because they can fit it in because the online piece, right, and so we've seen that shift in FTE count ... Students have told us, you know, "I can put the kids down and then watch my class. And that's not something that was an option for me before. I knew I had to actually come to campus to take a 7pm to 10pm course in a classroom. And so, I would opt not to do that. But if I can do that online, then I will."

It is also important to note that these demographic groups may be intersectional. For example, a rural learner may be a parent, or a first-generation learner may be Indigenous. Some of these learner subpopulations, such as international students and first-year students, were mentioned frequently, while others, such as disabled learners, were mentioned infrequently.

There were also inconsistencies in descriptions of trends for modality preference within a subpopulation. For example, one participant reported that graduate students prefer more online learning, while another reported that graduate students prefer more on-campus learning. Without additional data, and with the limitations of the data collection methods for this study, we cannot speculate further on the reasons for these incongruencies. We encourage readers to avoid overgeneralizing learner preferences based on demographic factors, or on single indicators of identity.

Modality Preferences and Online/Hybrid Enrolments Relate to Learner Desire and Need in the Context of Institutional Offerings

Participants understood that shifts in enrolments may not be only because of learner needs and desires, but also because of the kinds of modalities the institution makes available. Some learners may prefer in-person classes, but their institution may not offer in-person classes or classes that meet their specialized needs. Preferences therefore can be driven by desires – such as the learner's opinion on which mode is better for them - and needs, such as the need for a particular type of accessibility.

A learner's *preference* may depend on a variety of factors, such as:

- a balance between online and in-person courses to minimize screen time;
- previous experiences with a particular modality; and/or,
- their perceptions of the relative effectiveness of in-person vs. online learning.

In contrast, a learner's *needs* may be shaped by:

- geography, such as a learner preferring to attend online but not having access to an online course or program;
- limitations on their abilities, such as mobility, autoimmunity issues, anxiety, or severe allergies, which may require supports that may not be possible in in-person settings;
- program availability – for example, the availability of a program at a local institution, or a lack of availability that makes online courses the only real possibility; and/or,
- constraints around family and employment.

These three quotes from participants reflect the interplay between learner needs and preferences.

What I've heard from students is they like it when they can pick what works best for them. And we don't always have that opportunity. When we're talking about a cohort of 24 students, we can't have an online option for some and face-to-face option for others...we just can't, it wouldn't be feasible. But I think there is a lot of demand for that, that students would like to be able to pick and choose what works best for them. Feedback from students showed us that it [online learning] worked well, and it provided them some work-life balance particularly if it was asynchronous, that students were able to do that when it worked for them. And it just allowed a bit more flexibility. So, I think that was the big piece. (Administrator 12)

But anecdotally, we see a lot of students really happy to get back to on-campus and in-person learning. We know online learning works for some, but not all. And so we see students really appreciating the social aspects and the developmental aspects of being with their peers and learning community, and back on campus. We see the students that struggle with accessibility needs, etc., are usually much better and more comfortable learning with in-person support, etc. So, I think if I had to pick, do students prefer in-person or online, I think we still see lots of students really preferring in-person, but then we know, there's this demographic and they're balancing family, and work and travel and relocation issues, etc., where online does really suit their needs. So that's why we continue to do both whenever we can. (Administrator 6)

Those preferences sometimes are a snapshot of a point in time. So yes, when we were having really slow processing times from IRCC [Immigration, Refugees and Citizenship Canada] for international study permits, international students were predominantly all choosing fully online classes because they couldn't be here. So for them it was a necessity. As study permit processing times have changed, some of that has shifted, where we now do have more international students that are physically here. And so, they're not taking fully online, out of necessity. (Administrator 14)

Participants reported many factors that influence the availability of modality options at their institutions, such as institutional decisions, faculty preferences, staffing issues, collective agreements, space constraints, and capacity to offer quality online programming. These factors were described as influencing the amount of online programming, such as when an administrator noted that "as an institution, we're struggling a bit on the other side of the equation and that is how to support faculty appropriately [in teaching in online and hybrid modes]." Although there may be a desire for more online, hybrid, and multi-access course offerings, expansion of these types of programming is sometimes limited by policies, mandates, infrastructure, resources, and space needs. Administrator 8 highlighted how their institution's predominant modality guided decision-making:

For a long time, we were just a face-to-face institution. What drove all our policies and systems and that sort of thing are really designed around, you know, a faculty model that delivers face-to-face instruction. And even the collective agreement reflects that. So now we're in a situation where that's being upturned a little bit.

In other cases, the program or course content impacts modality decisions. Administrator 3 noted that "in instances where people do need to actually be in-person and hands-on with somebody watching them, then there are going to be those labs or courses where they need to be there in-person. And that's a requirement." Similarly, a faculty participant highlighted the challenging circumstances that delimit their department's online offerings.

In terms of the challenges, we feel severely under-resourced as it is to deliver the courses that we need to deliver. We've had to kind of strip back on the number of sessions and instructors. And then to think about, 'oh, well, should we do this course online?' Well, ideally, yeah... we'd be able to do this course or a section of this course online...a section of that course in-person... I think we'd all be fine with that, to give the students options. But we don't have that option. We can't be doubling the number of courses that we teach, unless somebody's going to fund that. So it makes it a bit challenging. (Faculty 3)

This finding is significant. While online, hybrid, and multi-access enrolments may reflect learner preferences, they are also reflective of institutional capacity and constraints. In other words, operational factors shape the availability of online, hybrid, and multi-access options that are available to students, and therefore affect enrolments in each type of course. Administrator 13 provided an example of the ways that modality offerings are determined at their institution.

Participants reported many factors that influence the availability of modality options at their institutions, such as institutional decisions, faculty preferences, staffing issues, collective agreements, space constraints, and capacity to offer quality online programming.

Effectively – institution-wide, within departments, faculties, divisions, school – people have made their own decisions about how many courses they want to offer online, and how many they want to have designated face-to-face. What's their standard? Some people, some departments have said, "No online; we want to see all of our courses back to face-to-face." Others have said, you know, "We're happy with whatever the instructors decide." Others have said, "Oh, you know, we can, we'd like to parallel the institutional breakdown of 25-75".

Online and Hybrid Learning Can Enable Access, and Can Provide Opportunities for Equity, Diversity, Inclusion, and Decolonization

Many participants noted that one of the primary benefits of more online, hybrid, and multi-access programs and courses is increased access for students. Regardless of where an individual institution is located, decisions about whether to offer a course in a particular modality, or in multiple modalities, appear to be heavily driven by access-related issues. In most instances, the underlying need for access was linked to the need for flexibility. Students may require the flexibility to take courses fully or partially online for many reasons, but some of the most prominent reasons mentioned in the interviews were:

- students have to commute a long distance to campus, particularly in communities where driving may be hazardous in the winter months;
- housing and transportation costs create barriers to on-campus learning;
- there is a need to remain within one's local community and not travel to a different community, as may be the case for Indigenous students, students with caregiving responsibilities, or students with employment commitments.

For example, Faculty 7 noted that:

being at a rural institution, there's lots of barriers to traveling in our area, everything from the weather to just the distance. You can live in our region, but still not really be able to travel daily. An hour-and-a-half commute, a two-hour commute is regular around here - that's definitely a barrier. Some students will not be able to do that.

A few participants also specifically tied access to equity, diversity, inclusion, and decolonization (EDID). Administrator 2 said that a range of modalities "might create access for a whole swath of people we never dreamed of." Such individuals may be the kinds of learners that Administrator 1 was thinking of when they noted:

[We] had a carpentry student who had to drive 120 kilometers round trip every Monday, because she didn't have Wi-Fi at her home or in her home nation. So, she would come down here, do her shopping, sit in the parking lot, and download the materials that she needed for the week, and then drive back every Monday.

Administrator 13 highlighted that efforts to increase access mean “continuing to work towards truth and reconciliation in all that we do” including “decolonizing practices, decolonizing those virtual spaces, decolonizing the way that we engage in those virtual spaces and so on,” guided by such works as the “Truth and Reconciliation Commission [report], the Declaration on the Rights of Indigenous people, the current BC provincial mandate on accessibility, the Accessibility Act.”

Operational factors shape the availability of online, hybrid, and multi-access options that are available to students, and therefore affect enrolments in each type of course.

While much of the conversation in BC institutions focuses on whether online and blended learning are as effective as in-person learning, the research in the distance and online education field has moved beyond that debate. The consensus is that it is learning design, rather than modality, that is instrumental and that shapes the effectiveness of educational offerings. It is important to understand the ways in which different modalities and designs constrain or support EDID ideals, without assuming that in-person education is the most accessible modality.

DISCUSSION AND RECOMMENDATIONS

Our interview participants have observed changes in learners' modality preferences, and expect an ongoing role for online, hybrid, and multi-access learning in BC, even if they anticipate in-person learning to be predominant. These findings need to be qualified, not only because they are based on the perceptions of a select group of individuals who represent predominantly in-person institutions, but also because they are highly contextual. Some institutions, for some learners in some disciplines, will rely heavily on online, hybrid, and multi-access offerings, while other institutions, for some learners in some disciplines, will rely heavily on in-person offerings. This variation will also become evident within institutions, especially at large institutions which serve diverse student bodies and diverse disciplines; different units may rely more on some modalities than others.

Based on both the results of this report, broader research, and broader trends, we urge readers to consider that online, hybrid, and multi-access learning has become a normal part of institutional offerings, and that learner preferences, while not universal, are shifting. We conclude this report by discussing our findings and framing the discussion with recommendations.

Recommendation 1:

Develop Criteria for Determining Course and Program Modality

BC post-secondary institutions face an increasingly complex environment of economic, environmental, and public health challenges, while technological advances – such as generative artificial intelligence – may shift traditional practices. In this environment, institutions are called upon not only to continuously maintain an understanding of learners' changing needs and preferences, but also to determine when and how to support online, hybrid, and multi-access learning options.

One question that BC institutions will need to answer is: What criteria should be used to determine the mode of delivery for a post-secondary program or course? We recommend that such criteria acknowledge learner needs, institutional realities including policies and infrastructure, and the research findings that no single modality is better than another. Institutions should support effective, efficient, engaging, equitable, and ethical learning independent of modality. Institutions may need to develop digital learning strategies and policies, and recruit and/or upskill highly qualified faculty and staff at all levels. One starting point for exploring these issues may be the recently released BC Post-Secondary Digital Learning Strategy (Government of British Columbia, 2023), which institutions may use and reflect upon in the context of their local realities.

Recommendation 2:

Collect and Analyze Data on Learner Preferences, Choices, and Contexts

Participants highlighted that their units and institutions are trying to make sense of the shifting landscape around learning modality. Complicating this issue is the fact that learner preferences are both complex and evolving. To develop a greater and more nuanced understanding of this landscape, we urge institutions, policymakers, and organizations such as BCCAT to collect and analyze data surrounding learner preferences, choices, and contexts such as individual academic disciplines. Further, we suggest:

- Using consistent definitions of in-person, online, hybrid, and multi-access learning.
- Disaggregating data by various factors, such as learner subpopulations.
- Recognizing that learner preferences and enrolment choices are two distinct constructs. Learners make modality choices based on both personal circumstances and course availability (i.e., they enroll in the options that are available to them, which may not reflect their preferred modality).

While some learner data are available at the institutional level and are incredibly valuable, these are rarely comparable across institutions, partly because BC institutions do not use a consistent definition of modality. There are two challenges here: agreeing on common definitions, and ensuring their consistent use. Meeting these challenges is especially complicated because several provincial and federal organizations (e.g., BC Student Transitions Project, Statistics Canada) collect and compare a variety of data surrounding learner experiences and characteristics. At the provincial level, the BC government – through the BC digital learning strategy and in collaboration with organizations such as BCCAT and CDLRA – may be best positioned to ensure consistent and comparable use of terms and data collection. Definitions have been developed by Irvine (2020) and Johnson (2021), and evaluated by Johnson, Seaman, and Poulin (2022).

To develop a province-wide picture of learning modalities and preferences, we recommend a longitudinal and multi-institutional research effort that gathers data directly from students. Such data would not account for institutional constraints that affect decisions around delivery modes, but would enable institutions to develop a clearer and broader view of learner preferences and needs. Interviewees indicated that their institutions are aware of learners' diverse needs and are doing what they can within the constraints they face, but the data upon which some participants relied were anecdotal or centered around the imagined learners that would attend their own institution. A longitudinal and multi-institutional research effort such as a survey, structured around consistent definitions and disaggregated data, would aid the sector in learning more about the learners it serves, and could also enable institutions to reliably compare themselves to others.

Recommendation 3:

Support Faculty Members' Developing Teaching Skills in Online, Hybrid, and Multi-access Contexts

The findings of this report indicate that institutions need to develop concerted efforts to prepare faculty members to teach in online, hybrid, and multi-access modes. Such efforts ought to target both current faculty members and future faculty members (e.g. doctoral students). Given the increasing prevalence of online and hybrid learning, and the evidence around shifting learner preferences and needs, we recommend that institutions support and prioritize the development of teaching expertise and digital learning/teaching literacies. While some faculty positions already require completion of training such as the Provincial Instructor Diploma Program or the Instructional Skills Workshop, we urge institutions to develop additional programs and efforts focused on the diverse skills and literacies necessary to teach in digital contexts, and advancing proficiency in online and blended teaching.

Two considerations are important for institutions embarking on these types of initiatives. First, institutions ought to avoid placing the onus of upskilling and professional preparation on individuals. They should consider that part of the responsibility for preparing faculty to teach well in online and blended settings lies with the institution. Institutions should provide the supports, resources, and time that faculty members will need to cultivate their skills and literacies. Second, upskilling faculty to teach in digital settings should not be seen as implying that faculty do not need professional development in face-to-face teaching. Faculty members need preparation for teaching in all contexts, especially in relation to significant issues such as decolonization which are independent of context. Setting a higher standard for teaching in digital contexts may disproportionately impact some faculty and some programs (e.g., those units and faculty that are more likely to offer online programs). Furthermore, it is well-known that doctoral programs rarely prepare faculty to teach. Institutional efforts to improve instructional effectiveness will contribute to raising the standard of teaching for all faculty in all modalities.

Recommendation 4:

Increase Capacity for Research, Teaching, and Collaboration

Further research on identifying needs, obstacles, and opportunities for resource sharing would be beneficial regardless of whether this focuses on infrastructure, staff, curriculum, or other resources. Such efforts are occurring across the province, but BC institutions could benefit from sharing resources and expertise. For example, the BC post-secondary sector could explore how a shared services model for procuring hardware and software may apply to other resources. Collaboration may include shared programming between institutions, such as joint credentials or pathways, and cost-benefit analyses could assist in assessing the feasibility and outcomes of such efforts. It would also be useful to consider past examples of such collaborations and learn from them, such as the past collaboration between BCcampus and several applied business technology and office administration programs to offer joint enrolments province-wide. Because all institutions face a shifting landscape around digitization, learner preferences, and learner needs, it behooves them to consider ways to collaborate.

Recommendation 5:

Approach Alternative Delivery Modes with Anticipation and Foresight

Based on our findings and understanding of the broader field, we believe that a return to the way things were prior to the COVID-19 pandemic is unattainable. We urge institutions to approach online, blended, and multi-access offerings – as well as the innovations that surround alternative modalities – not only with intentionality, but also with anticipation and foresight. These modalities are part of normal practice for institutions across Canada and the rest of the world. Questions that BC institutions should ask themselves now might include:

- What do our learning futures look like? What *should* they look like?
- Are these futures aligned with our values?
- Are these bright, hopeful, and equitable futures?
- What kinds of investments do we need to make now to achieve the learning futures we aspire towards?
- How can we involve the individuals who will be most impacted by the future (e.g. current and future learners) in co-designing the institution's learning experiences in the future?
- What residues of our past are preventing us from moving forward?
- How could we further embrace a justice-oriented mindset that prioritizes equity, diversity, inclusion, and decolonization?

Readers may perceive these questions as suggesting the adoption of online, blended, and multi-access forms of learning. We emphasize that these modalities are part of a toolkit and should not be treated as ready-made solutions to the multitude of problems that BC post-secondary institutions are facing. Approaching the futures of our institutions with anticipation and foresight requires asking the questions above, and asking other questions that can empower institutions. Our institutions and leadership have been called upon to respond to ongoing crises over the last few years, and we must recognize that to move forward, we need to do so cooperatively.

CONCLUSION

This study investigated whether and how the role of online and hybrid learning is changing and how learner preferences for online, hybrid, and multi-access learning are shifting in the BC post-secondary system. We solicited input from faculty members, administrators, and system-wide stakeholders. Our major findings included that in-person education is predominant in the province, but that learners may be demanding more online and hybrid options, and that online, hybrid, and multi-access learning in the BC post-secondary system may become more prevalent.

We also found that shifts in learner preferences are shaped by a variety of factors and vary by learner subpopulations; that modality is messy and masks variability; and that the “right mix” of modalities is unknown. Finally, we suggested that online and hybrid learning may enable access, and may provide opportunities for equity, diversity, inclusion, and decolonization.

The five specific and practical recommendations of the report center on the premise that online, hybrid, and multi-access learning are a normal part of operations, and that faculty members, administrators, policymakers, and leaders in general ought to consider these modalities part of their toolkit. To this end, we urge readers to consider the implications of our findings and recommendations in the context of their own institution’s operations, and engage in expansive conversations around the roles of these modalities in their institution’s futures.

The five specific and practical recommendations of the report center on the premise that online, hybrid, and multi-access learning are a normal part of operations, and that faculty members, administrators, policymakers, and leaders in general out to consider these modalities part of their toolkit.

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APPENDIX A: Interview Protocol

Faculty Questions	Administrator Questions	Ministry/Stakeholder Questions
<p>When I use the term “online and blended learning” today I am considering programs of courses which are fully online or partially online.</p> <p>What are the typical kinds of online and hybrid learning that you are offering in your program area? Are they synchronous or asynchronous? Are they self-paced or led by an instructor?</p>	<p>When I use the term “online and blended learning” today I am considering programs of courses which are fully online or partially online.</p> <p>What are the typical kinds of online and hybrid learning that you are offering at your institution? Are they synchronous or asynchronous? Are they self-paced or led by an instructor?</p>	<p>When I use the term “online and blended learning” today I am considering programs of courses which are fully online or partially online.</p> <p>What are the typical kinds of online and hybrid learning that you are seeing in the province? Are they synchronous or asynchronous? Are they self-paced or led by an instructor?</p>
<p>If you had to estimate the percentage of face-to-face, blended, and fully online courses in your program area, what would you say that is?</p>	<p>If you had to estimate the percentage of face-to-face, blended, and fully online courses at your institution, what would you say that is?</p>	<p>If you had to estimate the percentage of face-to-face, blended, and fully online courses in the province, what would you say that is?</p>
<p>In your program area, do you anticipate any changes in the nature and volume of online and blended learning post-COVID moving forward?</p>	<p>At your institution, do you anticipate any changes in the nature and volume of online and blended learning post-COVID moving forward?</p>	<p>In the province, do you anticipate any changes in the nature and volume of online and blended learning post-COVID moving forward?</p>
<p>Why do you say this?</p>	<p>Why do you say this?</p>	<p>Why do you say this?</p>
<p>In your program area and institution, what drives decision-making around how much online and blended education is taking place versus face-to-face education?</p> <p>[follow-up 1: what else drives these decisions at the program level?]</p> <p>[follow-up 2: what else drives these decisions at the institution level?]</p>	<p>At your institution, what drives decision-making around how much online and blended education is taking place versus face-to-face education?</p> <p>[follow-up: what else drives these decisions?]</p>	
<p>What role do you see online and blended learning playing in your courses or in your department in the future?</p>	<p>What role do you see online and blended learning playing in your institution in the future?</p>	<p>What role do you see online learning playing in the province in the future?</p>

Faculty Questions	Administrator Questions	Ministry/Stakeholder Questions
Since beginning to return to campus over the last year or so, have you noticed any changes in what learners in your program area or department prefer in terms of the mode of delivery of their courses?	Since beginning to return to campus over the last year or so, have you noticed any changes in what learners at your institution prefer in terms of the mode of delivery of their courses?	Since beginning to return to campus over the last year or so, have you noticed any changes in what learners in the province prefer in terms of the mode of delivery of their courses?
Why do you think that is? [regardless of whether they say yes or no]	Why do you think that is? [regardless of whether they say yes or no]	Why do you think that is? [regardless of whether they say yes or no]
Have you noticed any patterns in these preferences? For example, have you noticed any patterns specific to any particular student populations?	Have you noticed any patterns in these preferences? For example, have you noticed any patterns specific to any particular student populations?	Have you noticed any patterns in these preferences? For example, have you noticed any patterns specific to any particular student populations?
Have you noticed any other ways in which learner preferences towards online, blended, or in-person learning have changed since the pandemic?	Have you noticed any other ways in which learner preferences towards online, blended, or in-person learning have changed since the pandemic?	Have you noticed any other ways in which learner preferences towards online, blended, or in-person learning have changed since the pandemic?
Do you expect any changes in the amount of online teaching that you will be doing at your institution in the near future?	Do you expect any changes in the amount of online learning at your institution in the near future?	Do you expect any changes in the amount of online learning that will be happening in the province in the near future?
Do you expect any changes in the nature of online teaching that you will be doing at your institution in the near future?	Do you expect any changes in the nature of online learning at your institution in the near future?	Do you expect any changes in the nature of online learning that will be happening in the province in the near future?
If online and blended learning continue at your institution, what kinds of policies, supports, or infrastructure are necessary to assist you and your program?	If online and blended learning continue at your institution, what kinds of policies, supports, or infrastructure are necessary to assist your institution?	If online and blended learning continues in our province, what kinds of policies, supports, or infrastructure are necessary at the provincial level to assist institutions?
Thank you very much. Is there anything else that you'd like me to know before we end this interview about learner preferences or online learning in your program area and discipline in the near future?	Thank you very much. Is there anything else that you'd like me to know before we end this interview about learner preferences or online learning at your institution in the near future?	Thank you very much. Is there anything else that you'd like me to know before we end this interview about learner preferences or online learning in the province in the near future?

APPENDIX B:

Quotes Demonstrating Variations in Learner Subpopulations

We have a large number of small Indigenous communities that we service as well. And they have no access to education unless they travel to one of these educational facilities. And what we learned through COVID is that when we made more offerings available through a distance format, we had a higher uptick from our rural participants. (Administrator 10)

A lot of Indigenous communities are still very cautious around, do we want to have a larger group of people meeting in one of our buildings? So that's, I think that's a reality that will take a little longer to resolve itself. (Administrator 2)

We had international students that were starting in January, whose visas weren't coming through, and sections were being closed. And it raised the question of, should we be doing that in 2023? Like we have the capacity to post them virtually. (Administrator 13)

I think the other trend that we see is the number of the international students are opting for online courses, because, quite frankly, they're working, you know, with the change in the government legislation that allowed for the 40 hours of work. That really completely impacted and changed which students and how many students were taking online courses from the international student population. (Administrator 13)

Our international students, they're very cautious about enrolling online. But if they exceed the 50% threshold, it threatens their postgraduate work permit. And so they are conscious of that. And that is coupled with, if they are threatened by their time to graduate they will choose to do online in order to maintain their graduation schedule. And so, they have to balance - they're balancing that all the time. (Administrator 10)

I think international students when they're coming to a campus want to be part of that campus. That's why they moved to be there. And so, when there's too much online, they do seem to think, well, I didn't leave home to be online and sit in my dorm room and be online. So, I want to be engaged. And having that kind of bounce. But at the same time, they still do like the option of having some courses online or some activities online. (Administrator 3)

For some of our mature learners, they are working and parenting, and their lives look a little bit different than sometimes the traditional "direct from high school" student. (Administrator 14)

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