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"I Did Not Sign Up For This": Student Experiences of the Rapid Shift From In-Person to Emergency Virtual Remote Learning During the COVID Pandemic

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Abstract

Objectives: The main objective of this study was to explore students' experiences of the emergency virtual remote teaching, which was implemented as a result of the COVID-19 pandemic.

Method: 439 students enrolled at a community college in Canada responded to a survey that had Likert-scale and open-ended questions. Anderson's model for online learning was used as an analytic lens to gain insight on student experiences. Descriptive statistics were used to make meaning of the data. Thematic analysis was done on student responses to open-ended questions.

Results: Findings were organized according to Anderson's six factors in online teaching, namely: (a) Independent Study; (b) Peer, Family, & Professional Support; (c) Structured Learning Resources; (d) Community of Inquiry; (e) Communication; and (f) Paced, Collaborative Learning. The study revealed both challenges and opportunities that students experienced during their transition to emergency virtual remote learning.

Conclusions: The invitation to students to share what worked—and what didn't—yielded a wealth of specific suggestions for engaging students, promoting accountability, and supporting collaborative learning.

Implication for Practice: This study looked past anticipated pressure points to reveal critical teaching factors that challenge—or enable—students as they transition to emergency virtual remote teaching. Post-secondary instructors would be well served to consider how they promote self-efficacy, provide access to supports, fashion an online learning environment, develop community, communicate expectations, and encourage collaboration.

Introduction

The coronavirus disease of 2019, known as the COVID-19 pandemic, resulted in many unforeseen challenges and opportunities in higher education. Countries across the globe composed health guidelines, suggested safety measures, and implemented lockdowns to control the spread of the highly infectious virus. The implementation of these measures, as well as the lockdowns, ultimately resulted in schools, colleges, and universities suspending in-person classes and seeking alternative ways to enhance student learning. Most higher education institutes in Canada resorted to emergency virtual remote teaching and learning. This rapid transition from in-person to emergency virtual remote teaching provided both opportunities and barriers for instructors and students alike.

This study was designed to learn about the experience of post-secondary students as they dealt with the sudden shift from in-person to emergency remote virtual learning due to the onset of COVID-19. The research study was conducted during Fall 2020 at a community college in Canada. The main aim of this study was to explore self-reported experiences of students during the sudden transition in teaching modality. The results from this study might inform educators and educational institutes about promising practices to support students and enhance remote learning. Lessons learned and insights gained could also inform future educational reforms.

Though a number of researchers have explored student experiences during the pandemic, this study will add to such discussions, given that context matters. Students at different institutes and geographical regions may have experienced the transition differently. Our study was conducted at a community college that provides learning opportunities for all, including people often underrepresented in the labor force: Indigenous Peoples, new immigrants, and persons with disabilities. The college embraces diversity. The student population represents 114 countries of birth; 57% of the students are born outside of Canada; and 72 languages are spoken on campus.

Literature Review

Since the onset of the COVID-19 pandemic, there has been considerable research done on the effect of the pandemic on learning and teaching at the post-secondary level. More specifically, researchers investigated the effect of the pandemic on student life and well-being (Aristnovik et al., 2020; Burns et al., 2020) and unpacked the reality of emergency virtual remote teaching as opposed to carefully planned online learning (Hodges et al. 2020). Other researchers gauged the impact of the technological transition or migration to emergency virtual remote teaching on student performance (Joshi et al., 2020); instructional design and

digital pedagogy (Anderson, 2020; Adedoyin & Soykan, 2020); and on faculty perceptions and experiences (Cameron-Standerford et al., 2020).

COVID-19 and Student Well-Being

The COVID-19 pandemic caused many North American post-secondary institutions to rapidly transition away from predominantly offered face-to-face instruction. Students were suddenly forced to continue their education through various combinations of asynchronous learning, synchronous virtual classes and, in some cases, distance education packages that had to be picked up and dropped off at their institutions. This quick pivot to a predominantly digital modality (Anderson, 2020) greatly affected the well-being and overall quality of life for some students (Aristnovik et al., 2020; Burns et al., 2020).

Some post-secondary students struggled with the stress and uncertainty associated with a major health crisis (Aristnovik et al., 2020). They experienced isolation and mental health challenges due to the lockdown measures and the lack of a personal, corporeal community (Burns et al., 2020). Successful completion of their coursework online or through other remote means was aggravated by socioeconomic factors (Aristnovik et al., 2020; Fishbane & Tomer, 2020) that include access to affordable and effective technologies (Adedoyin & Soykan, 2020); suitable workspace and home environment (Ferri et al., 2020); digital inequalities (Aristnovik et al., 2020; Khlaif et al., 2021); and access to quality Wi-Fi service (Adedoyin & Soykan, 2020). Student success was also affected by changes in assignment requirements and additional work (Aristnovik et al., 2020) and the difficulty in replicating real-world skill development in a remote virtual learning environment. As the research has shown, the COVID-19 pandemic, while providing the impetus for significant technological advancement in online pedagogy and practice (Anderson, 2020), also brought substantial challenges. These challenges include academic fatigue; delays in career development (Aristnovik et al., 2020); decreases in student interest, engagement, and levels of meaning-making (Khlaif et al., 2021; Wang & Zhao, 2020); and mental health and well-being issues (Burns et al., 2020).

The Transition to Emergency Virtual Remote Learning and Teaching

The quick pivot to alternate modalities for teaching and learning soon revealed that what some would mistakenly call online or e-learning in the face of COVID-19 was emergency virtual remote teaching and learning (Cameron-Standerford et al., 2020; Hodges et al., 2020; O'Keefe et al., 2020). Online education has an established pedagogy and practice and is based upon carefully planned learning experiences and assessments (Branch & Dousay, 2015; Kopp et al., 2019; Leszczyński et al., 2018). While some have argued that online learning is not as effective as face-to-face learning, numerous studies have shown that carefully constructed online learning can be just as effective as the face-to-face modality (Means et al., 2014).

Skillfully employing a mix of asynchronous and synchronous learner experiences can create an effective community of inquiry for the students and the instructor (Anderson, 2008). However, the rapid transition to emergency virtual remote teaching was not carefully planned; it was rather a quick response under stressful circumstances (Adedoyin & Soykan, 2020; Bozkurt & Sharma, 2020; Vlachopoulos, 2020). Remote instruction has been defined as being reactive and responsive; relies on real-time, paced synchronous sessions as a stop gap for face-to-face interruptions; challenges instructors to seek ways to support and guide students with less access to technology and applications; and relies on instructors to conduct or facilitate learning experiences (Center for Innovation in Teaching and Learning [CITL], n.d.). In contrast, fully online instruction is intentional and preplanned; involves students who choose this modality and have the technology for it; uses more tools and online applications to facilitate social interaction and learning; and puts instructors into a monitoring role—checking in with self-directed learners (Memorial University CITL, n.d.).

Emergency virtual remote teaching, in response to the COVID-19 pandemic, was a bare-bones approach to instruction that served as a temporary fix and required creative problem solving and adaptation (Brooks et al.,
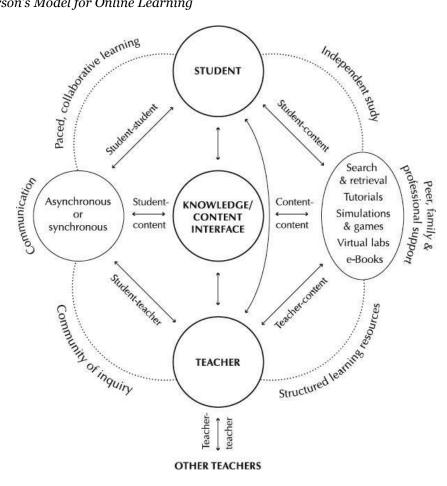
2020; Hodges et al., 2020; O'Keefe et al., 2020). Emergency virtual remote teaching required instructors to orient themselves to new technology and alternate ways of communicating (Ferri et al., 2020). It also required instructors to leverage their learning management system (LMS) platforms and video conferencing applications in ways that they had not previously (Adedoyin & Soykan, 2020). This sudden requirement to adapt and learn created an increased workload for post-secondary instructors (Adedoyin & Soykan, 2020). Emergency virtual remote teaching also created new challenges for instructors in presenting themselves as calm, measured, and respectful in challenging and uncertain situations (Cameron-Standerford et al., 2020; Czerniewicz, 2020); in communicating and promoting meaningful learning communities (Osmond, 2020); and in meeting the needs of learners who required additional guidance and emotional support (Cameron-Standerford et al., 2020).

These notable differences between face-to-face, online, and emergency virtual remote teaching led some researchers to conclude that the lack of face-to-face interaction and the volatility of the temporary virtual modality had a negative impact on student learning and achievement (Joshi et al., 2020). We would suggest that it is still too early to effectively measure the academic impact of the COVID-19 crisis or its effect on developing the requisite professional competencies for post-secondary graduates. Nonetheless, the COVID-19 pandemic did facilitate innovation in the wake of confusion and uncertainty. The crisis initiated a digital transformation in post-secondary education that would have taken years to orchestrate; it pushed instructors out of their comfort zone and into rapid learning based upon necessity and urgency (Adedoyin & Soykan, 2020). The pandemic also challenged institutions to experiment with delivery options and teaching modalities that they hitherto had only dabbled in (Manfuso, 2020) and made human resource development teams re-think how they might screen and support post-secondary instructors in the wake of emerging new requirements for effective post-secondary instruction (Anderson, 2020).

Research Framework and Analytic Lens

At the time of data collection, there were few theoretical frameworks or models to describe emergency virtual remote teaching and learning. After reviewing several models, we selected an online learning model (see Figure 1) developed by Anderson (2008) to provide an analytic lens for coding and sorting the survey data in this study.

Figure 1. *Anderson's Model for Online Learning*

Note. From "Towards a Theory of Online Learning." By T. Anderson, T., in T. Anderson, (Ed.), *The Theory and Practice of Online Learning* (2nd ed., p. 61). 2011, AU Press. https://www.aupress.ca/app/uploads/120146_99Z_Anderson_2008-Theory_and_Practice_of_Online_Learning.pdf Copyright 2008 by T. Anderson. Reprinted with permission.

Emergency virtual remote teaching is not synonymous with online learning (CITL, n.d.; Vlachopoulos, 2020). However, there are enough similarities between emergency virtual remote learning and online learning environments, particularly regarding using technology to engage students and enhance their learning. Additionally, all elements described by Anderson are helpful in analyzing most learning environments regardless of the mode of delivery. What might differ in the three modalities (face-to-face, online, and emergency virtual remote learning) is how such elements are enacted. For example, all learning environments incorporate and rely upon structured learning resources (one of Anderson's six elements), but what these resources look like—and how they are accessed and used—may be quite different depending on the learning environment. What might also be different for specific delivery modalities are the interaction patterns.

In his model, Anderson unpacks the factors that influence the interplay between student, instructor, and curricula (that includes course content, skills, and attitudes). Anderson asserts that successful online educational experiences are impacted by how the environment allows for and advocates for (a) Independent Study; (b) Peer, Family, and Professional Supports; (c) Structured Learning Resources, (d) the Establishment of a Community of Inquiry; (e) Regular Two-Way Communication; and (f) Paced Collaboration (Figure 1). The six critical elements for successful online learning, identified by Anderson (2008), were well suited for our work in describing the perceptions and experiences of post-secondary students in response to the sudden pivot to emergency virtual remote teaching.

Anderson developed his model for online learning after years of working with online students. As such, the model speaks to programming that is carefully planned, where structures are well-developed, and where students chose to follow an online course of study. Realistically, it would be unfair to use Anderson's online model (or any other model for planned, sequenced instruction) as an actual benchmark to evaluate the quality of teaching and learning experiences that students and instructors experienced during the COVID-19 pandemic. Nonetheless, Anderson's model does provide an effective frame of reference to review student response to the transition. The model speaks to learning as it could be and includes the important considerations that should be made in setting up and maintaining an effective, collaborative, stimulating, and safe learning environment. The model also helps provide specificity and language when unpacking the factors that impacted the experience of students early in the transition process from largely in-person teaching to emergency, remote, and virtual facilitation.

Purpose of the Study

The main purpose of this study was to explore student experiences during the rapid transition from in-person to emergency virtual remote learning during the COVID-19 pandemic. The study was conducted at a Canadian community college during the month of October 2020 after the March 2020 transition was complete. The college was closed from summer break from the beginning of July to early September. Students had 4 months of emergency virtual remote learning experience at the time of data collection. We wanted to gain some insights into their experience that would inform educators in finding ways to enhance students learning during and after the COVID-19 pandemic. Students in different environments could have experienced the transition in different ways, hence the need to gather evidence from different contexts and learning environments. The following research question guided our study: What were students' experiences during the rapid transition from in-person to emergency virtual remote learning during the first wave of the COVID-19 pandemic?

Methods

Study Context and Participants

The research proposal was approved by the college's research ethics board. In October of 2020, a survey was sent to the student population of an urban college in Canada. This post-secondary institution caters to a very diverse population of students by providing a wide range of programming, including (a) professional diploma programs in business, social work, early childhood, and licensed practical nursing; (b) university transfer programs; (c) certificated programs in health-care aide, hospital unit clerk, and other health-related careers; and (d) foundational programs, such as Language Instruction for Newcomers to Canada and Academic Upgrading (high school equivalency work). The student population is diverse and represents 114 countries of birth with more than 75 languages spoken as first languages by the students (College, *2019–2020 Annual Report*). As the college refers to teaching faculty as instructors, we use that term throughout.

The invitation to the survey for this study was distributed to about 10 thousand full- and part-time students enrolled at the college during the fall 2020 semester. In all, 439 students took part in the survey process, though some students chose only to complete certain questions. A total of 280 students completed all the survey questions. Before the rapid shift in March 2020 to remote emergency instruction, 64.2% of student respondents were engaged in exclusively face-to-face learning, 24.7% were taking online instruction, and 11.1% were involved in blended programming.

Instrumentation

The student survey consisted of 27 closed-answer questions to ascertain student backgrounds, situational contexts, delivery methods, and relative satisfaction with learning processes. Closed questions were in multiple forms, such as 5-point Likert scale, check boxes, and dichotomous questions (e.g., yes, no). The survey also included three open-ended questions where students could share what aided in their learning, hindered their learning, and what instructors and institutions might consider to support student virtual remote learning (see Appendix). The electronic survey link was shared with the students through their emails.

Data Analysis

Closed survey questions were explored using descriptive statistics. The deductive thematic analysis approach was used to explore the open-ended questions using elements of Anderson's online learning model (Anderson, 2008). Qualitative student responses were downloaded into a spreadsheet, thematically coded, cross-referenced, analyzed, and reflected upon. The quantitative descriptive statistics were then compared to the qualitative responses in order to provide a more credible description of student perceptions and experience. The responses were anonymous and data in the Qualtrics database indicated only participant numbers, in the order they completed the survey. Students had numbers from 1 to 439 (i.e., total number of students who attempted the survey). We then assigned each participant a pseudonym using a randomized name generator.

Results

In this section, we describe and analyze the research data through an interweaving of student quotes, corresponding descriptive statistics, and general observations about emergent themes. The findings section is organized according to the Anderson (2008) framework that consists of six factors, namely (a) Independent Study; (b) Peer, Family & Professional Support; (c) Structured Learning Resources; (d) Community of Inquiry; (e) Communication; and (f) Paced, Collaborative Learning. Each subsection is introduced by representative quotes from the students, to invite consideration, and is followed by an elaboration on the general findings. We use data from the survey as evidence to support the themes, the six elements from Anderson's framework.

Student Demographic Information

More than half of the 439 participants (51.3%) were below age 25; 13.8% were above 40, and the rest were between 20 and 40 years old. About 35% reported having lost their jobs due to the COVID-19 pandemic. The college has a significant number of students born outside Canada. About 35% of the participants had English as their second language, 12% were taking language courses, and 13% were international students. Approximately 78.5% of the participants indicated that all their classes moved to emergency virtual remote learning because of the pandemic, 13.8% were already enrolled in online courses, and 7.5% had some of their courses cancelled or postponed. About 10% of the participants indicated that they had to seek course extensions because of the pandemic.

Independent Study

In any course of study, students need to independently interact with course materials, internet searches, library materials, LMS activities, and in-person instruction. As students interact with content, they are expected to gain knowledge and conceptual understanding. In addition, some students require scaffolding to support them in interacting with content and promote independent study. In our study, we wanted to explore how students navigated their course content, created learning routines, and took ownership of their learning during the rapid transition to emergency virtual remote teaching.

> What I liked about the online learning [virtual remote learning] is 1. it is self-paced and mostly independent learning, but I still needed to be aware of time and deadlines to complete them; 2. I learned the importance of time management as online learning still required me to do assignments and exams on time just like regular in person learning; and 3. I learned how to be more organized and using the school agenda/schedule helped me in writing down important dates and deadlines for my assignments and exams. (Beresh, explicitly describing how they learned to be independent through the COVID-19 experience.)

Participants in this study shared their experiences on how they interacted with the content following the rapid shift from in-person to emergency virtual remote learning. Students shared both positive and negative sentiments about their experiences during the rapid transition to emergency virtual remote learning. The quote above shows that some students liked self-paced learning where they did not feel pressure to interact with the content at scheduled times. These students appreciated flexibility, as indicated by the student who said virtual remote learning "allowed me to take care of my family and apply for jobs online... and opportunity to learn about different apps and technologies that I would never have been exposed to otherwise (Haneen)." However, self-paced (autonomous) modalities favored by some instructors also required students to develop time management skills to avoid falling behind.

Several students wrote that they were not happy with what they referred to as "disorganized" teaching with a lack of clear expectations. They indicated that they were unsure whether they were accomplishing their learning goals or not—given that they needed more scaffolding supports. For example, one student said, "I felt that I didn't grasp all the learning and outcomes I was supposed to accomplish in that course by the end. I felt there were gaps in the guidance of what I was supposed to read, learn, and understand (Aleeyah)." These experiences may illustrate an ill-preparedness on the part of instructors (and their institution) to rapidly shift to a different delivery modality. The comments may also reflect a lack of independent learning strategies on the part of the student. In contrast, other students saw this as an opportunity to develop more skills to enhance their learning—such as time management.

Overall the COVID-19 pandemic created pressure on students to adapt to new ways of learning. This was especially apparent in student responses related to independent study. Within a structured and pre-planned online learning environment, a significant amount of responsibility is placed upon the learners themselves. According to Anderson, online learners take charge of their own learning; keep up with asynchronous demands and assignments; handle flexibility and choice; create effective learning spaces and routines; and are self-motivated in attending and interacting in synchronous classes (Anderson, 2008). However, the kind of teaching and learning brought about by the COVID-19 pandemic was not pre-planned, and many of the structures and activities designed for face-to-face environments simply would not translate to hastily configured online learning environments.

The students in our study were not typical online learners but learners who were faced with emergency virtual remote learning. In our survey only 39% said they were independent learners who work well with self-directed readings and video links. In their open-ended responses, many of the students admitted they were not ready for the demands of emergency virtual remote learning, and a significant number of respondents vented that "they had not signed up for this kind of learning." A smaller percentage of students wrote that they were less impacted by the transition, having already developed confidence and competency in online learning.

Ownership of Learning

> A positive about learning at home is that the commute doesn't have to happen, and you don't have to worry about leaving any materials at home! And it's nice to be able to see all the coursework organized from start to finish in Moodle. Having all of your upcoming assignments organized and in front of you

on Moodle is really helpful. (Osmar, explaining how they felt more choice and control when learning remotely as opposed to face-to-face instruction)

Some students shared that they thrived in the emergency virtual remote learning environment. The quotation above illustrates that a well-designed course and clearly laid out LMS site made it easier for students to deal with the new remote reality. Students said the experience made them more accountable and autonomous; they now made choices about when, how, and where they studied. Other students remarked that the transition was difficult for precisely those same reasons; they lacked the self-regulation to be successful. They struggled with maintaining focus, practicing self-discipline, prioritizing tasks, and managing their time. Students shared that it is "easier to fall behind when you are not surrounded by peers [in person] …" (Nouvelle); "I fall asleep online" (Joshuah); and "lectures can be watched later, which leads to procrastination" (Kayan).

Learning Load

Students expressed frustration with the amount of assignments they were given during the pandemic. They felt that their instructors were giving them too many assignments, and they felt overwhelmed. "Another thing that frustrated me was the increase in assignments. I understand we need ways to show that we understand the material, but just because I am at home, doesn't mean I have more time to work on these assignments on top of my other classes" (Jaidin). This student was expressing frustration with the change in learning environment and the perceived increase in assignments. Another student echoed the same sentiments about an increase in expectations that became overwhelming for them. "Everything becomes so overwhelming—all the deadlines and video submissions, and it's just so demotivating, studying online. You just cannot focus when you're at home, and it's really hard to practice; you don't even know if you're really doing the right thing or not" (Roselynn). This student was sharing their stress and uncertainty exacerbated by an increase in assignments, the isolation in completing these alone, and their lack of confidence in completing the coursework.

In the open-ended responses, students remarked that the amount of work required increased when learning transitioned from face-to-face to emergency virtual remote teaching. In addition, in certain programs that had demonstration and skill components (labs, for instance), students had to learn new skills and technologies just to show understanding and competency. Students in lab courses were asked to demonstrate certain lab skills through video recordings ("I am not a videographer!"). Some students complained they did not have the technical competencies and, as a result, were frustrated. Other students remarked that group work assignments became much more challenging because the classmates were hard to get ahold of, and once they were in the breakout rooms, there was awkwardness and a lack of meaningful connection. "I don't believe there should be group projects at this time. I understand it is a key part in our learning/assignments; however, many of us have kids that make it extremely difficult for us to even participate in class, let alone do a group assignment" (Caige). Some students wanted their instructors to recognize that "just because we are online doesn't mean we have more time. I also think they need to understand that this situation is new for everyone in more ways than one" (Jaiden). From the responses, it became evident that some instructors were assigning more independent study and tasks to make up for lost instructional time; "the teacher is acting like they don't need to teach and just throws assignments at us" (Haifa).

Flexibility

Some students appreciated the flexibility brought about by the rapid switch from in-person to virtual remote learning. For example, Arpi said, "I enjoyed that we could do things in our own manner. When they provided interesting material; when we could pick our own groups for projects." Arpi cited having choice as a significant benefit to emergency remote learning and teaching.

In the open-ended responses of the survey many respondents remarked on the convenience of the shift to emergency virtual remote teaching. Students said that the shift to remote e-learning: (a) saved commute time and transportation costs; (b) allowed them to access, watch, and review recordings at convenient times; (c) allowed them to provide childcare and supervise their school-age children while continuing their studies; (d) gave greater flexibility with assignment deadlines; and (e) provided more time to work on the course work. However, several students remarked that the increased flexibility sometimes meant assignments were missed.

Learning From Anywhere

Learning from home created distractions for students. Hosna said, "We live in a world full of distractions, and going into a classroom where your only job to do is to learn is for sure the ideal. I know for a fact I would be able to learn better, focus, learn and get way better grades by being in an actual classroom." Hosna's comment suggests that some home environments were distracting and, as a result, some students could not pay full attention to their learning. Katrin indicated that her home environment was not concussive to learning. "My home environment is chaotic and it's difficult to focus. I feel very 'on my own' when it comes to figuring out my program. No opportunity to meet peers."

While shifting to online learning provided more flexibility, it also created issues for students who did not have a viable workspace or ideal environment. Several students remarked that rooms, computers, and desks were shared between different members of the household, and there were conflicts in getting access at the right time or for enough time. Others mentioned the isolation of having to do the work alone: "It is difficult to be alone in my house doing schoolwork in front of a screen for 7 or more hours a day" (Davontay). Students also mentioned daily distractions, such as housework, media, childcare, family members and roommates, anxiety about COVID-19 and isolation, and technology and connectivity issues: "I find it difficult to focus in the comfort of my own home—there are a lot of distractions" (Graylon). One student cited the challenge of navigating time zones to attend synchronous classes: "I live on the other side of the world and attending classes at midnight does not make me feel good" (Beia).

However, a number of students remarked that studying from home actually quieted their anxieties; they did not have to risk the environs of crowded buses, hallways, and classrooms. And some students shared that they actually enjoyed the new ways of learning, but these comments were few and far between. "I did have some doubts and concerns, as I don't really work well in an online environment, but mostly in a regular in-person learning environment. I tried online learning, and to my surprise, I was able to do it and complete my administrative course on time. I did not have any frustrations while doing online learning because my instructors were always there and available to answer any questions and properly guide me in my course work" (Ivory).

Peer, Family, and Professional Support

According to Anderson (2008), one of the most important considerations in building and maintaining an effective online environment is in ensuring that students experience peer and family support and have access to professional supports. However, the rapid transition experienced in March of 2020 caught students, instructors, and institutions by surprise, which made the provision of—and access to—critical supports a challenge. Jaiyon shares one of the challenges of moving online. "I feel like I have no one to practice my skills on because I don't have friends, and I don't get to learn from others, and I am missing out on the traditional university/college life of making friends and learning with each other" (Jaiyon). The student was describing how the transition led to feelings of isolation.

The quick pivot to emergency remote instruction left students to cope with uncertainties related to program sustainability and funding, as well as the viability of their programs. In fact, only 65.6% of the students in this study indicated that they were able to continue with their coursework online without interruption (see Table

1). Those who continued with their studies were also affected by their access to suitable computer hardware; reliable internet access; family or caregiving responsibilities; challenging finances; and general stress, which was related to the pandemic and the societal measures and mores associated with COVID-19 (see Table 2). Students responded to a 5-point Likert scale from "strongly agree" to "strongly disagree." For the purposes of this paper, we combined "strongly agree" and "agree," and we also combined "strongly disagree" and "disagree." The standard deviation (*SD*) and the mean are for the 5-point Likert scale. The proportion of participants who agreed, disagreed, or were undecided is shown as a percentage of the total respondents. For the questions related to factors influencing student overall well-being, more than 60% of respondents agreed that uncertainty of finances and stresses related to the pandemic impacted their learning (see Table 2). The mean and the *SD* show that the data points are spread towards "agreeing" with the provided prompts.

Table 1. *Program Sustainability*

Due to the COVID-19 pandemic, which of the following statements apply to you?	%
I was not able to complete some or all of my courses for that term due to financial, family, or other responsibilities.	12.15%
My planned work placement was delayed or cancelled (e.g., internship, co-op, work-related training)	14.43%
I was not able to complete my degree, diploma, or certificate as planned.	7.85%
None of the above—I was able to continue with my program through online learning.	65.57%
Total	100%

Table 2 shows how the educational experiences of the students at this institution were affected by concerns related to the pandemic, which complicated the transition to emergency virtual remote teaching.

Table 2. *Factors Influencing Student Well-Being*

Please rate how much the following affected your learning experience as the colleges and universities shifted to online learning.	Agree	Undecided	Disagree	Mean	*SD*
My responsibilities as a caregiver or wage earner directly affected my learning experience.	52.32%	17.54%	30.12%	2.67	1.30
The uncertainty around finances and living expenses directly affected my learning experience.	61.92%	11.34%	26.75%	2.44	1.26
The stress, anxiety, and uncertainty associated with the pandemic and its lock-down requirements directly affected my learning experience.	74.13%	7.56%	18.32%	2.03	1.17

Emotional support

> Online instruction has helped me personally due to mental illness challenges and in-person classroom difficulty. In the comfort of my home, I am able to access quality education in order to gain future employment. The fact that I am not in front of a class helps with "stage fright" so to speak, so I am a lot more vocal in class. (Conor, explaining how the online modality actually helped with their confidence in completing studies.)

Like Conor, a number of students said that working from home was less stressful; they did not have to struggle with daycare, transportation, the risk of infection, and set class times. Several remarked that they drew closer to their families, as they coped with the lockdowns and regulations.

Many students, however, expressed anxiety, loneliness, and isolation: "I feel isolated. I don't know my instructors, and I don't know my classmates. I am a recovered addict and single mother, and the one way I was going to meet new sober friends was through school" (Gem). Although only 8.9% of the respondents indicated they lived alone (14.3% lived with a roommate and 76.8% lived in a family situation), feelings of isolation were frequently expressed in the surveys. The cycles of lockdown and the lack of social interaction only served to compound the disconnect of moving from face-to-face instruction to emergency virtual remote teaching: "Having to remain at home in a less than ideal family situation has added extreme amounts of mental illness relapses/stress, which make it extremely difficult to stay on track with the material" (Seva).

These feelings of anxiety, loneliness, and isolation were exacerbated by the pressures that the COVID-19 pandemic placed upon many of the students—physically, culturally, emotionally, and financially: "I feel like I'm paying thousands of dollars just to feel overwhelmed and anxious" (Tera). "Staying at home and study[ing] is stress[ful] in comparison to face-to-face classes, having fun with instructors and friends. As an international student, I don't have relatives, family, or friends except college mates, spending time with them gave me energy and motivation to do well in studies" (Aracelis).

At the time of our research, the institution in this study offered extensive language programming and was seen as a place that might help foreign students secure permanent residency. In fact, 12.9 % of the survey respondents disclosed they were international students completing their studies under a student visa. Furthermore, 35% of respondents shared that English was not their first language, and almost 12% (11.86%) were taking classes to improve their English competency. For many of these students the sudden transition proved even more formidable as they struggled with loneliness, technology, and instruction while learning a new language: "I had to buy a computer, I had no clue how to do anything on a computer" (Vito).

Additionally, there were the costs of attending school. International students paid between 2.5 and 3 times the registration fees that domestic students did. Many students (both domestic and international) needed to keep employment to make ends meet. Our survey revealed that the pandemic greatly impacted the financial well-being of students: 34.9% of the respondents shared they had lost their job as a result of the pandemic, and another 22.5% revealed they had their working hours reduced. Due to illness, financial pressures, family responsibilities, or stress, 9.9% of respondents applied for and received a "COVID-19 Extension" on their program and course work (an opportunity to pause their programming without losing fees). Overall, 45.5% of student respondents said their career plans had changed or were delayed as a result of the pandemic. With financial and academic pressures like these, it is easy to understand the level of anxiety felt by participating students.

Several students also said their anxieties were compounded by anxious instructors who would overshare. "The anxiety of my one instructor, because of COVID-19, was shared/felt. It made it almost impossible to utilize this instructor the way I needed in order to move through my course" (Rahm). Some of the students said that their instructors simply "checked out" (shut down communications and scaled back on synchronous teaching). There was "no feedback or instruction from instructors, which ultimately lead to me dropping out of chosen program" (Mats); and "I felt alone, lost, and like the school abandoned us" (Sarayu). Some of the students also chose to check out. Not seeing their instructors did not help: "Being able to see the instructor— some don't share video—and being able to see the instructor while they are speaking is a benefit, more non-verbal communication is enabled" (Jaielle); "It's hard when I can't see the instructor and do things in real life" (Kenzington); and "It's very hard when I only hear a voice and see a PowerPoint" (Shaunak).

Students also lamented that they missed being part of a cohort, moving through a program together. "I miss being around my friends and other people, I feel like I lost the real 'nursing school experience'" (Ailen). While the college offered some programming and services for students to help cope with the stressors related to COVID-19, many students seemed unaware of the opportunities or chose not to take advantage of them.

Instructional Support

> Instructors, at beginning of 2020 pandemic, were willing to work with groups/student for accessibility. Instructors now seem to have the airs that if the majority can access the required program and information being sent out, then the strife [onus] is on you to figure out how to access it. (Aniv, describing how the amount of support and extent of understanding changed as the pandemic continued.)

As the quote above illustrates, how well students were supported with instruction during the rapid transition depended upon the programs they were enrolled in and the instructors that were assigned to teach them. This student implied that, once the instructors and students settled into a new routine, students were often left on their own to figure things out. This sentiment was echoed in a number of student responses: "Instructors are not giving enough support—tutoring, advising. [You are left feeling] like you're doing this alone with no help" (Joshiah). Some students blamed the lack of support on the online modality, asserting that the online synchronous classes were no replacement for face-to-face interaction and support:

> I sometimes did not understand anything, and it was super frustrating trying to catch up with the class and letting [the instructor know] you don't understand, because everyone is talking and sending messages in the chat box; I felt I've got no one to ask for help, and I wanted good grades. I tried watching videos and all, but it would never be the same as having someone physically [there that] you can ask (Nadir).

However, there was great variation on the matter of instructional support. Several students gave testimonies to the efforts of their instructors: "I find [my instructor], this term, is very prepared for labs and class. I find his instruction easy to follow despite being online" (Wesley); and to the supports offered by the college: "anytime I need extra help, the tutors are always there to answer questions. They have done an incredible job and are a huge contributor to my success as a student" (Rahm).

Technology Support

Reliable internet connectivity and access to relevant technology for virtual learning were another challenge faced by students during the pandemic. "Not everyone has a steady internet connection, which has been causing some issues with communicating with instructor and students" (Graylon). The student was sharing a concern of students with inequalities, access, and inclusion in an emergency virtual remote teaching environment. The quote below is from Ambar, who related their challenges with technology and connectivity and how it impacted their learning.

> Sometimes my connection was bad. One day I was doing a presentation to represent my class and my Moodle get frozen for 20 min. I couldn't give my presentation, and I couldn't have another chance to do it when I came back finally; they didn't vote for me, and I was very sad and disappointed because of technical problem (Ambar).

Like many other institutions, the college in this study quickly established a laptop loaner program for students. Unfortunately, there were more students than available hardware. In the survey, students shared that their personal computers were often not up to the task of online learning. Students also mentioned not having cameras; having poor connectivity; and experiencing choppy, almost unlistenable, synchronous lessons (see

Table 3). As shown in Table 3, 62% of respondents agreed that their access to quality technology directly affected their learning. More than 50% of the participants experienced internet connection issues that affected their learning experiences. The mean in Table 3 represents an average for the 5-point Likert scale, and so is the standard deviation (*SD*) and the variance. The *SD* in Table 3 suggests that the data points were skewed towards agreeing with the prompts, indicating that a majority of the learning was affected by access to technological devices and reliable internet connectivity. Table 3 illustrates that students had uneven access to technology and the internet, which put some at a disadvantage in an emergency virtual remote teaching situation.

Table 3. *Impact of Technology on Learning Experience*

Please rate how much the following affected your learning experience as the colleges and universities shifted to online learning:	Agree	Undecided	Disagree	Mean	*SD*	Variance
My access to quality technology (computers, tablets, printers) directly affected my learning experience.	62.5%	10.76%	26.74%	2.5	1.32	1.75
My access to a reliable and economical internet connection (consistent Wi-Fi) directly affected my learning experience.	53.48%	11.63%	34.88%	2.67	1.39	1.94

Some students mentioned that they were older or not "tech savvy," while others complained about internet connectivity or the additional expenses they incurred in securing hardware. "I had to buy expensive equipment just to be able to participate in group discussions. I had to buy a new printer, as we have to print off many documents" (Braelee). On the flip side, several students remarked that, while most students may have had the technology and aptitude, their instructors could have been better equipped for the change:

> Instructors tried their best, I've seen it. [It is] just so hard teaching a class of more than 20 through a computer, some don't know how to use a laptop, and that's alright [because] I sometimes don't know how to use things either, but that makes us go slow in classes and talk about irrelevant subjects. [Losing] time, and I'm really worried about time, if I don't get the English I need through funding, it will be harder for me to finish it. (Nadir, expressing her empathy for the instructors while also sharing her personal challenge in completing her program this way.)

> Some instructors are not prepared to deliver an online education ([for example, the microphone] doesn't work, and [the instructor] does NOT replace it, therefore students can't hear the instructor, or don't know how to navigate Blackboard). The instruction, in general, is inconsistent; you either have a great instructor who knows Blackboard [video conferencing tool] and can have an efficient lecture, or you have lectures that are stalled throughout the allotted time and either miss material or the class runs longer than it is supposed to. (Vayu, sharing some of their online frustrations.)

Students said that instructors did not effectively use the features of the chosen video conferencing tool, used the LMS haphazardly (not as a learning tool), and tried to use "dollar store" microphones and cameras that hampered the student experience. As one student wrote: "Get better internet connections and webcams. There should be no reason why some dingus who plays video games on streaming services has a better set up than an instructor" (Brennox).

Comparable to instructional support, technology support was dependent upon the program and the instructor. However, while most instructors had the prerequisite content and skill knowledge to effectively support students with learning, a significant number of instructors were inexperienced with online pedagogy and practice. Some instructors fell into a pattern of telling, not teaching: "A 3-hour lecture online with instructor just using a PowerPoint made me disconnect and stop listening" (Caldwell). Technological inexperience meant that instructors lacked the technological confidence, thereby forcing students to figure out things on their own.

Structured Learning Resources

> I believe instructors have done an amazing job teaching our program for what we have been given with this pandemic. By doing breakout groups, recorded and live lectures really help us feel less stressed from the stress we are already dealing with from this pandemic. (Aarik, providing an alternate perspective on the success of remote virtual instruction.)

The third component of Anderson's model is structured learning resources. This implies that curricular planning, instructor and student resources, and activities and assessments are well developed and align to provide an excellent foundation for learning. When college-level, face-to-face programs are taught by experienced instructors, they use a variety of approaches to engage and support their students (see Table 4).

Table 4: *Instructional Methods Pre-COVID-19*

Before COVID-19, the main teaching methods of my instructors were: (Please check all boxes that apply.)	% of respondents
Prepared lectures with PowerPoints or Prezi's	68.19%
Class and group discussions	65.72%
Guided practice (demos and labs)	53.71%
Class assignments and worksheets	61.48%
Individual inquiry and assignments	43.10%

However, transitioning to online meant that these same instructors would need to learn very different ways to reach and teach their students. At the time of our data collection, most instructors (and their students) were still working through the challenge. On the surveys, over 60% of the students reported that the quality of their educational experience was negatively impacted by the transition to virtual remote facilitation (38% said their experience was somewhat worse and 22.5% much worse). Only 17.7% of students felt that their learning experience improved as a result of online facilitation.

> What frustrated me through online learning was when my instructors would try to run their classroom like they would have face to face. That doesn't work right now. It is hard to stay engaged through pre-recorded lectures and maintain drive to keep focused. It was hard for me to get through some instructors pre-recorded lectures because they would have low quality PowerPoints or overshare information in those lectures, and it would be a waste of time. (Jaidin, pointing out that pandemic teaching requires adjusting practices.)

On a follow up question, we asked students to rate their engagement to develop the requisite knowledge, skills, and attitudes needed (Table 5). In Table 5, the mean and standard deviation suggest that, although virtual remote learning was perceived to be effective by about a third of the participants, about half of respondents did not find the learning environment effective.

Table 5. *Online Engagement for Knowledge, Skill, and Attitude Development*

Please rate the effectiveness of online teaching (both asynchronous and synchronous) on your engagement:	Agree	Undecided	Disagree	Mean	*SD*
Online teaching helped me to gain a deeper understanding of the most important content for my courses and program.	32.28%	17.89%	49.82%	3.26	1.31
Online experiences allowed me to develop the essential thinking and practical skills necessary for my chosen field of study.	35.79%	14.39%	49.83%	3.26	1.27
Online facilitation (through scheduled presentations, assignments, readings and links, and discussions) helped me develop professional judgement and awareness.	41.41%	23.6%	35.44%	2.98	1.23

How well instructors were perceived by their students to have facilitated and supported learning through structured learning resources could have been impacted by: (a) instructional clarity and organization; (b) the use of technology; and (c) assignments and assessments. However, as some students pointed out, the online environment had its limitations, especially when it came to hands-on learning.

Clarity and Organization of Resources

> Instructors should have a clear schedule available to students so that they know what is coming in the weeks to come and can plan their personal and school life accordingly. Instructors should also make themselves available to answer student questions in whichever way possible. I had an instructor who gave us his phone number so we could contact him whenever we needed, and he was always there and willing to help. Instructors should stay on top of their marking as best as they can so that students can view their marks as a way of finding motivation in their studies. (Elanny, expressing their need for transparency and organization.)

Structured learning resources require development and planning, effective organization, and skillful use. For those instructors who were already using their LMS as more than a repository of readings and assignments, it was easier to scaffold and support students when the shift to online happened. In the open-ended responses, students voiced their frustrations with those who were not so ready: "Organize your platform!" (Gem); "Prepare students ahead for exams or homework!" (Laithen); "Spend time going through where to find resources and explain what will be needed for individual projects and assignments to avoid anxiety and depression from school!" (Genji); and "Try to stick to a schedule!" (Keyanni)." The rapid transition to emergency virtual remote teaching was challenging for instructors who did not have experience in organizing online learning experiences.

Technology Resources

> I felt that I didn't grasp all the learning and outcomes I was supposed to accomplish in that course by the end. I felt there were gaps in the guidance of what I was supposed to read, learn, and understand. She didn't use other resources to help in learning other than a big thick textbook, and PowerPoints, which reiterated the same material. (Aleeyah, pointing out the need to effectively use electronic resources and supports.)

In e-learning, most structured learning resources are housed and accessed online. Such resources might include online readings and videos; web applications that help students to problem solve and note-take; participation in online games and polls; employing LMS applications that help generate inquiry and discussion (forums and chat and wikis); using LMS applications to help student consolidate learning (quizzes, books, assignments, glossaries, and wikis); and promoting online video platforms that allow students to collaborate and work on group projects. Table 6 provides information on effective use of several learning management features.

Table 6. *Instructor Use of LMS, Video Conferencing, and Online Tools*

My instructors made effective use of the following learning management features:	% of resp
Forums	49.43%
Chat	62.54%
Quizzes and tests	76.02%
Wikis	4.11%
Glossary	10.86%
Surveys	16.85%
Assignments	82.77%
When using a video conferencing tool (Blackboard, Zoom, WebEx, Teams, etc.), my instructors made regular use of video conferencing features, such as:	**% of resp**
Chat	85.01%
Screen share	75.65%
Whiteboard	61.04%
Polls	36.32%
Breakout rooms	55.43%
My instructors made effective use of the following online tools, apps, or technologies:	**% of resp**
Online resources (YouTube, LinkedIn, TED Talks, etc.)	78.04%
Online games (Kahoot, Quizlet, etc.)	53.25%
Social media (Facebook, Twitter, What's App, etc.)	6.50%
Notification systems and texting (Remind, What's App, Messenger, etc.)	13.00%
Pre-recorded presentations (PowerPoints, Voice Thread, Camtasia, Loom, etc.)	51.62%

Some of the applications that students explicitly mentioned appreciation for in the open-ended section of the survey included:

- The use of forums: "The forums were good ways to share ideas and gain other perspectives, and make a person feel they were participating in an active class, that counted for marks" (Aleeyah).

- The use of YouTube and online links and apps: "The instructor provided YouTube and TED Talks for learning tools. Kahoot! And Quizlet helped, live lectures are better (Aleeyah)!"

- The use of recorded lectures and demonstrations: "I am able to choose when to study and watch videos of my lectures without spending unnecessary time in in-person lectures taking up the majority of the day. This allows me to organize my studying time most effectively and remain

flexible as other things come up in my personal life. Video tutorials. Great way to cover large amounts of very specific material" (Reily).

The students frequently mentioned how much they appreciated access to recordings of synchronous lessons, pre-recorded lectures, and online video links. Some remarked at the convenience while others mentioned that they could re-watch certain sections for clarity or speed through material that they already knew. This is one advantage that the switch to remote emergency learning afforded to the students: in face-to-face learning, they had to rely on their memory and their notes (or the notes of a friend if they missed class), "Recorded lectures are a blessing for me. I have found that not being physically in a large lecture hall of 50 people is something that I'm completely comfortable with (Dalaya)."

However, some students were uncomfortable with how resources were used in online learning and missed the familiar feel of physical books. "No e-books please!" Students complained of having to be behind a screen all day and having to read dense text on the small screen of their cellphones. Others complained that their instructors expected each student to buy physical texts (often expensive), and these students missed accessing library copies of the texts, tutoring services, and face-to-face learning support, "If I did not have the textbook, I would have lots of problems compared to if I was on campus. I could go to the library or borrow a friend's book because I did not have the money to purchase the book so now, I had to find money I didn't have" (Lamis).

Assignments and Assessments

> The open book exams were awful. They were made with really hard and obscure answers. All they did was test how well you could look up answers, not what general knowledge you had. To get through this program with all the readings, you have to skim the text and pick out the nuggets (even instructors tell us this), but there were things on those exams I never remembered reading. I am about to take a test that is 50 questions multiple choice and short answer not open book, I am really hoping that it is not set up the same way. It is better to have short answers to actually test knowledge, but I hope to heaven it is not expected they be word for word from the text, as that is [an] unrealistic [expectation]. (Stevan, relating how assessment changed as a result of moving instruction online.)

Perhaps the biggest challenge in the shift to emergency virtual remote teaching had to do with assignments and assessments. These integral parts of the structured learning resources for both face-to-face and online teaching did not transfer very well. Instructors who favored large multiple-choice assessments as the most efficient way to assess student understanding found that these assessments were extremely insecure in an online environment. There were some offerings for online proctoring, but the proctoring services were limited and, when used, some students found them invasive.

> Having proctored exams was sometimes frustrating. It would take over 30 [minutes] at times to just get started from the time the test is scheduled. So, when I schedule my exam taking, I have to make sure to add an extra 30–45 [minutes] that it may take to get started. Or sometimes there will be a glitch, and I will need the proctor's assistance to get back into it. It is also very privacy invading.... I have to give a 360-degree view of my work space... this is my home, and I am showing my space to some stranger. As well as the extensions we download to our computer, [which] allows them total access to our computer. I make sure to delete it after my exam, but I still worry about possibly getting hacked. (Haneen)

As a result, many programs pivoted to more open-ended or open-book assessments, asking students to complete scenario assignments. Furthermore, in the wake of COVID-19 anxieties and complications, the window for completing exams was extended (to 1.5 times), and the deadlines for assignment completion

became more flexible. The overall result was an urgent and somewhat chaotic assessment revolution with more assignments and students complained about it.

Limitations in Virtual Learning

> Online learning has been frustrating when it comes to the lab and practical lab assignments. Video submissions are a good alternative, but more in-person guidance and practice are needed—[in] particular, nursing labs where a lot of feedback is needed to practice essential skills. (Caldwell, sharing how they missed the immediate, individualized feedback in face-to-face labs.)

While online assessment and the corresponding need to ensure fairness, reliability, and academic integrity were perhaps the biggest concerns raised in our study. The unsuitability of the online mode proved to be a close second. This unsuitability was often tied to learning preference: "Honestly… online learning does NOT work for me. I need to be in a classroom. I need to be with my classmates and my teacher. If I wanted to study online, I would have enrolled in the online program. But I enrolled in the face-to-face program, and here we are…." (Braelee). About 76.8% of respondents indicated they learn best from guided practice (See Table 7: How I Learn Best.).

Table 7. *How I Learn Best*

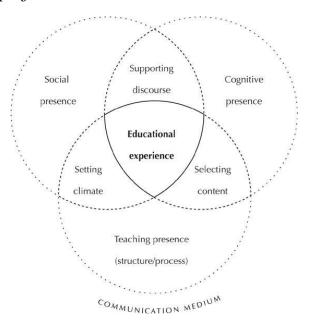| I learn best from: (Please check all boxes that apply.)	% of resp
Self-directed readings and video links	38.94%
Instructor lectures (recorded and live)	74.03%
Guided practice (regular instructor feedback and coaching on work and demonstrations)	76.84%
Group work, collaboration, and discussion with peers	41.75%
Timely and appropriate assignments and assessments	53.68%

However, the unsuitability of the mode could also be attributed to the type of program and competency requirements. Students in programs that required the development of physical skills (often in nursing or other healthcare programs) found themselves having to make elaborate adaptations (making recordings on their phones, building mannequins, using housemates or family as subjects, and making do with household objects instead of actual professional materials). "Some lab instructors don't tell the students what they need to make for class or how to make it. [For example], how do you make a 'patient' with a tracheostomy and how do you make the trach" (Vayu)? Students also complained that they weren't able to learn the soft skills of patient care, such as visual analysis and effective communication; weren't able to watch demos from a variety of angles and ask questions in real time; and did not get immediate feedback but had to wait for instructors to watch all the video submissions. "The other issue with online learning is the lack of hands-on experience. As a Medical Office Assistant, we may need to take blood pressure, height, and weight. We were only able to look at instructional videos. Not getting the hands-on learning experience is disappointing" (Haneen). Students pointed out that it was much more time-consuming for their instructors, and this also led to a lag in communication and an overall disconnect. Many students also had their practicum placements postponed or cancelled. "Also due to COVID-19, we missed out on learning to use the EHR at a hospital. I will be going on a practicum with low confidence on my ability to use the software. Just not having the opportunity to be in a lab setting to practice our skills is a negative for online learning" (Haneen).

Community of Inquiry

Anderson's model for effective online learning incorporates the community of inquiry model as one of the six essential elements. This community of inquiry model illustrates how three presences (social, cognitive, and teaching) in the learning process intersect and combine to promote purposeful, critical discourse and reflection; the construction of personal meaning; and the confirmation of mutual understandings (Anderson et al., 2001; Garrison et al., 1999).

Figure 2. *Community of Inquiry*

Note: From "Social Software to Support Distance Education Learners." By T. Anderson, in T. Anderson, (Ed.), *The Theory and Practice of Online Learning* (2nd ed., p. 223). 2011, AU Press. https://www.aupress.ca/app/uploads/120146_99Z_Anderson_2008-Theory_and_Practice_of_Online_Learning.pdf Copyright 2008 by T. Anderson. Reprinted with permission.

We viewed community of inquiry as being related to purposeful critical discourse, where students and their instructors engage in focused inquiry, thoughtful collaboration, and shared meaning-making. Such a community is tied to meaningful engagement (not just interaction), personal discoveries, and mutual understandings. Pivotal to the establishment of such a community is a shared learning experience. Unfortunately, for many of the participants in this study, the lack of proximity, feelings of isolation, and awkward or missed interactions in synchronous online teaching proved to be barriers to creating a real community of inquiry. Instructors were challenged in ways they had not anticipated, and yet they expected to maintain the same kind of interaction and collective inquiry that they had previously experienced in face-to-face teaching.

Cognitive Presence

> Try to use games, breakout rooms, polls, and mechanisms other than just assigning readings. (Kenzington, asking for more variety than online lecturing.)

There are ways to engage students and create a community of inquiry in online teaching, and the students were quick to point them out. "If they are to be synchronous classes, then provide more engaging learning tools and activities to keep students engaged" (Aleeyah). Table 8 demonstrates that most instructors tried to teach through familiar, transmissive ways (assigned readings and lectures), but less than half experimented with interactive online ways to stimulate real-time discussion, facilitate small group collaboration, and gauge immediate response through online tools, such as polls, games, and discussion postings.

Table 8. *Supporting a Community of Inquiry*

During the COVID-19 lockdown, my instructors:	% of resp
Sent regular messages (email, chat, text, etc.) to update students on course work	68.28%
Assigned readings and supplied video links	63.43%
Gave regular lectures (recorded and live)	72.76%
Provided live or recorded feedback on class assignments and lab activities	46.64%
Facilitated group work, collaboration, and discussion using breakout rooms or small-group video conferences	45.89%
Tried new technologies, found new ways to connect with students	36.94%

As many of the student respondents pointed out, teaching requires more than lectures and readings. An online community of inquiry needs to be involved in meaningful work, with appropriate challenges to foster engagement and encourage discourse about content and concepts. The fact that only 37% of instructors tried new technologies or found new ways to connect was especially revealing.

Instructor Presence

> We are all stressed in the HUC [Hospital Unit Clerk] and MOA [Medical Office Assistant] program, as some instructors are helpful, and others are not doing ANYTHING to be helpful and acting like this is a little vacation time for them and not teaching properly. I am very displeased with this, as this course is not cheap and we are paying FULL tuition as if we are in class, yet the instructor is acting like they don't need to teach and just throws assignments at us. (Haifa, explaining how unevenly instructors applied themselves to the new remote emergency context.)

Experienced online instructors make their presence known by framing learning experiences and scaffolding students as they develop new skills and patterns of thinking. Experiences are orchestrated strategically, according to course scope and sequence, specific aims and outcomes, and the thoughtful progression of learning. These effective instructors support student learning through regular touchpoints; checking on student progress through email, one-on-one check-ins, small group check-ins, and during pre- and post-class drop-in time.

Unfortunately, the quick transition to emergency virtual remote learning left many post-secondary instructors at a loss. "Some instructors are not prepared to deliver an online education ([for example], mic doesn't work and does NOT replace it, therefore students can't hear the instructor, or don't know how to navigate Blackboard)" (Vayu). Many of the instructors had little experience in teaching and supporting students online, and this caused frustration for some students. "I paid full tuition for FACE-TO-FACE classes, and the majority

of my instructors simply hold an optional 1-hour Q & A instead of an actual lecture/class" (Seva). However, respondents also pointed out that other instructors tried to connect their students to the content and skills in meaningful ways (e.g., see Table 6). These teaching adjustments and tools made it easier for instructors to check for comprehension, build engagement, and adjust their lesson delivery in real time.

Social Presence

> The social aspect, no one turns their cameras on, some people don't even speak when we get out into breakout rooms, nobody socializes. Having to stare at a screen all day is really a pain too, after a while you start to get headaches and it's not good for the eyes. (Osmar, sharing their frustration with the lack of contact in online learning.)

> My instructor for 2005 is really utilizing the breakout rooms. Provide a case study, breakout, discuss, and bring back thoughts. This engages us. (Camaron, pointing out how their instructor adapted to the online environment.)

> It was helpful to have break-out lab groups so that we could get more 1:1 time with instructors. (Matty, explaining how their instructor used breakout rooms for individualized coaching.)

Many instructors tried to foster a community of inquiry through the use of breakout rooms in the video conferencing tool. In most cases, the instructors used random discussion groups as a way of breaking up their lessons and allowing the students to talk to each other. The breakout rooms were also used as drop-in rooms that students could use to chat with each other or connect one-on-one with the instructor. However, as the students revealed, there was uneven success with the use of breakout rooms. As one instructor recently confessed: "When I say breakout rooms, the students all log off!" Our survey found evidence to support this statement. Students complained that their classmates chose not to turn on their cameras or interact in the breakout rooms choosing to lurk quietly in the background or leave to get a coffee: "Some students are not respectful and fake being present when they are not. Others may be experiencing technology problems" (Rayella). This meant that the discussions were limited or even non-existent. So, breakout rooms ceased to be a viable option for some instructors; they saw them as a waste of time.

Creating social presence space for the students and instructors proved a real challenge during the COVID-19 transition to emergency remote teaching. Students were not prepared for the independence and lack of community. "[I miss] being able to ask questions in real time or having peers to talk to in regards to content was not existent. I miss having my peers to study with. It's hard to meet new people when you are home learning in an isolated environment" (Rahm); "Online learning is more isolating and lonelier than face-to-face. It would be helpful if relationships between students were promoted even more" (Kayan). Some students attributed the isolation and awkwardness to the online environment. "I feel totally disconnected from my instructors and peers; it feels like no one has any idea what's going on. I do not have adequate resources at my disposal to facilitate my learning (technology, as well as nursing tools that were available for in-person labs). Online learning requires a lot more self-regulation than I am used to, and I am struggling heavily as a result" (Cyan).

Communication

> My first synchronous 8-week class I took was in May. I had regular weekly check-ins, assignments, readings, tests, and forums to participate in. The instructor was always very timely with returning emails when I had questions or needed feedback. The instructor was engaged, and I felt support—tutoring, advising, and part of an active class, even though it was all online. (Aleeyah, sharing their positive experience due to regular communication.)

The fifth aspect of effective online teaching used to interpret what occurred as a result of the swift transition to emergency remote virtual instruction was communication. How did the instructor keep the lines of communication open? Did the students feel they were included? Were they given clear direction? Were they seen as individuals, rather than an amorphous group? When reviewing the data related to communication, we looked at two factors: (a) the approach and modes of instructor-initiated communication; and (b) the availability and responsiveness to student-initiated communication.

Approach and Modes

> Reach out more to your students. Check in on them. If you see them struggling with their exams/assignments, send them an individual email to see how you can help. Don't rush through showing them where to access assignments, marks, tutoring, and advising information, not everyone is great with technology. (Hosna, suggesting ways to improve the student experience through clarity and communication.)

In the survey, students were asked how often they were sent regular messages, such as through email, chat, and texts, to update them on their course work. Just over 68% said that they did; thus, almost 32% of students did not have regular communication. So, when students write of feeling isolated and abandoned by their instructors, they have some cause to do so. Some instructors tried to find innovative ways to connect by using texts, chat, video messages, notifications, social media, reminder apps, and a few other modes of communication. However, in trying to reach the students, these instructors sometimes confused them. "Use consistent communication (instead of using email one day, forum another, class time another, the other forum once again, and then the mailbox on Moodle). It's way too many platforms to check" (Genji). Finding the best mode and sticking to it was the advice of more than one respondent.

Availability and Responsiveness

> I really loved when my online instructors were (1) always available; (2) willing to help; and (3) they would always send emails and messages to keep everyone up to date on what is happening in their courses. (Ivory, expressing appreciation for timely and attentive communication.)

> I had a lab instructor last semester who would call me to give feedback on my video submissions. I really liked that as I could ask one-on-one questions. (Novelle, expressing appreciation for individualized feedback.)

Simply putting out messages is only one part of effective communication. How instructors dealt with student inquiries is also very important and, as the two comments above show, some instructors were very conscientious and prompt. Students appreciated the prompt replies and helpful suggestions and that, no doubt, paid dividends when it came to attendance and effort.

However, the survey had many negative student responses on the aspect of communication. Respondents shared that:

- **Often email replies came too slowly or not at all.** "Please respond to emails in a timely manner and check regularly" (Seva). "Responding to inquiries was slow. I found out very quickly that if I was struggling with understanding something to discuss it with my classmates instead of emailing the instructor. There are emails that were never replied to. Usually it would take about 3–4 days to get a reply to a question" (Nuriyah).

- **Some instructors relied on standardized responses** in their messaging (e.g., please watch the recording/read the text) and did not provide specific enough or helpful feedback. "Answer questions! If a student asks a question in an email, ask if it can be posted to a forum or

have weekly video sessions for answering questions and explaining how you want things done" (Vinnie).

- **Some instructors failed to effectively monitor, use the chat feature, or raised hand feature** in the video conferencing tool. "The only negative experience I have noticed is the unprofessionalism in the group chats. I wish instructors would suggest to students that is not appropriate to use slang and emojis" (Kashlyn).

- **Instructors used the forums haphazardly**, failed to make the purpose of them clear, and/or did not participate/interact in them. "I didn't enjoy participating in forum chats. Realistically most students don't care, and they're quickly responding for the sake of meeting a requirement" (Anaiza).

- **Instructors failed to reach out and check on their students** to see how they were coping. "I had little involvement with instructors unless I reached out, but I was a frontline care worker, so with work zooms, it became overload leaving me too mentally exhausted to do so" (Ailis).

When it came to suggesting what instructors might do to improve communications, students volunteered several suggestions.

- **Instructors should be more available** by being prompt and scheduling drop-in or online office hours. "Instructors should answer their emails; have times every week where students could call them to discuss concerns; do more than just prerecord lectures; and actually support, tutor, and advise students during this time" (Sarayu).

- **Instructors need to model positive and encouraging communication.** "Maybe tell your students positive things. We are sad and stressed. Be personable with us so we feel comfortable learning from you" (Gem); "Consider listening to the student's struggles" (Malayla).

- **Instructors should provide regular, targeted, and actionable feedback.** One student remarked that the lack of clear feedback ultimately led them to drop out of their program.

- **Instructors should offer more synchronous lessons.** "Hold actual lectures instead of just Q and A's" (Seva).

Paced, Collaborative Learning

The sixth aspect of online learning advanced in Anderson's online learning model is paced, collaborative learning. Anderson suggests that online education, which is carefully sequenced with check-ins and deadlines, helps students to stay connected and engaged with learning.

> I was happy to choose online learning in the first place, but I did have some doubts and concerns as I don't really work well in an online environment, but mostly in a regular in-person learning environment. I tried online learning, and to my surprise, I was able to do it and complete my administrative course on time. I did not have any frustrations while doing online learning because my instructors were always there and available to answer any questions and properly guide me in my course work. (Ivory)

In our study, most instructors implemented paced, collaborative learning (See Table 9).

Table 9. *Modes of Instruction*

The main delivery/teaching mode of my instructors through the COVID online teaching experience was through:	%
Self-paced (asynchronous), individualized work; my instructor sent messages and posted resources and gave assignments that had to be completed. There were no or very few interactive online video conference lessons.	17.31%
Whole class video lectures and class discussions (synchronous); we had regularly scheduled online classes through a video conferencing platform (Blackboard Ultra, Zoom, Teams, WebEx, etc.)	38.52%
Blend of both asynchronous and synchronous work	44.17%

Routine and Rhythm

The effort to maintain regular, guided instruction was well appreciated by the students, especially those who were used to regular, face-to-face instruction. Respondents expressed appreciation for regularly scheduled synchronous lessons, reviews, and consistency in lesson formats.

Several students even suggested that instructors should expect every student to partake in real time, aligning with pre-COVID-19 demands of in-person attendance. "Mandatory attendance would be beneficial for scheduling home life" (Brylie); "Have live lectures and stick to live lectures to keep students on a schedule" (Prince). However, other students wrote that they appreciated choice in when and how they partook in the weekly lessons (provided they completed the weekly activities and stayed on top of deadlines). And several wrote that they just appreciated that the lectures were recorded and could be reviewed:

> Live lectures are being recorded, which allows me to watch them once I am ready and make more notes, as it is hard for me to learn by just looking at a PowerPoint and hearing a voice. My brain needs more stimulation than that... so what I do is that I watch the recordings and stop the lectures when I need to make additional notes. (Shaunak)

> The online lectures have been really helpful. The fact that they are recorded is great in case you miss a class or have a scheduling conflict. The fact that I am not in front of a class helps with "stage fright," so to speak, so I am a lot more vocal in class. Tools like Moodle and MindTap [allow] me to easily check when all assignments and quizzes are due, so I'm not missing any dates. (Ngozi)

There seemed to be variation in just how much instruction was scheduled for synchronous online learning. Students complained that some instructors only offered recorded lectures and others shortened 3-hour classes to only an hour and did very little instruction or activity in this time. In contrast to this, other students complained about being online and plugged in too much. "There were a lot of lectures that were back to back, so it would require me to sit in front [of] a screen for about 5 hours a day" (Christopher); "What frustrated me through online learning was when my instructors would try to run their classroom like they would have face to face. That doesn't work right now" (Jaidin).

Synchronous Collaborative Learning

While many students expressed appreciation for regular rhythms and expectations, other students felt that the paced lessons themselves needed to be attended in real time, as well as more engaging. Some students like Lemuel preferred live sessions as compared to prerecorded lectures. "Pre-recorded lectures take away from learning experience, all should be live... we are deserving to be actively instructed" (Lemuel). Some students preferred having more contact with their instructors in ways that were similar to the in-person classes. "More

interactive, longer live lectures. I was supposed to be in a full-time F2F program, and I only have two regular instructors out of five that I meet with daily through the week" (Rowen). At the same time, Audrei appreciated the live sessions offered by some instructors. "I think the blackboard live lectures are great, I think making students participate in them mandatory would benefit some people" (Audrei)

Thus, students point to the need for synchronous lessons to be interactive—what Anderson's model describes as collaborative learning. Students voiced their frustrations with having only pre-recorded lectures to work from with no opportunity to ask questions and seek support in real time: "It is hard to stay engaged through pre-recorded lectures and maintain drive to keep focused" (Jaidin). However, there were few suggestions from the students about collaborative teaching strategies, other than the use of breakout rooms which, as we have written earlier, were reviled as much as appreciated.

> Lay off the group assignments. Although there is immense value in working with a group, it is not worth the struggle of getting students to participate. If group projects continue, I think the break out rooms should be monitored better. (Ngozi)

Most of the suggestions by the students for interactivity had more to do with being attentive to student needs and challenges.

> Teach as if you were in a classroom, provide the PowerPoints you would have used in class. Actually, listen to what students need. Pretend you were a student again and remember what your struggles were and what you could have used to help you succeed better. (Donavin)

Discussion

We used Anderson's (2008) online learning model as a framework to code, organize, and describe student survey responses. The model has six key elements that influence student learning, namely: (1) independent study; (2) peer, family, and professional supports; (3) structured learning resources; (4) the establishment of a community of inquiry; (5) regular two-way communication; and (6) paced collaboration. Though the model's elements helped frame most of our findings, it is also important to note that the interface, content delivery, and expected ways of interactions in online asynchronous are not identical to a synchronous virtual remote learning environment. Consequently, some of the disadvantages identified by students in this study could be largely due to the nature of the delivery during emergencies when instructors had to prepare teaching materials as they went along, unlike traditional online learning environments.

This study was conducted after the college had transitioned to emergency virtual remote learning. The college was also closed for summer break during July and August 2020. From the time we collected the data, there have been changes in the higher education learning environments as a result of the pandemic. The switch necessitated from largely face-to-face to alternate modes of instruction had its own challenges and affordances. As several studies have noted, the COVID-19 pandemic necessitated a move to emergency virtual remote teaching (Cameron-Standerford et al., 2020; Hodges et al., 2020; O'Keefe et al., 2020). The quick transition adopted by most Canadian post-secondary institutions gave instructors little time to orient themselves and learn about effective online practices and pedagogy (Cameron-Standerford et al., 2020; Czerniewicz, 2020). Furthermore, like their instructors, most of the students in the study—who were enrolled in face-to-face cohorts prior to the pandemic—had to make significant adjustments in shifting to an emergency virtual remote modality (Jeffery & Bauer, 2020). How well students were able to make the adjustment often had to do with socio-economic circumstances (Aristnovik et al., 2020; Fishbane & Tomer, 2020; Khlaif et al., 2021); stress and uncertainty around the pandemic (Burns et al., 2020; Cameron-Standerford et al., 2020); home life responsibilities and intrusions (Aristnovik et al., 2020; Manfuso, 2020); increased workload (Aristnovik et al., 2020); suitability of the online environment for skills-based learning

(Greenhow & Lewin, 2021); technology access (Adedoyin & Soykan, 2020); Wi-Fi connectivity (Adedoyin & Soykan, 2020); and technological competency of both students and instructors (Bozkurt & Sharma, 2020; Vlachopoulos, 2020).

Our study provided more insight about the experiences of post-secondary students. Some students appreciated the flexibility that remote teaching afforded, although some were frustrated by the paced schedule and synchronized online classes. There were students who needed more scaffolding and support, some who struggled with uncertainty and stress related to the pandemic, and others who had challenges with technology and internet connectivity. Some students had busy home environments that made synchronous remote learning challenging. It was evident from responses that the pandemic impacted their overall well-being (Burns et al., 2020; Cameron-Standerford et al., 2020). Students suggested that instructors do wellness check-ins with their students, not to reinforce deadlines and expectations, but rather to get a sense of how students are coping emotionally, physically, and mentally. It was evident that the emergency virtual remote learning did not result in the creation and sustenance of communities of inquiry where issues of teacher, social, and cognitive presence are of importance (Garrison et al., 1999).

The sudden shift to online or remote learning exposed a long-standing issue for many face-to-face post-secondary instructors; their courses were not organized for virtual remote delivery (e.g., Bozkurt & Sharma, 2020; Vlachopoulos, 2020). Such issues could have been associated with technological competencies for both students and their instructors (Bozkurt & Sharma, 2020). Students complained that the organization of curriculum materials in the LMS was difficult to navigate and understand. The aforementioned concern was corroborated in a parallel study we conducted with instructors who acknowledged that the LMS site had been under-utilized prior to COVID-19; served only as a repository of readings and links; and was not organized for online or virtual remote learning (Manokore & Kuntz, 2022). It was evident from our study that virtual remote learning and teaching was not a smooth transition, and this impacted learning. The findings point to the importance of exploring pedagogical and technological ways to enhance learning in virtual remote learning environments.

Implications

This exploration of student experiences revealed factors that challenge students or help them succeed in their transition to emergency virtual remote teaching. What follows are teaching implications for instructors and post-secondary institutions.

Independent Study

Post-secondary institutions and instructors would be well served to design their courses with the various levels of independence in mind. Students who are self-starters and appreciate the freedom to choose might need to opt for asynchronous online offerings, instead of being enrolled in paced synchronous courses. Students who need scaffolding and support in the face of emergency virtual remote learning would need to be enrolled in courses where there are clear expectations and reasonable deadlines, regularly scheduled online classes, and careful monitoring and feedback. The instructor's role would be to help students develop successful work habits by showcasing these habits, modeling accountability, providing timely feedback, and slowly ratcheting up the level of work expected. At the same time, these instructors would need to show grace and compassion, being firmly aware of the disparity in home situations and individual capacity to cope in stressful circumstances.

Peer, Family, and Professional Support

Post-secondary institutions that are required to shift to an emergency virtual remote teaching model need to establish support systems and wellness options for students to work against the isolation experienced by crises, such as warfare, lockdowns, or natural disasters. As well, instructors who are faced with making this transition should schedule regular wellness check-ins with their students to get a sense of how students are coping emotionally, physically, and mentally. This could be done in one-on-one meetings or by small group meetings (when teaching large classes) to provide emotional support and connect students to wellness supports. Emergency virtual remote teaching also requires instructors to provide layers and levels of instructional support for their students. In the surveys, students mentioned drop-in support (virtual office hours); short videos posted in the LMS or YouTube channel; and more asynchronous activities (reading checks or quizzes). In addition, instructors need to constantly advocate for their students, connecting them to supports and personnel for both emotional and technological support. Emergency virtual remote teaching requires post-secondary instructors to move past the idea of simply being content purveyors or skill developers and look to the needs of the whole student—a tall task when many an instructor is as stressed and overwhelmed as their students.

Structured Learning Resources

The sudden shift to online or remote teaching exposed a long-standing issue for many face-to-face post-secondary instructors: Their courses were not as organized as those who taught online courses. Going forward, post-secondary institutions need to provide training and support in instructional design, showing instructors how to format their LMS sites to provide clarity and ease of navigation. Furthermore, instructors need support in utilizing a wealth of online educational activities that are provided in most LMS systems, such as forums, polls, assignment remittance, gradebook, wikis, quizzes, and activities, as well as exposure and access to online tools for polling, posting, brainstorming, and/or collaborative work. This could be accomplished through purchasing site licenses and providing training. In addition to these supports that individual instructors need, post-secondary programs need to review the purpose, procedures, and practicality of assignments and assessments. In an emergency virtual remote teaching context, how might academic integrity be assured? How will teachers really know if students develop the requisite competencies for course completion and professional placement?

Community of Inquiry

Perhaps the most critical challenge in making the transition to emergency virtual remote teaching is the creation and maintenance of a community of inquiry for both the students and the instructor. If emergency virtual remote teaching is to support a community of inquiry, there must be cognitive engagement and respectful tasks (cognitive presence); opportunities for collaboration and meaningful discourse (social presence); and skillful facilitation and support (instructor presence). Furthermore, the students themselves need to see their responsibilities in an online or virtual community of inquiry.

Virtual learners can support each other in making sure that the learning environment is safe and comfortable, helping classmates enter into discussions and inquiries. Instructors need to make their students aware of their community of inquiry responsibilities from the outset of the course, establishing viable working groups, clearly setting expectations for roles and tasks, impressing the need to develop teamwork competencies, and tying these responsibilities to course completion and achievement.

Communication

This study reinforced how important communication processes are in the event of crisis teaching. Students suggested that instructors need to be available and responsive. They need to initiate contact, regularly

checking in or posting regular updates on their LMS, so students feel supported and connected. What this study also revealed was that instructors need to explore alternate ways of communication with their students. A communication plan might also help instructors to establish boundaries, setting limitations for contact after certain hours or on weekends (except in the case of emergencies).

Paced, Collaborative Learning

In an emergency virtual remote teaching situation, it is important to recognize that most students are familiar with the paced, collaborative environments of in-person classes. Anderson's sixth factor–paced, collaborative learning–for effective online teaching (Anderson, 2008) is extremely vital in emergency virtual remote teaching. Unfortunately, the swift response to the onset of COVID-19; the chaotic adjustments made (for example, some programs discontinued or paused, others moved to fewer contact hours, and some moved almost exclusively to asynchronous facilitation); and the mixed and conflicting messages put out by institutions, programs, and instructors made the provision of paced, collaborative learning problematic. Our research would indicate that institutions and programs need to establish a crisis teaching plan, which would indicate just how face-to-face teaching would pivot to online facilitation.

What would be required of both students and instructors in terms of contact time, lessons and support, assessment and indicators of achievement, and program completion? Our suggestion would be that faculties and programs reflect on the lessons of COVID-19 and use them to plan for maintaining instruction in crisis scenarios, such as flooding, fire, pandemics, tornados, earthquakes, and other disasters.

Limitations and Suggestions for Future Studies

The fact that this study was conducted with only one institution may limit the applicability of findings to other post-secondary contexts. Furthermore, it must be acknowledged that the study was conducted at a very specific time, about 6 months after the initial shift to emergency virtual remote teaching. As such, it may not capture the chaotic immediacy of coping with a crisis, nor would it have the reasoned and somewhat distanced view that a significant amount of time would provide. It was, in fact, a snapshot in time.

We suggest that it would be insightful to conduct another inquiry to see how post-secondary students (and instructors) have made the adjustment to new ways of learning and facilitation brought about by the COVID-19 pandemic. Are the students still experiencing the same affordances, concerns, and pressures? Have instructors developed the technical and pedagogical skills to facilitate emergency virtual remote teaching more effectively?

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Appendix

I have reviewed the information and consent form, and I have agreed to participate in this research project.
- ❑ Yes
- ❑ No

Part 1: Demographics

1. How old are you?
   - ❑ Less than 20 years old
   - ❑ 20–25
   - ❑ 26–30
   - ❑ 30–40
   - ❑ More than 40 years old

2. What is your current living arrangement?
   - ❑ I live alone.
   - ❑ I live with friends or roommate.
   - ❑ I live with family (parents, grant parents, spouse/partner, children).

3. The COVID-19 pandemic affected my employment situation:
   - ❑ I was still working, but working less.
   - ❑ I lost my job or was temporarily laid off.
   - ❑ There was no change in my employment—I could keep working.
   - ❑ I did not have a job and am not looking for one.

4. Are you an international student completing your studies under a student visa?
   - ❑ Yes
   - ❑ No

5. Is English your first language? (The language you spoke as a child?)
   - ❑ Yes
   - ❑ No

6. Are you currently taking language courses to improve your command and confidence in English?
   (Language Instruction for Newcomers to Canada or English as an Additional Language)
   - ❑ Yes
   - ❑ No

7. Were you—or are you—currently enrolled in a full-time program at the college?
   - ❑ Yes
   - ❑ No

8. Were you enrolled at the college in March of 2020?
   - ❑ Yes
   - ❑ No

9. In February 2020, how would you describe your program?
   - ❑ All my classes were face-to-face/classroom-based
   - ❑ All my classes were online.
   - ❑ Some of my classes were online, and some were face-to-face.

10. Due to the COVID-19 pandemic, which of the following statements apply to you?
    - ❑ All of my classes moved online.
    - ❑ Some of my courses moved online, while others were postponed or cancelled by my institution (e.g., courses requiring in-person attendance).
    - ❑ There was no change, I was already an online student.

11. Due to the COVID-19 pandemic, which of the following statements apply to you? Please check all that apply.
    - ❑ I was not able to complete some or all of my courses for that term due to financial, family, or other responsibilities.
    - ❑ My planned work placement was delayed or cancelled (e.g., internship, co-op, work-related training).
    - ❑ I was not able to complete my degree, diploma, or certificate as planned.
    - ❑ None of the above—I was able to continue with my program through online learning.

12. Due to illness, financial pressures, family responsibilities, or stress, I applied for and received a "COVID Extension" on my program and course work.
    - ❑ Yes
    - ❑ No

Part 2: The Impact of COVID on Your Learning Experience
Please rate how much the following affected your learning experience as the colleges and universities shifted to online learning:

13. My access to quality technology (computers, tablets, printers) directly affected my learning experience.
    - ❑ Strongly Agree
    - ❑ Agree
    - ❑ Undecided
    - ❑ Disagree
    - ❑ Strongly Disagree

14. My access to a reliable and economical internet connection (consistent Wi-Fi) directly affected my learning experience.
    - ❑ Strongly Agree
    - ❑ Agree
    - ❑ Undecided
    - ❑ Disagree
    - ❑ Strongly Disagree

15. My responsibilities as a caregiver or wage earner directly affected my learning experience.
    - ❑ Strongly Agree
    - ❑ Agree
    - ❑ Undecided
    - ❑ Disagree
    - ❑ Strongly Disagree

16. The uncertainty around finances and living expenses directly affected my learning experience.
    - ❑ Strongly Agree
    - ❑ Agree
    - ❑ Undecided
    - ❑ Disagree
    - ❑ Strongly Disagree

17. The stress, anxiety, and uncertainty associated with the pandemic and its lock-down requirements directly affected my learning experience.
    - ❑ Strongly Agree
    - ❑ Agree
    - ❑ Undecided
    - ❑ Disagree
    - ❑ Strongly Disagree

18. Due to the switch to online learning, my career plans . . .
   ❑ Changed
   ❑ Were delayed
   ❑ Remain unchanged

Please rate the effectiveness of online teaching (both asynchronous and synchronous), your engagement, achievement, and satisfaction through the following questions:

19. I learn best from: (Please check all boxes that apply.)
   ❑ Self-directed readings and video links
   ❑ Instructor lectures (recorded and live)
   ❑ Guided practice (regular instructor feedback and coaching on work and demonstrations)
   ❑ Group work, collaboration, and discussion with peers
   ❑ Timely and appropriate assignments and assessments

20. Due to the switch to online learning, my overall learning experience, and the quality of my education was...
   ❑ Much better
   ❑ Somewhat better
   ❑ Stayed the same
   ❑ Somewhat worse
   ❑ Much worse

21. Online teaching helped me to gain a deeper understanding of the **most important content** for my courses and program.
   ❑ Strongly Agree
   ❑ Agree
   ❑ Undecided
   ❑ Disagree
   ❑ Strongly Disagree

22. Online experiences allowed me to develop the **essential thinking and practical skills** necessary for my chosen field of study.
   ❑ Strongly Agree
   ❑ Agree
   ❑ Undecided
   ❑ Disagree
   ❑ Strongly Disagree

23. Online facilitation—through scheduled presentations, assignments, readings & links, and discussions—helped me develop **professional judgement and awareness**.
   ❑ Strongly Agree
   ❑ Agree
   ❑ Undecided
   ❑ Disagree
   ❑ Strongly Disagree

24. Before Covid-19, the main teaching method of my instructors were:
   ❑ Prepared lectures with PowerPoints or Prezi's
   ❑ Class and group discussions
   ❑ Guided practice (demos and labs)
   ❑ Class assignments and worksheets
   ❑ Individual inquiry and assignments

25. The main delivery/teaching mode of my instructors through the COVID online teaching experience was through:
    ❑ Self-paced (asynchronous), individualized work; my instructor sent messages, posted resources, and gave assignments that had to be completed. There were no or very few interactive online video conference lessons.
    ❑ Whole class video lectures and class discussions (synchronous); we had regularly scheduled online classes through a video conferencing platform (Blackboard Ultra, Zoom, Teams, WebEx, etc.).
    ❑ A blend of both asynchronous and synchronous work.

26. During the Covid-19 lockdown, my instructors:
    ❑ Sent regular messages (email, chat, text, etc.) to update students on course work
    ❑ Assigned readings and supplied video links
    ❑ Gave regular lectures (recorded and live)
    ❑ Provided live or recorded feedback on class assignments and lab activities
    ❑ Facilitated group work, collaboration, and discussion using breakout rooms or small group video conferences
    ❑ Tried new technologies, found new ways to connect with students

27. My instructors made **effective use** of the following online tools, apps, or technologies. (Please check all boxes that apply)
    ❑ An LMS (Learning Management System) system (Moodle, Canvas, eClass, etc.)
       LMS features and plugins used included:
          ❑Forums
          ❑Chat
          ❑Quizzes and Tests
          ❑Wikis
          ❑Glossary
          ❑Surveys
          ❑Assignments
    ❑ A video conferencing tool (Blackboard, Zoom, WebEx, Teams, etc.)
       Video conferencing features used included:
          ❑Chat
          ❑Screen share
          ❑Whiteboard
          ❑Polls
          ❑Breakout rooms
    ❑ Online resources (YouTube, LinkedIn, Ted Talks, etc.)
    ❑ Online games (Kahoot, Quizlet, etc.)
    ❑ Social media (Facebook, Twitter, What's App, etc.)
    ❑ Notification systems and texting (Remind, What's App, Messenger, etc.)
    ❑ Pre-recorded presentations (PPTs, Voice Thread, Camtasia, Loom, etc.)

28. **Please share three ways online learning worked for you.** Provide details if you can. We are interested in learning the most effective online practices.

29. **Please share three ways in which online learning was a frustration for you** or caused you to disconnect from learning. Share details if you can.

30. **Please share three things that instructors might consider** as they prepare for subsequent groups of students. How might post-secondary instructors better reach and teach their students as they learn more about online facilitation?