

## Replication or Reinvention: Educators' Narratives on Teaching in Higher Education During the COVID-19 Pandemic

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### Abstract

**Objectives:** The purpose of the study was to examine narratives about the effect of the sudden transition from face-to-face teaching to emergency remote teaching necessitated by the COVID-19 pandemic on post-secondary educators.

**Method:** We conducted interviews with 11 post-secondary educators from five post-secondary institutes in one province in Canada. Educators were asked to reflect on their experiences during the transition from in-person to remote teaching and learning.

**Results:** Our thematic analysis revealed that **educators' experiences were influenced by three main factors:** (a) student engagement, interactions, and persistence in learning; (b) competence in the application of teacher technological pedagogical content knowledge (TPACK); and (c) overall well being of faculty and students.

**Conclusions:** Participants had unique experiences, and institutions varied in the ways they supported students and staff. Those educators who had expertise, experience, or professional support in technology and teaching seemed to have an easier transition.

**Implication for Theory and Practice:** Higher education institutes should support educators in enhancing their technological pedagogical knowledge and in facilitating learning in various delivery modalities.

**Keywords:** *remote teaching, educator experience during the pandemic, transition during COVID-19*

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## Introduction

On January 30, 2020, the World Health Organization (WHO) declared the threat caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) a public health emergency of international concern. On March 11, 2020, the WHO declared the coronavirus outbreak a pandemic. Coronavirus disease 2019 (COVID-19) was first identified in Wuhan, China and later spread across the globe. The COVID-19 pandemic resulted in the physical closure of many educational institutions around the world in an effort to contain the spread of **the disease. According to one United Nations' early report, the COVID-19** pandemic affected about 1.6 billion learners across the world and impacted nearly 94% of the student population and up to 99% of learners in low-to-medium-income countries (United Nations, 2020). Educational institutes that had the capacity to rapidly alter their delivery modality quickly moved from predominantly in-person teaching to emergency virtual remote teaching and learning. These changes were necessary to allow students to learn from anywhere during the pandemic.

In this paper, we explore post-**secondary educators' experiences with the rapid transition from the traditional** face-to-face modality to emergency virtual remote teaching and learning as a result of the COVID-19 pandemic. Our study sought to gain an understanding of the experience of post-secondary educators in responding to the COVID-19 pandemic. Through in-depth one-on-one interviews, we gathered information on the challenges and opportunities these educators faced during the transition.

Emergency virtual remote teaching should not be confused or conflated with traditional online learning. Online education has been offered for decades and has been evaluated and found to be just as effective as face-to-face learning environments (Branch & Dousay, 2015; Hodges et al., 2020). Using various digital platforms, online education was designed to provide activities and interactions that enhance learner experiences and outcomes. Successful online programming includes courses that are well laid out and assignments and assessments that have been carefully crafted and already piloted with students (Hodges et al., 2020). Most of all, successful online programming involves students and educators who have *chosen* this modality and are relatively comfortable with it (Center for Innovative Teaching and Learning [CITL], n.d.).

In contrast to online education, the kind of teaching and learning environments established during the COVID-19 pandemic were more reactive to the pandemic context and subsequent lockdown situations (**O'Keefe et al., 2020**). **One cannot compare the experiences of experienced online educators to those who** were suddenly faced with moving to emergency remote models (Adedoyin & Soykan, 2020; Bozkurt & Sharma, 2020; Vlachopoulos, 2020). Learning institutions, educators, and students were figuring things out in real time while also dealing with the stressors associated with a pandemic and waves of lockdown measures. Consequently, evaluating the pros and cons of emergency remote virtual learning using research and frameworks from literature concerning online teaching might not be appropriate. As pointed out by Hodges et al. (2020),

[w]ell-planned online learning experiences are meaningfully different from courses offered online in response to a crisis or disaster. Colleges and universities working to maintain instruction during the COVID-19 pandemic should understand those differences when evaluating this emergency remote teaching. (p. 1)

Although our interview participants often described their transition to remote teaching as online teaching, in this paper we make a clear distinction between the two. This distinction is described in Table 1, which summarizes the work by Hodges et al. (2020) and builds upon a model provided by the Memorial University Center for Innovation in Teaching and Learning (CITL, n.d.). Interestingly, none of the interview participants used the phrase remote teaching; rather, they used the term online teaching to describe the teaching and learning modalities they adopted as a result of the COVID-19 pandemic.

Table 1. *Comparing Remote and Online Learning and Teaching*

	Emergency Remote Learning & Teaching	Online Learning & Teaching
Design	Developed week by week, student learning experiences were highly <b>dependent on instructor's technological pedagogical content knowledge (TPACK)</b> .  It is reactive and responsive.	Fully developed before the start of the course, leveraging technologies to facilitate self-directed learning.  It is intentional and preplanned.
Delivery	Paced delivery, reliant on real-time synchronous sessions with conferencing applications or asynchronous assignments through prerecorded videos.  Attempting to mimic or replicate collaborative (classroom) teaching and learning.	Self-paced delivery, cohort paced, or a mix of both. Learning is mainly independent or asynchronous with a few synchronous touch points.  More focused on independent concept or skill acquisition.
<b>Student's Role</b>	Due to the rapid transition, students may have less access to and capacity in using online technologies and applications.  Students are more reliant on their instructors for guidance and support.	Students who have chosen this modality are aware of expectations at the beginning of the course and should have access to the technology required for their learning and interactions  Self-directed learning.
<b>Teacher's Role</b>	Mirrors typical instructor role in face-to-face instruction, with scheduled interactions.  Educator as conductor or facilitator of learning experiences.	Check points to monitor the progress of the students.  Educator as facilitator, designer, and support system for learners.
How LMS is used	Used for communication, sharing learning resources, and assessment.	Add-on tools to facilitate interactions (social and cognitive).

*Note:* Adapted from the Memorial University Center for Innovation in Teaching and Learning (n.d.).

The use of educational technologies and digital education as a modality is not new in higher education. The trend towards online education and digital transformation has been happening for decades (Kopp et al., 2019; Leszczyński et al., 2018). Yet, as noted by Adedoyin and Soykan (2020), the COVID-19 pandemic initiated a digital transformation in higher education that would have taken years to plan and implement if it was not for the urgent need and the crisis caused by the pandemic. The limitations caused by the closure of education institutes as a result of COVID-19 and the rapid changes in delivery without cautious design and a clear development process resulted in scholars reinforcing the notion that remote teaching is *not* a replica of online teaching (e.g., Adedoyin & Soykan, 2020; Bozkurt & Sharma, 2020; Hodges et al., 2020; Vlachopoulos, 2020).

In fact, the rapid switch to remote learning and teaching brought its own very different opportunities and challenges. The move to remote learning and teaching provided organizations with the opportunity to continue to meet their organizational mandates to provide learning to post-secondary students in innovative ways without having to maintain brick and mortar facilities. Remote learning and teaching provided flexibility for students and educators to interact from anywhere as they were physically distancing to reduce COVID-19 infections. As noted by Manfuso (2020), organizations managed to take advantage of the situation and tried delivery options that they had never tried before. As a result, lessons learned would provide opportunities for various delivery modalities after the pandemic.

The challenges brought about by the rapid transition include those faced by students, their instructors, and their organizations. The move to online facilitation brought anxiety about how the learning would unfold; this **anxiety was compounded by the impact of the pandemic itself on people's physical and mental health (Son et al., 2020)**. Documented technological challenges include securing access and developing skills to use the platforms to meet the learning needs of students. Adedoyin and Soykan (2020) noted that some students had problems accessing devices they could use and had issues with internet connectivity, as well as limited technological skills, such as the digital competency/literacy needed to learn using the learning platforms that their organizations adopted. Fishbane and Tomer (2020) highlighted some socio-economic issues that impacted **students' access and use of internet**-based learning resources during the pandemic.

Instructors had challenges related to technological literacy, confidence, and anxiety. The sudden shift to remote teaching also created a huge workload and time cost for instructors (Adedoyin & Soykan, 2020). Overall, remote learning brought significant technological, pedagogical, and social challenges. Technological challenges resulted from issues related to infrastructure, technological skills, internet connectivity, and access to computers; pedagogical challenges arose as educators tried new interactive media to motivate and engage students (Ferri et al., 2020). At the same time, physical isolation was another factor that impacted learning for many students and instructors. Ferri and colleagues indicated that some individuals did not have a suitable home environment where they could engage in learning.

## Purpose of the Study and Research Questions

The purpose of this study was to explore post-**secondary educators' experiences** with the rapid transition from face-to-face to virtual remote teaching because of the COVID-19 pandemic. We wanted to gain insights into their lived experiences to learn lessons that might help educators and institutes when faced with similar circumstances. Questions included: (a) What were some of the specific challenges and opportunities college educators experienced during the rapid transition from in-person to emergency virtual remote teaching and learning due to the COVID-19 pandemic? (b) How did these educators adjust in response to changing demands and new modalities for instruction? (c) Were there any other factors or situational contexts that influenced such experiences? To answer these questions, we conducted 11 one-on-one, in-depth interviews with educators from five post-secondary institutes in one Canadian province.

## Methods

**This qualitative study used a phenomenological approach to explore participants' experiences of the rapid transition from in-person to virtual remote teaching.** According to Gray (2014), phenomenological studies explore opinions, subjective accounts, and interpretations of participants about a phenomenon. In this study, the phenomenon is the rapid transition from in-person to virtual remote teaching during the COVID-19 pandemic. **The assumption is that each participant's description of their experience also depends on their backgrounds and their perspectives on what transpired.** Phenomenological approaches are not so much about

generalizing to the larger population; rather they are more about providing contextual descriptions of experiences (Gray, 2014). As such, our study focused on experiences of educators in one Canadian province.

## Participants

The results reported in this manuscript are part of a larger study that was designed to gather information on experiences of educators and students during their transition to remote learning from traditional face-to-face learning and teaching environments. The proposal was approved by the institutional research ethics board. Invitations were sent to college educators to participate in the study via the provincial Colleges and Institutes Faculties Association. In the larger study, educators completed an online survey with both Likert-scale and open-ended questions. As a result of participation in the main study, certain respondents volunteered to participate in follow-up, in-depth interviews to share details of their experiences during the transition from in-person to remote teaching and learning as a result of the COVID-19 pandemic. This paper shares the results exclusively from the **follow-up educators' interviews; survey results are reported elsewhere (Authors, under review)**. Eleven educators from five colleges in one Canadian province volunteered for the one-on-one interviews. These 11 educators represent a broad range of experience, expertise, and program assignments. They teach in foundational programs (literacy and high-school upgrading), technology and trades programs, professional programs, and university-transfer programs. Most post-secondary organizations in that province shifted to remote learning and teaching in March 2020

## Procedures

After securing institutional ethics approval in July 2020, we sent the survey out in September 2020, and the follow-up interviews were conducted between September and December of 2020. Virtual remote interviews **were conducted using Microsoft Teams. With participants' consent, the interviews were recorded using a handheld digital recorder** to avoid the recording getting into the virtual space. Detailed notes were also taken during the interview. Due to the wide range of programming between participating institutions and the differences between academic calendars and course load assignments, participating educators varied in the amount of time they had been teaching in the emergency modality. All interviews were conducted with participants who had less than six months of experience in remote teaching because of the pandemic; thus, memories of the transition were still very fresh.

## Instrumentation

The semi-**structured interviews were designed to gather participants' personal accounts of their experiences** during the rapid transition to emergency virtual remote teaching and the kinds of institutional support they received. The interview guide included the following:

1. A section to explore academic and professional backgrounds and courses they taught.
2. Transition accounts of experiences in which educators shared initial responses to the lockdown, new skills learned, communication and teaching challenges, opportunities and innovations related to delivery modes, peer support systems, institutional supports received (or not received but needed), and any other experiences they were willing to share.

## Qualitative Analysis

Each participant account was documented and analyzed as a unique, personalized experience; however, we also looked at patterns emerging from such experiences. A thematic analysis of these interviews helped identify common opportunities and challenges faced by the post-secondary educators in the province during the transition to remote teaching, and the analysis shed light on the importance of teacher training and preparatory experience. We followed the thematic data analysis 6-steps as described by Braun and Clarke

(2008). The first step was to familiarize ourselves with the interview data. The familiarization started during the time of the interview. During the interview process, one researcher focused on asking questions and probing participants as the other researcher wrote detailed notes. Through this inquiry and transcription, both researchers gained some understanding of participant perspectives and experiences. After the interviews, both researchers reviewed the recordings, transcribed interviews, and created meaning from the data (Bird, 2005). Both researchers read and re-read the transcripts and made notes on possible preliminary codes. The second step involved generating the codes. Both researchers manually generated the initial codes by identifying and highlighting the interview data that was informative and of potential interest. As we worked through the data, we recognized the uniqueness of each participant and the need to highlight that in each **participant's narrative. After coding, we started the third step**, in which we combined some codes to form broader themes. The fourth step involved reviewing the themes. We once again reviewed the data, codes, and themes as we redefined some of the identified themes and merged others. In the fifth step, we named our themes. During the sixth step, we started writing up the findings and considered the interdependence of the main themes.

## Results

### Educator Narratives

In this section, we share individual educator narratives. We describe their background and share a defining quotation from each. Each interview participant provided insights that helped the researchers build a more nuanced understanding of how these educators approached the challenge presented in emergency virtual remote facilitation. We were especially interested in how post-secondary instructors may have leveraged their training and their prior experiences during the COVID-19 pandemic.

#### Participant A

Participant A only had one year of teaching experience at the organization at the time of the interview. She had no formal training in education; however, Participant A had experience in using educational technology from her prior work before joining academia. She joined her post-secondary institution from corporate industry and was hired because of her experience and content knowledge. She was a part-time employee. Participant A taught small classes of about 40 students. All of her classes were face-to-face before she transitioned to fully online because of the pandemic. Her classes were comprised of both domestic and international students. In **Participant A's organization, educators did not have much time to prepare for the switch to remote teaching**, and her immediate priority was to figure out what needed to be done to enhance student learning. Her challenge was to keep her students engaged and she felt that she had no way of getting non-verbal feedback because her students were not willing to turn on their cameras during synchronous class time.

I have worked remotely before in my previous work and we would all turn on our cameras. In my teaching, very few students turn on their camera. I need strategies for having students participate more. I want to observe other instructors teach because they make it look easy, they use various tools. **Watching someone's prerecorded video might also help. If I were full time, I would have time to learn and use more interactive and engaging activities.**

Participant A compensated for this lack of feedback by checking in on students through email and through one-on-one meetings. She indicated that her students appreciated that. As a part-time instructor, Participant A found it challenging to allot enough time to prepare additional resources to support the students compared to her full-time colleagues who had the capacity to put in extra hours for additional prep needed during the transition.

Like many other educators, Participant A would have preferred students to turn their cameras on during synchronous sessions. Her experience in private industry, with online meetings, caused her to expect more from her students in terms of interaction and visibility. To make up for the disconnect, as she experienced it, Participant A started to experiment with other features in her video platform such as breakout rooms, polling, and the chat. She also found online apps for polling, posting, and games that promoted interaction and gave her a better sense of who her students were.

Another way that Participant A attempted to promote interaction and engagement was through the use of portfolio assignments and assessments. Students were given the choice of what they worked on and submitted and how they presented it. An integral part of this assessment was a team assignment in which students were graded not only on what they submitted but also on how they provided feedback to each other. Participant A missed the community feel of the classroom and so she designed educational tasks that were meant to promote community.

**Participant A also expressed her desire to visit her colleagues' classes to gain understanding and confidence by watching peers effectively facilitate their remote classes.** She shared that she had much to learn in facilitation and she appreciated the workshops and seminars from her institution on effective facilitation. Another concern shared by Participant A was that of increased workload brought about by the rapid shift to remote learning and teaching. Casual/adjunct instructors who are paid per course did not have extra time to dedicate to learning about relevant interactive technologies during the pandemic. Participant A explained that some of the casual instructors had multiple appointments at different institutions and each institution had a different learning management system (LMS) and different video platforms. Casual instructors did not have extra time to volunteer hours towards learning more about remote learning and teaching.

#### Participant B

Participant B had more than 10 years of teaching experience at his organization at the time of the interview. He was teaching in a diploma program, and all his courses were offered in person before the pandemic. The courses were moved to online learning during the pandemic. Though this instructor had his Moodle (LMS) page populated with some teaching and learning resources, he indicated that the materials were developed for in-person and not for emergency virtual remote learning and teaching. During the rapid switch to online learning and teaching, Participant B had to familiarize himself with many of the tools on the LMS and video conferencing platform such as polling, whiteboards, forums, and chat; there also were many online applications he had never used before.

For me it was a huge learning curve to shift to online. It does not come easily to me to learn new technologies. I am a slow learner when it comes to technology. There is a difference in teaching face-to-face and online. You cannot just cut and paste. It requires a lot of time and familiarity with things that I do not have expertise in. I can be my own worst enemy, that is a personality flaw of mine. I was questioning my own abilities even though I had materials in Moodle. My area provided resources, experienced colleagues did independent training sessions and offered training and were accessible all the time. For example, there were lots of training sessions including on using Blackboard [video conferencing tool]. **There was a sense of "Let's support each other and work together!" as people shared their skill sets.** My parents and my in-laws are high risk to COVID-19 related complications. It felt like an impending doom and I was very anxious about whether I will do a good job and keep my family safe.

Participant B was not only **learning to facilitate students' learning remotely, but he was also learning to use technologies** in ways he had never experienced before. Compounding this stress was the fact that Participant B was very concerned about his family contracting the coronavirus. As the interview continued, we also learned that Participant B had additional responsibilities as a program founder, curriculum developer, and an

executive on the faculty association. As a result, Participant B shared that he had stressors from work and home as he tried to do his best in both worlds.

In reflecting on his experience, Participant B explained how he overcame some of the challenges presented by the pandemic and gained confidence in facilitation. He did not want to be one of the instructors who simply talked at his students. He credited peers who were experienced in using technology and provided him with the support he needed in further learning about the LMS and video conferencing platforms. He began to experiment with shared documents (Google Docs) to do small group analysis and mini-simulations. He set up role plays and simulations that students could tackle together in the breakout rooms. At the same time, Participant B confessed that he continues to struggle to more effectively integrate online apps, the use of games and online forums, and the monitoring of the chat board and other video conferencing features.

### Participant C

Participant C started teaching in the 1980s through a non-governmental organization (NGO) and has been teaching in formal settings since 1993. Her family originally came from Eastern Europe. Her grandparents did not speak English well. Her parents learned to speak another language first before they could speak English. Her mom was the first to graduate high school in her family. Her family has been moving around for generations. That is why she has a special connection to immigrants and second language learners. She currently teaches English as an Additional Language. During the transition to online learning and teaching, her home office was not optimally set up. The computer was not equipped with a second display, microphone, and camera, and she had some technology and connectivity issues. Before the pandemic, she did not use the Moodle LMS because she felt like her students were struggling with technology literacy and the navigation of the LMS would be too difficult for them. Participant C used the LMS only as a repository for assignments. The pandemic made her expand her use of LMS to hopefully promote the kinds of learning and interaction she was used to in face-to-face instruction. However, she was disappointed by the results. **The LMS served as the repository of her video conferencing recordings, but she was not satisfied by the quality of the recordings. “I listened to my recordings and did not like how the sound was coming and the lagging on my end was worse than students.” She was convinced that her students were not learning the language to the level she would want them to because the technology limited how they could interact. Two-way communication was difficult, she missed the non-verbal cues and clues of in-person teaching, and online chat and forums were difficult for additional language learners. Participant C confessed that she did not have much experience with virtual remote teaching and has no reference point because she never took an online class as a student.**

My students did not have the right technology. How can you have a conversation when the technology keeps cutting in and out? Most of my students like learning online because they do not have to travel to campus. For me, I worry that they might not gain the skills that they would require for in person interactions and also for me to see and be sure that they are learning. I do not know for sure if it is them doing the assignments. I have no way of knowing if they are learning and I do not believe that they are learning anything. The chat can become controversial, divisive, and distracting. Like students passing notes. Some students put up emojis that others think are disrespectful. Sometimes side conversations happen in the chat that are not healthy. I do not teach language, I teach people. I do not know if I am making a difference; I do not know if they are learning. I am not taking care of myself because of the workload. I wish for outdoor socialization, maintaining the social distance just to be with colleagues.

Participant C was worried that her students might not gain relevant skills through remote learning due to challenges with technology, lack of conversational practices (important course expectations), and **questionable authorship of students’ assignments. She was worried that learners might “cheat” and find someone to do the assignments for them.** As she indicated during interviews, she never completed online

courses herself and therefore had no reference on how such learning environments are designed to enhance learning. She was also not familiar with proper online assessments in her field.

Some of the ways that Participant C tried to improve the remote learning experience for her students included incorporating online chats and forums in the LMS, breaking the larger class into smaller, more familiar working groups to practice speaking and listening skills, incorporating smaller projects and more checkpoints to assess learning in bite-sized ways, and reaching out to faculty developers and other support personnel for more ideas and strategies. Nonetheless, Participant C was unhappy with the level of teaching and support she could offer her students, she was tired of the extra work and the social isolation, and she was looking anxiously to the end of pandemic restrictions and a return to face-to-face teaching.

#### Participant D

**Participant D had been teaching for 34 years and has a master's degree in Education.** Before the COVID-19 pandemic, Participant D was doing flipped classes where he recorded how-to videos or pre-recorded lectures for the students to view before coming to class so that face-to-face time could be used for active discussion and group work rather than passive listening and note-taking. This meant that he had already developed a repository of recordings. Since the onset of the pandemic, he has split his contact hours so that some lessons with students are synchronous, and others are asynchronous. **Participant D's administration gave instructors** authority to cover the course material using whatever means that would help students achieve the learning outcomes. Participant D wanted his students to have a good experience. Given his background in technology and his comfort in the content, he felt prepared for the transition to online teaching and learning.

I did not have any new discoveries, I have been in tech for a while and I know what is out there. There was nothing that knocked me off. In my chemistry class we have one Zoom class per week and students record and play it later. They have content videos I created before the pandemic. They like watching recordings we are having with Zoom. In my regular class I do not record but with this I am recording and they seem to like the recordings. The institute gave us a heads-up before they said they are moving over. I had tech know-how; I was ok. The institute was good to give a heads-up. I did not start doing anything new. Communication with students is a good tool. I gave my students my cell number. A lot of my students text me. I answer by creating a support video and post it on YouTube. I was doing that before and now I am doing more. I provide generalized videos even for specific questions to the students. I make a playlist and the students can see what others are asking too. I send the video link to the person who asked the question and it is added to the channel playlist for other students to view.

Unlike Participant B, Participant D was comfortable with educational technology and had been creating videos for the students prior to the pandemic. He was one of the few participants who seemed to be ready for the rapid switch to remote learning as a result of the COVID-19 pandemic. Participant D used breakout rooms extensively, explained math problems using a tablet and cursor, used Dropbox for assignments, and a lockdown browser for monitoring exams. That said, Participant D did share that his synchronous online classes could not sufficiently replace the feel of a face-to-face class. He missed the spark of understanding that **he could see in his students' eyes, the fact that he could more easily gauge where the students were in their** learning and the knowledge that all students were actually attending and paying attention (with online it was hard to judge). Participant D suggested that every instructor, whether they are new to technology or as comfortable with it as he was, would benefit from being part of a community of practice. He asserted that educators need to share and compare effective practices across programs and even between institutions. It was with this motivation in mind that Participant D volunteered to participate in the interviews.

#### Participant E

Participant E has a health-related professional background. She started teaching skills in a laboratory and

then transitioned into full-time teaching for both theory and laboratory courses. Early in her career, she realized that she did not have enough knowledge and skills to teach online. She enrolled in a course offered by her organization that provides participants with some basic skills for online teaching, and this started a career-long pursuit. At the time of the interview, she was taking a course on teaching at an online university. She felt well prepared for the transition to emergency virtual remote teaching, especially for her theory courses. However, despite her preparedness, she indicated that the pandemic quadrupled the work needed to prepare for the laboratory and theory classes.

I felt good about the transition because I had the skills. I was not worried. In spring I was stressed out because I had to teach [Lab skills] online. I stressed on how I would do that. I did not know how to position my camera so that I could show the whole body. All my plans went through the window at **that time. At that time, we were in firm lockdown, I could not ask anyone to be my model. I've noticed** the difference between students who signed up for online and those who signed up for face-to-face and real learning online due to the pandemic. My online students have been amazing, they do the readings. I see the difference between the two groups. Those who signed up for online learning do the work as compared to those who signed up for face-to-face synchronous class. I changed my strategy and reached out to my students more. I use MS Teams meetings a lot to have more connections and share screens with the students. I used the various video conferencing features a lot. I used more Voice Thread [a video recording app]. I did not want to hit my students with too many new forms of technology because some were struggling. I had to use what was introduced already.

Just like other educators who facilitated practical skills-based courses, it was not an easy transition for Participant E to move to emergency virtual remote teaching and learning. Mimicking face-to-face skills demonstrations presented its own challenges in terms of technology and feasibility. She found it difficult to record demonstrations of physical skills (with appropriate subjects and useful camera angles) so they could be uploaded for viewing on YouTube, but she persisted. Participant E noticed a significant difference between the students who signed up for online classes and those who had enrolled in face-to-face classes and had to pivot to emergency remote teaching. The online students watch the videos and complete the readings, but the remote emergency students are not as diligent at doing the pre-work and instead expect the instructor to tell them the essentials in scheduled synchronous classes. Educators had to think creatively and were challenged to engage students and facilitate skills-based courses to meet the learning outcomes. That said, Participant E was an educator who actively looked for and often found solutions for the challenges associated with remote emergency instruction.

Since moving to emergency virtual remote teaching, Participant E said she ramped up her communications through the news and announcement forums in her LMS, through email, and especially through video phone calls (Zoom or Microsoft Teams). Talking to students and walking them through situations by visually demonstrating and sharing screens made explaining much easier. Because it is important for her students to understand steps in physical care, Participant E often used recording programs, such as VoiceThread and Screencast-O-Matic, that allow students to add their own comments and respond at key moments. Moreover, Participant E discovered many other programs that helped her scaffold and support learning in her teaching. Apps and features included shared documents (Google Docs), formatting programs (Canva), posting programs (such as Padlet and Jamboard), and quizzing apps. Participant E said that her experience in using breakout rooms was disappointing, and her students did not seem to appreciate the small group breakouts.

When asked about further support that might optimize the move to emergency remote teaching, Participant E suggested clearer guidelines for students in terms of what they might need to be successful, such as working cameras, a private space to learn, and appropriate software. She also suggested a week-long orientation for students on how to use the software and conferencing components and how to find assignments. Especially concerning for Participant E was the supervision of practicums and the need for flexibility on start and end

dates, holding grades back until completion, and perhaps a reduction in the number of hours needed by accreditation boards. At the same time, she was concerned about the quality of instruction students experienced and the employment readiness of students who completed their training in COVID-19 conditions.

#### Participant F

Participant F graduated from the same program he was now teaching in more than 20 years prior to the pandemic. After completing the program, he worked in the industry before coming back to the college as a faculty member two years before the pandemic. All of his courses were designed for in-person learning and teaching. Though the transition was not easy, he believes his adaptation was good compared to his colleagues.

I was not prepared for online teaching in March. We did not have enough time to prepare. We started with the idea of shutting the school down for three days to prep and then went online. I was not worried about the program and content, but I knew that the first few days would be rough. I was worried about student mental health and ability to engage. We had awesome resources, I am impressed with faculty and student support especially the Center for Academic Development and Innovation (6 people) whose job it is to support instructors. We are their students. I switched my assessment style to pass or fail and started giving shorter assignments and I would give students credit for just trying; hence the pass or fail grade. It works very well. I compete with other courses where they have high-stakes assessments. From a learning standpoint, pass/fail helps them to learn. I make my assessments hard to cheat, I limit time. Proctoring software is stressful for students.

Like several of the other participants, Participant F found the transition to remote emergency instruction a difficult one. He worried about student mental health and missed the kind of interaction he was used to in face-to-face contexts. **“In virtual class, they turn their cameras off and I lose body language. I did not know students would turn their cameras off.”** To address the need for interaction, Participant F availed himself of the various supports offered by his institution. He learned to use breakout rooms effectively and set up one-on-one video conferences with students so they could share screens. He also set up special channels in the Microsoft Teams environment so students could post files and he could send group messages. In addition, Participant F used polling programs, such as Poll Everywhere, to set up informal feedback loops so he could gauge interest, engagement, understanding, and get a sense of where he needed to adjust his practice.

One of the major changes was in his assessment strategy. He started giving his students shorter assignments more often. He felt that this might ease the pressure of high-stakes assessments and make it easier for students who were having wellness challenges due to the pandemic and its stressors. In addition, he gave credit for just trying the assignments and switched to a pass or fail grading system. Participant F felt that this approach of providing more assessments worth fewer points worked. He found out that the pass/fail grading system worked well, and students met the expected learning outcomes. That said, he confessed that he still had no guarantee that students were doing their own work. During class facilitation, Participant F discovered that after asking a question, he would wait a bit longer for a response than he would do for in-person classes. Each time he took time to think, he would let his students know that the learning management system was not frozen and that he was just taking a pause to reflect. He also used the Microsoft Teams chat function to communicate with students. When students were submitting their assignments in the form of a video, Participant F did not request a limit on length, mainly because he was aware that some of the students might not be skilled in editing videos. He pointed out that video editing was not an expected learning outcome in his course and, therefore, was not a requirement.

Overall, Participant F felt that students were getting good value for their education though it might not be on par with in-person instruction. He pointed out that the students, as well as the instructors, were learning new ways to research, collaborate, and present their work. However, he missed the spontaneous interactions that happened **on campus when you “bumped into students and would have chats in the hallways.”** Participant F

also noted that physical isolation regulations designed to minimize the transmission of the coronavirus brought their own mental health challenges. Going forward, he pledged to work even harder on developing his listening skills so he could more effectively build community for his students.

### Participant G

Participant G had been teaching since 1993. She has a B.Ed. and an M.Ed. She has international experience in teaching English as a second language (TESOL). She joined her current college in 2002 and has been teaching English as a second language. Six years prior to the pandemic, Participant G wrote curriculum materials for TESOL. At the time of the interview, she was writing teaching materials for K–12 students. She has provided TESOL instruction to post-graduate students. At the time of the interview, she was teaching in a program where the majority of the students have post-secondary credentials. She felt lucky that such students already knew how to navigate post-secondary learning. During the rapid shift to virtual remote teaching, she had to do some research on how to teach online, online pedagogies, as well as literature on teacher and student presence. However, she had had previous experience as a Moodle Associate (LMS support), and this gave her some confidence with the technology. During the transition to online learning, as a result of the pandemic, she helped her peers by providing support they needed—she became a resource for her colleagues.

I was worried about students who had jobs cancelled and did not get funding because they are international students. Some moved to live with family in Canada in other towns such as Toronto. Some students got cleaning jobs and would do cleaning during class using phones, they could attend class at work. I had to cut down on the length of synchronous sessions and have a small group at a time rather than all students for 3 hours. Every 3rd slide I would have an interactive activity such as **Kahoot, Padlets, Quizlet Live etc. I was concerned about students' well-being and financial issues.**

She noted that some students benefited from the virtual learning because they had to access learning resources from home and did not have to commute to the college. However, Participant G felt that many students were experiencing a tough time due to the pandemic. She was worried that some of her students had lost their jobs and moved to other towns to stay with friends or family. Some of the students who lost their jobs were international students who could not access Canadian loans. She gave an example of a student who had a cleaning job. At times the student would attend the virtual synchronous session from their workplace. Participant G mentioned that other students had problems with internet connectivity and social isolation, and some had young children at home, which impacted their routines and learning. Consequently, she had to make reasonable adjustments to accommodate the learners. She had to cut down on the length of her synchronous sessions, meet students in smaller groups rather than meeting the whole class for three hours, and integrate more interactive activities.

**Participant G's recommendations for improving the transition to emergency remote teaching would be to** provide an orientation to online practices and standardize the look and feel of courses posted on the LMS. She felt that educators confuse their students and make it harder on themselves when their online platforms are disorganized. She also felt that the institution could do a better job of making students aware of the supports offered to international students and students in crisis.

### Participant H

Participant H has a degree in education and a diploma from a technical college. At the time of the interview, he had been with his college for 20 years. During his tenure, he worked as a faculty developer. His department permitted him to work for the Center for Teaching and Learning to help others learn about educational practices and pedagogy. He has also written modules to support new faculty members in his department. In addition, he is certified to deliver Instructional Skills Workshops, which is an internationally recognized four-day workshop for new and continuing post-secondary educators to enhance their practice. During his tenure at the institution, Participant H served as an academic chair for a short period of time. At the time of the

interview, he was teaching theory and lab-based skills courses. Because of the pandemic, his skills lab classes were split so that some instructional hours could be in-person (practicing physical distance as per COVID-19 recommended guidelines), while others were done online. Participant H learned to be kind to himself and the students. Due to lockdown measures, all of his family was working from home and that created bandwidth challenges.

At ours [post-secondary] we were allowed to complete the rest of the weeks online. We had one week to take our resources (e.g., books, chairs) from office to home. I still do not have all my resources from the office. We were given one week to prepare for online teaching due to the pandemic. It was difficult to input everything into our D2L [LMS] in a short period. The accreditation body relied on the college grades and could not give the students the traditional test which they typically give at the end of the year. Some students are happy with no trade examinations from accreditation bodies. I do not think that students are getting fair value for their education. I was just hoping that the students would complete and was happy that students continued online. Some programs were refunded and some programs did not continue. I was happy that my students went through the year. I had to learn how to manage class time, I had to decide if I should talk for 3 hours. I needed to do some assignments so that they do not just sit and listen. My students are in trades because they learn by doing and not just listening. I had to learn how to manage that, from talking to having them doing something using the online format. I figured the transition out on my own basically; we did not have much time. I learned a lot of great and fun ways of teaching. I have not found the best ways to use them all because some you have to pay for the platform. We do not have professional development money to cover all the costs for educational technology software. Free versions are superficial and not as good as the paid ones.

Programs that had examinations from accreditation bodies also experienced a different level of challenges. As pointed out by Participant H, not only were licensing bodies not prepared for the pandemic, but some did not move quickly to mitigate against minimal disruptions and to offer alternative assessments. As a result, students were disadvantaged and some lost their time and were delayed in their education as they could not write the licensing exams.

Due to his comfort with technology and his short tenure as a faculty developer, Participant H was in a favorable position when the transition to emergency remote teaching began. He was comfortable trying new tools in the LMS and in the video conferencing platform, including breakouts, surveys, quizzes, gradebook, polls, and forums. But Participant H was reluctant to use online apps; he did not want to pay for subscriptions and found that the free versions had limited capabilities. Like some of the other participants, Participant H found the whole experience of emergency remote teaching to be disappointing and as something to be endured rather than embraced. He felt that the students were not getting the education they deserved and needed, and he worried about them taking the accreditation exams for their trades. He lamented the fact that **he could not see the students' faces in synchronous online classes and found the teaching of skills challenging in online contexts. In the end, Participant H said,** "I had to learn to let go of things I can not control. I can do the best I can, I am no longer too hard on myself, and I treat my students with kindness and compassion. I told my students we are learning together as we are all new to online [virtual remote] **teaching.**"

#### Participant I

Participant I started teaching at her college in August of 2019. It was her first professional teaching job. She has a Ph.D. in her content area, and she is passionate about teaching. Apart from teaching two theory courses, Participant I also coordinated the lab activities for the students in her department. The transition to online teaching was not very challenging for her in the beginning. However, she indicated that later it became **stressful. She also observed that the students'** performance also went down after they moved to an online platform. Participant I indicated that, prior to the transition to online teaching, she barely used the Moodle

LMS for teaching other than posting PowerPoints for her students. She had to learn from the internet how to use Moodle and she became a resource for her peers. She also took some in-house training offered at her college and that helped her with other interactive ways of engaging students, such as through the online app Kahoot. She indicated that the training sessions helped with her anxiety.

My one-on-one office hours are more effective. When students reached out to explain during one-on-ones there were no problems in turning their mics and cameras on. My synchronous teaching is different because at times you do not know if they are still logged on or not. When it is one-on-one they ask questions and the learning is a lot better. I have labs for in-person and I was fortunate I had that opportunity to make it easier to interact with the students. In lectures I am a presenter and in one-on-ones it is more interactive. I posted recordings and asked students to vote if they wanted recorded sessions or the synchronous lesson. They wanted them [the synchronous lessons] recorded to view later. When I post the recordings online, they do not open them until just before the exam. My exam marks were catastrophic with an average of 51 and I asked myself, **“What was going on?”**

Participant I shared sentiments that were also shared by most of the participants, such as how one knows that they are talking to their students and whether the students are still logged in. She shared that some of her classes were quite small in size and that attendance could be spotty for the synchronous classes. In one particular class, only one student attended. As shown in the quote above, Participant I addressed the lack of interaction and connection by scheduling one-on-ones with her students. In these video chats students felt comfortable turning their cameras and microphones on, they asked questions, and shared their screens. However, the stress and extra effort in trying to support the students gradually took its toll on Participant I. She shared **that she “lost her balance,” she would often work** until midnight and on weekends, and she took the plight of her students very much to heart. She found that she started to develop anxiety related to student performance, exam integrity, and her own ability to support her learners. Participant I explained that many of her students were international students who needed to work full-time hours, struggled with new cultural contexts, faced stressors due to COVID-19, and sought support and conversation in the evenings and on the weekends. Participant I said that she had to learn to set boundaries, but it was hard to communicate and stick to these.

#### Participant J

Participant J has a Ph.D. in her content area. She taught in the United States previously. She has been at her college since 2012. She has been using video conferencing as a teaching tool for a number of years. Participant J and her husband both have chronic medical conditions that put them in the high-risk group for COVID-19. She was very concerned about infection and, as a result, she was watching closely what was happening in other schools within and outside the country. That helped her to make a personal plan on how she would handle the situation. Participant J was also worried about her students who worked outside school hours and were also stressed about the pandemic. She had to learn to use Moodle tools she had never used before. She was also concerned that by using online assessments in Moodle, students might look up the answers.

**Participant J’s college changed their LMS from Moodle to D2L/Brightspace during the pandemic.** She found the new LMS to be more intuitive and easier to navigate. Unfortunately, some of her colleagues were laid off during the pandemic and those most affected by layoffs were in the tech support department.

I did not require them to have a camera on. Those with cameras on are more engaged. I have one class which talks a lot on their own. Some use the chat without drawing too much attention to themselves. Asynchronous online was not as engaging as a synchronous session. I love my department, we have a supportive department, we gel very well, some take training and then they come and train us—like one-on-one. We have departmental meetings and we can talk. We have very strong social connections, our leaders focus on our well-being, we have check in times, and we have departmental social committee set things we can do online. There is strong support within the department. I did not have time to check in with the one surviving tech personnel. I did not need that support because I get it

from the department and my teaching partner is a tech person. I worry about the social aspects of how they [the students] make connections, meeting for coffee—those connections are important to retention, something that keeps them coming. The student association is working on socialization. Some students do not have pre-established peer groups. This is affecting their ability to talk because they do not know each other. There are mental health issues with students especially those who stay on campus. Some deal **with disturbing domestic violence. It's a serious COVID-19 problem.** I cannot deal as much with that. English is doable online. I worry about their isolation as they stay home or in dormitories online. When in class, they naturally get connected and get to know each other.

**Like Participant I's interview, Participant J's interview showed how the pressures of the pandemic and the switch to emergency remote teaching were quite different from carefully planned online education.** For Participant J, the fact that her family was at risk and feeling isolated gave her even more empathy for her students and how they might be experiencing the pandemic. She pointed out that issues of social isolation very much affected learning. While some organizations had ways of engaging students through student associations, it was very hard to replace the face-to-face social interactions that students needed to sustain community and a sense of belonging in post-secondary learning. Participant J shared that, like Participant I, she used one-on-ones and frequent email and LMS messages to try and build a connection with her students. She would make sure to address the students by name, make personal comments and compliments, and share some of her own perspectives. She especially liked it when students would personalize their interactions too, sharing their pets and children or relating what was going on in their world. Overall, Participant J was thankful that her institution transitioned to emergency remote teaching as it protected her family from exposure, but it did raise concerns related to mental health and well-being for students and instructors.

#### Participant K

Participant K has experience in industry in addition to over 30 years of teaching in post-secondary. He teaches courses that have field-work experience components. He was not surprised by the sudden switch from in-person to online classes. He had time to record classes for students. He believes that the other reason why he managed to get enough time to prepare for the rapid move to online teaching and learning was because he was single. At the same time, being single and being alone at home created challenges when he wanted to record himself demonstrating certain skills for his students. He indicated that he had no help with the recording **himself. He was also worried about students' internet connectivity.**

We got a lot of support from the IT department. We have a good dean/chair and they were flexible. Some had challenges to work from home because of the internet, people could bring their kids. Those who needed to work online, they had online facilitation support for people who had technical and health issues. We reached out to our students who had issues and tried to help them. Flexibility, keeping spirits up, keeping people healthy and keeping an eye on quality. The question is, can we use something we have learnt and move to online synchronously? Some worry about losing jobs if all teaching and learning is online, we can consider hybrid.

Participant K also noted the importance of flexibility in order to accommodate student needs. Some learners had challenges with remote learning because of the lockdown restrictions brought about by the COVID-19 pandemic. Some students shared space with their families, and some had limited access to the internet and devices to effectively participate in remote learning. Such situations could have created a form of a remote learning divide of haves and have nots, where some students had easy access and others had challenges.

Compared to some of the other interview participants, Participant K did not use a great variety of apps and plug-ins. He chose not to use chats or forums and he did not use the whiteboard feature. He did do a lot of pre-recorded videos and set up teams for his students. Participant **K's suggestions for making the transition easier for students and instructors** included more support and training in technology and learning apps and

the availability of technicians to help with filming and recording—especially for field work. In closing his interview, he said: **“We need to help students get through and understand and not focus on getting A’s but on passing the courses. They are learning for life. 2020 taught us a lot about extending grace and to looking for perfection. Not all deadlines matter, they can and should get more time to practice, rather than having them compete. We need good graduates.”**

In Table 2, we present brief background information for each participant, the main challenges they faced, and some questions that arose as we reflected on the experiences of educators interviewed.

Table 2. *Comparing Educator Experiences and Concerns*

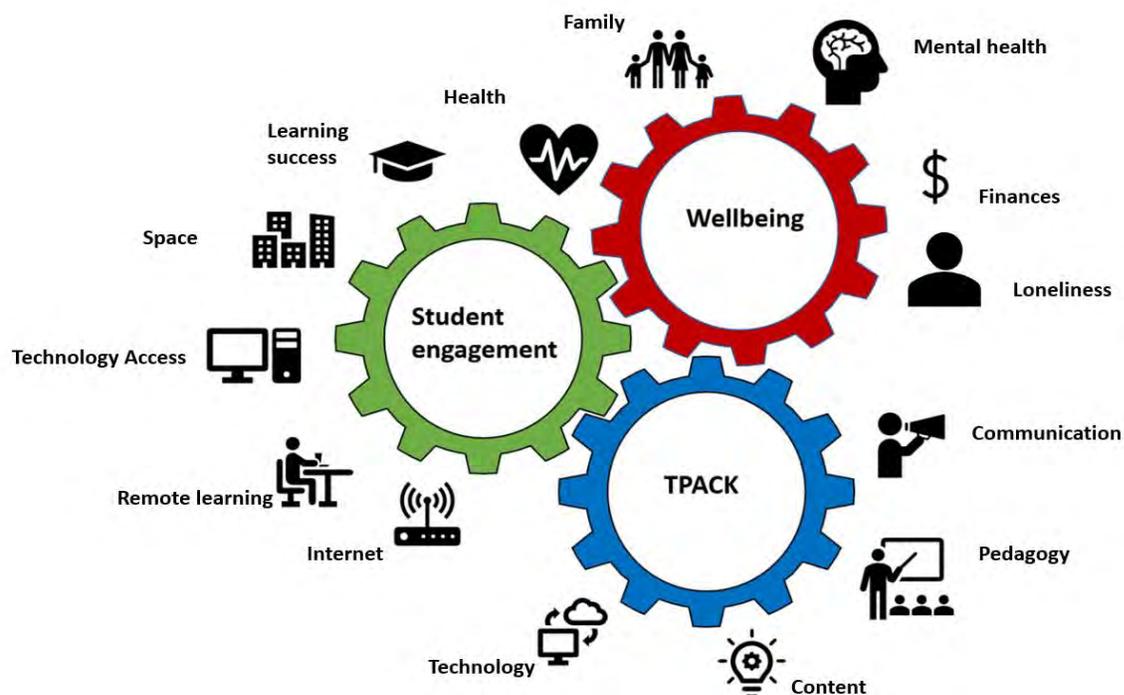
Educator and Experience	Challenges, Issues and/or Themes	Questions for Post-Secondary Institutions?
Participant A Extensive industry experience, no teacher training, less than a year of teaching experience	Experiencing disconnect with students, lack of planning time, inequities in teaching load, and a lack of mentorship/modeling.	How might educators feel more connected with their students when teaching remotely? How can institutions provide more training and support to educators new to remote teaching? How do institutions deal with the needs of contract and full-time educators?
Participant B Bachelor of Education More than 10 years at the organization	Converting F2F materials and resources to online systems, addressing aptitude and readiness to embrace support, and coping with pressures and anxieties brought on by uncertainty. Limited educational technology knowledge and skills	How might institutions provide more time for transition and build learning communities for peer support? How could institutions provide support and flexibility for instructional staff and students in crisis or experiencing anxiety?
Participant C International experience in teaching More than 20 years of experience	Coping with an ineffective home office set up and technology, inexperience with LMS, the limitations of language interactions, online incivilities, and personal health and wellness	How does an institution or educators deal with varying levels of technological systems/components and internet connectivity?
Participant D Master of Education More than 34 years of teaching	Facing transitions by drawing on teaching and technology experience, transferring previously recorded resources, and adjusting the ratio of synchronous and asynchronous teaching	How might institutes build upon in-house expertise?
Participant E Industry experience New to teaching, enrolled in PD work	Upgrading technology and teaching skills, finding time required to prepare for online facilitation, using tech apps (Screencast-O-Matic, Padlet, VoiceThread, Nearpod, Quizlet, etc.) and dealing with differences between students who sign up for online or not.	How might educators access ongoing professional learning and support? What accommodations can be made for students who are not confident or effective online learners?

Participant F Industry experience Three years teaching experience	Finding adequate preparation time, addressing student mental health and well-being, coping with student invisibility and lack of connection, shortening presentations, polling students, adjusting assessments, and shifting to a competency and completion focus (pass/fail)	How do educators make allowances for <b>students' anxieties and challenges</b> ? Are educators able to support students at risk, or do they know how to advocate for such students?
Participant G Bachelor of Education Master of Education More than 25 years teaching	Addressing student uncertainties (funding, access, travel, employment), providing flexibility in modality, adjusting session length and timelines, and building interactivity into synchronous lessons	How can educators and institutions provide stability in programming and support in an uncertain climate?
Participant H Bachelor of Education Trade Diploma More than 20 years teaching	Transferring materials to the LMS, coping with assessment issues (finding alternative ways), providing <b>"fair value," teaching for "hands-on"</b> programming online, and securing funding for educational technology software.	How can post-secondary programs ensure quality programming, valid and <b>reliable assessment and "fair value" in</b> the face of a pandemic? Should educational institutions look at providing funds for educational resources (apps and programs) as part of professional development funding?
Participant I Doctorate in content area No teaching certificate Less than two years teaching	Getting the most out of the LMS, connecting with students, benefitting from departmental support, and understanding poor student performance and achievement.	What should be done for students who struggle with the transition academically? Will such courses impact their GPA?
Participant J Doctorate in content area No teaching certificate Teaching 10 plus years	Experiencing anxiety about the pandemic, discovering new LMS tools, accessing tech support available, creating collegial community, and advocating for student community.	How do institutions help educators get the most out of their LMS, pandemic or not?
Participant K Extensive industry experience 30 + years teaching	Appreciating leadership support, coping with distractions and stressors from working at home, addressing technical and health issues, providing flexibility in approach and expectations, and boosting student morale and perseverance.	What is the role of educational leaders in supporting students and educators through challenging times? Who supports the leaders?

## Emergent Themes From Educators' Experiences

In recounting their experiences of making the transitions and adjustments required to facilitate emergency remote learning, participants reflected on ideas that comprise three major themes. These include: 1) student engagement, interactions, and persistence in learning; 2) educator confidence and competence in providing quality learning experiences (i.e., the application of teacher's technological, pedagogical, and content knowledge, or TPACK); and 3) overall well-being for both students and educators. Such factors are interconnected in ways that could impact teaching and learning. Figure 1 shows the major themes with icons representing more specific emergent concerns from the interviews.

Figure 1. *Themes and Factors Influencing Educators' Experiences*



*Note.* TPACK = technological pedagogical and content knowledge

### Student engagement, Interactions, and Persistence in Learning

Several of the interviewed educators expressed concern that it was tremendously hard to gauge student engagement; most of their students were not turning on their cameras during synchronous sessions, a concern found in previous studies (Castelli & Sarvary, 2021). These educators missed the nonverbal classroom cues of eye contact, nods of assent, confused looks, or other cues. Others were worried that perhaps some students just logged in to the synchronous lesson and then proceeded to do other work.

Costa (2020) indicated that having cameras on does not necessarily result in meaningful student engagement and that requiring students to have cameras on may end up having negative impacts on students. Costa argued that requiring students to turn on cameras goes against universal design principles, trauma-informed pedagogical approaches, and is not inclusive of students who might not be able to afford fast internet. The educators interviewed indicated that a majority of their students do not turn on their cameras.

Some of the more experienced educators (Participants D, G, H, and K) and two of the newer post-secondary instructors (Participants F and I) shared that student engagement had more to do with how students processed the content, skills, and applications than whether or not they make eye contact. They attempted to foster student engagement in learning by:

- pre-recording video presentations to prepare for classroom discussions (D & E),
- building in more interactive elements into their synchronous lessons (G & H),
- relaxing expectations and focusing on competency (pass/fail) (D, F, G, H & K),
- adjusting the ratio of synchronous to asynchronous work and shortening synchronous presentations (D, F, G & K),
- scheduling one-on-one video chats (F & I), and
- building more asynchronous active learning elements into their LMS course (F, G & I).

### Teacher Technological Pedagogical Content Knowledge (TPACK)

The second theme emerging from the interviews has to do with **educators' technological pedagogical and content knowledge (TPACK; Koehler & Mishra, 2009)**. The TPACK framework highlights three kinds of teacher knowledge that teachers are expected to have. The first is content knowledge (CK), which is about subject matter knowledge. The second is pedagogical knowledge (PK), which refers to the knowledge of teaching and learning strategies. Third is technological knowledge (TK), which pertains to knowledge and awareness of educational technologies that can be integrated with teaching to enhance student learning. In sum, educators are expected to have adequate content and pedagogical knowledge as well as the relevant technological skills for them to effectively facilitate learning. TPACK has to do with the levels of confidence **and comfort that educators had in integrating relevant technologies to enhance students' learning**. For example, Participant A indicated that she had worked remotely before in her previous job and was familiar with remote conferencing technologies. However, Participant B indicated that technology integration was a challenge for him, and it was a huge learning curve such that he had to rely on peers for support. Furthermore, Participant C mentioned that she had no reference point for online or remote learning and teaching because she never had the chance to be an online student herself. Lortie (1975) introduced the term apprentice of observation, which refers to the amount of time students spend observing teachers/educators teach and how learners develop conceptions about teaching by observing their teachers teach. Consequently, it is possible that educators who have had some prior experience as online students themselves had reference points they could leverage during the rapid transition to remote teaching and learning brought about by the pandemic. Other participants, like Participant I and Participant J, who had doctoral degrees in their content area, were able to learn new technologies on their own yet struggled with issues related to student engagement, an aspect of pedagogical knowledge.

It was evident from our interviews that the educators had different levels of comfort with educational technology and the integration of technology in remote teaching. Educators who had experience in teaching online or who had already used technology with their face-to-face students (online apps or LMS activities) did not have as many challenges in transitioning to emergency remote teaching. Those who were not experienced with technology had more challenges using the available LMS and video conferencing tools that could be used to interact with and support students. One interview participant indicated that, though her organization provided technical support to resolve LMS issues, they were not available to assist on what she would need in her home or tell her the appropriate bandwidth that would support the LMS and video conferencing.

As noted by Pokhrel and Chhetri (2021), though the pandemic did provide opportunities and incentives for digital learning, some educators had their confidence challenged when it came to digital literacy. In our study, some of the educators indicated that mastering technology that can be integrated with learning environments was not easy for them. Moreover, the rapid switch to remote teaching did not provide enough time for

educators to learn more about the technology and that introduced another layer of anxiety and stress. This stress was compounded when educators had significant groups of learners from disadvantaged communities who had less access to reliable technology, needed to share computers with other family members, and experienced poor internet connectivity. Furthermore, some educators had the very same technological challenges as those experienced by their students (Doucet et al., 2020).

Another technical pedagogical challenge faced by educators was how to demonstrate certain skills for their students and assess skill-based activities. Due to physical isolation regulations, some educators found it challenging to record themselves demonstrating essential skills. As a result, they felt that students were not getting a quality education and modeling when it came to courses that required them to be competent in certain practical skills (Participant H). There was a lot of trial and error in integrating technology in remote learning and student assessments, consistent with experiences reported by other researchers (Pokhrel & Chhetri, 2021). This was mainly because education systems were not prepared for such disruptions in learning environments due to the **COVID-19 pandemic**. **Participant B's comment was shared by many interview participants and sums up the importance of teacher knowledge, prior experiences, technology comfort, and institutional support: "I was worried about the quality of the program and worried about my abilities because I do not have online teaching experience or training."**

### Overall Well-Being

All of the interviewed educators expressed concern about the overall well-being of their students. They mentioned that physical isolation brought about by COVID-19 health guideline restrictions might affect student mental health. Coupled with that isolation and stress were **educators'** concerns about students losing their jobs as a result of the pandemic. The following are some quotes from the interviews:

In virtual class, they turn their cameras off and I lose body language. I did not know students that would turn their cameras off. In small groups they do turn their cameras back on. When I lose students, I don't know what is going on: **Is it tech, health, mental health or could they be dead?" I have international students whose parents are paying and if they do not do well, their parents come down hard on them. That may affect their mental health. It is hard to tell if a student is struggling with mental health if its virtual. I was not prepared to check on students' mental health.** (Participant F).

I worry about the social aspects of how they make connections, meeting for coffee—those connections are important to retention, something that keeps them coming. The student association is working on socialization. Some students do not have pre-established peer groups. This is affecting their ability to talk because they do not know each other. There are mental health issues with students especially **those who stay on campus. Some deal with disturbing domestic violence. It's a serious COVID-19 problem.** I cannot deal as much with that. English is doable online. I worry about their isolation as they stay home or in dormitories online. When in class, they naturally get connected and get to know each other. If we can create nonacademic online communities it will help, even games and do silly stuff. (Participant J)

As shown by the examples above, the educators were also worried about the overall well-being of their students and families. As pointed out by Participant B, not only were educators worried about the well-being of their students, but they also worried about their own well-being and that of their families.

This pandemic hit my family hard. No one contracted the disease thankfully, but my in-laws and parents are at high risk and so is my wife and son. I was worried about my family and did not want my family to get sick, so I was happy when the college closed. (Participant B)

## Discussion

Student engagement and interactions with learning spaces was a key theme that emerged from our analysis. However, student engagement is multifaceted and has different meanings to different educators. Fredricks et al. (2004) noted that engagement can be contextual and includes three dimensions, namely behavioral (e.g., participation in activities, course completion), emotional (attitudes towards the course), and cognitive. Though behavioral engagement includes student participation, it is not explicit on the acts of participation that do not count as engagement. Behavioral engagement does not necessarily equate to cognitive engagement or student success.

One of the frequent comments was that it was difficult to connect with students virtually, as many students failed to turn on their cameras and educators missed the kinds of interactions they were used to in face-to-face classrooms. This concern reinforces why it is important for educators to have activities where students can participate in different ways apart from showing their presence through turning on their cameras. Some educators indicated that they found other ways of having students participate in class discussions that were not dependent on eye contact or body language. The engagement indicators included but were not limited to use of chat functions, verbal feedback, non-verbal feedback (status indicators or emojis), the level of conversation in the breakout rooms, and feedback they gained from one-on-one video conferences.

Issues raised by the educators made us wonder how each educator might define student engagement and which indicators could be a reliable measure of meaningful engagement. In their study, Daniels et al. (2021) reported a decrease in student engagement in behavioral, emotional, and cognitive dimensions during the COVID-19 pandemic. The argument implies that whatever the measure of student engagement used by educators, they should have expected a decrease in engagement using various indicators. However, Lungu and Lungu (2021) highlighted the importance of engaging students using innovative social media strategies given the challenges caused by the COVID-19 pandemic. Their argument suggests that during the pandemic, educators could have used other ways of engaging students rather than completely relying on traditional approaches that worked before the pandemic.

Student engagement during the pandemic highlighted other engagement opportunities and strategies that were feasible during the pandemic and relevant to virtual remote learning spaces, such as chats and forums. This raises the importance of expanding our understanding of the ways students can engage in an academic context. In our study, educators reported a significant decrease in non-verbal feedback from students when they moved from in-person to virtual teaching. Given the paucity of literature on aspects of student engagement in virtual remote learning, we question whether educators are conflating meaningful cognitive engagement (analysis and metacognition) with simple interactive responses or feedback.

Participants indicated that it was challenging for them to get non-verbal feedback from students during virtual remote teaching. Some literature presents reasons why educators encourage students to turn on their cameras. These include providing non-verbal communication cues for instructors and for students to see how others react to their contributions, reducing instructor isolation and negative feelings of talking to self, helping to build teacher-student and student-student relationships, building trust between class community, and reducing loneliness (Castelli & Sarvary, 2021; Falloon, 2011; Mottet, 2000).

**In this study, we were only interested in the educators' experiences and perspectives, and we did not ask students why they were not turning on their cameras.** The fact that many students were reported to not turn on their cameras (or were hesitant to do so) could indicate that they had valid reasons for that. Castelli and Sarvary (2021) highlighted several reasons why students do not turn on their cameras. The first is concerns with personal appearance. Students were not comfortable showing their faces because they were not comfortable with how they looked and how others would think about their looks. The second is about the

physical location being seen. Students were concerned that other people in the background and their physical locations would be seen by synchronous participants during class sessions. The last was internet bandwidth. Internet connections often did not have enough strength to support video conferencing. The learning experience for these students improved when they turned off their cameras.

Additionally, Costa (2020) argued that having students turn on their cameras does not necessarily result in meaningful student engagement. Castelli and Sarvary (2021) suggested that turning on cameras should be recommended but not required. They argued that students are already stressed by changes brought about by emergency remote learning and the impacts of the COVID-19 pandemic, so making use of cameras a requirement might add stress and anxiety for the students. Based on the research literature, we suggest that turning on cameras should not be a requirement for students and should remain optional. We argue that when turning on cameras is a requirement for skills assessment, students should be notified in advance so that they prepare for the event.

Our findings suggest that educators who had TPACK had an easier transition from in-person to virtual remote teaching as a result of the COVID-19 pandemic. Though most seemed to have requisite content knowledge, some of them indicated that they did not have adequate pedagogical and technological knowledge (TPACK). The rapid transition to virtual spaces resulted in the need to integrate certain technologies that were not familiar to some, especially those who indicated steep learning curves when it comes to educational technology integration. Our findings are consistent with the argument put forth by Pokhrel and Chhetri (2021) that digital literacy presented some challenges despite opportunities afforded with technologies. Farhadi and Winton (2021) used the metaphor “building a plane while flying” to describe the impact of COVID-19 on teaching practice. Arguments by Farhadi and Winton can also be used to describe how some educators had to learn certain pedagogical strategies and educational technologies as they went during the pandemic. In such instances, prior experiences of educators both as students and professionals were a key element that impacted their experiences during the rapid transition to remote teaching and learning. In our study, some educators indicated that they had no reference point for virtual remote teaching and also acknowledged their lack of training and support from their institutes during the pandemic.

Overall well-being for the college community and their families emerged as another theme that impacted **educators’ experiences**. **Educators were not only concerned about their own families’ vulnerability** to COVID-19 illnesses, but they were also worried about their students. They had students who had lost their jobs and had to move towns to stay with family as they accessed learning materials remotely. Some had students who were staying alone, and they were **rightfully worried about the impact of loneliness on their students’ well-being** and motivation in addition to how that would impact learning outcomes. These observations are consistent with those of Cameron-Standerford et al. (2020) and with findings from a survey carried out by YoungMinds (2020) in the United Kingdom. In this survey, 80% of the youth indicated that COVID-19 made their mental health worse because of physical isolation, feelings of anxiety, loss of motivation, and lack of coping mechanisms.

Other authors revealed that Canadian youth are at a higher risk for poor mental health due to the COVID-19 pandemic (Findlay et al., 2020). According to Statistics Canada (2021), about 38% of Canadians felt lonely and isolated as a result of the COVID-19 pandemic and that more than 40% of Canadians were impacted financially by the pandemic. Participants in this study were rightfully concerned about their own and their **students’ well-being**. The concerns raised by the interviewed educators are consistent with other literature demonstrating that COVID-19 impacted individual well-being. Koob et al. (2021) identified social support **together with digital learning formats as important resources that impacted students’ engagement during the pandemic**. They argued that institutes should find ways to support students who might not have social structures to support them. Additionally, this is consistent with findings from VanLeeuwen et al. (2020), in **which university faculty described their experience “as being stuck in a cycle of never-ending repetitiveness,**

sadness and loss, or managing life, teaching and other professional responsibilities with little sense of **direction**” (p. 1306).

## Limitations of the Study

Study participants were from five post-secondary institutes from one Canadian province. Given the contextual nature of the impact of COVID-19 on teaching and learning, it is possible that other post-secondary educators may have experienced other contextual factors affecting their transition, such as various degrees of institutional support and short courses in virtual remote teaching. Consequently, while our findings cannot be generalized, it is likely that they are comparable to other similar contexts. Furthermore, this study did not focus on indicators of quality teaching; we only explored participant accounts of their personal experiences in teaching during an emergency transition. Triangulating the data by looking at student outcomes could have yielded more insights on how such experiences impacted student learning outcomes and student achievement.

## Implications for Future Research, Theory, and Practice

As expected, not all post-secondary organizations were adequately prepared for virtual remote teaching and learning required because of COVID-19. Most educators had to leverage their personal prior backgrounds in remote teaching, and those with relevant experiences had smoother transitions as compared to their counterparts. Unfortunately, post-secondary institutions offer short induction courses that might not adequately prepare educators in ways that enhance their TPACK. Thus, post-secondary institutions need to reevaluate the induction or instructional skills workshops they offer new faculty members. Some participants indicated that they were learning from peers during the transition. We suggest that post-secondary institutes should consider mentorship programs that pair educators with different skill sets so that they all learn from each other. Another suggestion would be to establish faculty communities of practice that target online practices and pedagogy.

Our study raises several questions with regards to teacher knowledge, institutional support, and overall well-being of college communities and their families. There is a need to explore ways of continued professional development so that those educators who need to enhance their pedagogical and technological knowledge get opportunities to do so. We suggest the following areas for further research:

- What are the long-term impacts of COVID-19 pandemic on higher education delivery options for educators and students? There is a need to explore the impact of remote virtual learning on student outcomes and whether remote virtual learning is as effective as in-person learning.
- Our study took place at a very specific time. Now that the impacts and conditions of COVID-19 have lingered, have educators and students become accustomed to the new environments? Or did the same instructional pressures and feelings of isolation persist? Further studies should be conducted to see how faculty and students have adjusted to the crisis as it continued.
- What do educators see as meaningful interaction in both synchronous and asynchronous modalities? What does student engagement look like in an emergency remote learning environment? How might post-secondary educators adjust to the lack of multi-sensory feedback loops? Helping educators better understand the differences between in-class and online or asynchronous interactions may help mitigate the sense of loss experienced when moving to remote emergency instruction.
- Some participants indicated that they did not have formal training in education. This means that they had content knowledge and limited pedagogical and technological knowledge. It is important to explore the effectiveness of instructional skills workshops (or any induction workshops) in enhancing faculty members with pedagogical and technological skills in ever-changing learning environments.  
**Should peer mentorship be part of the new faculty’s onboarding experiences?**

## Conclusion

How each educator responded to and coped with the crisis and the teaching transition necessitated by COVID-19 is very individualized. However, we can make some general observations. All educators interviewed experienced challenges related to student engagement and perseverance, technological and pedagogical shifts, and community building and personal wellness (student and educator). The COVID-19 pandemic brought about a swift and very uneven swing towards remote virtual emergency teaching. It provided an unparalleled opportunity to spur post-secondary educators to learn new ways of online and remote facilitation, but it also brought with it isolation, increased workload and stress, and a lingering uncertainty as to whether they were making a real difference for the students in their care. There are very clear lessons to be learned from this transition; institutions and educational leaders would be well served to develop plans and programming that include training and support in online facilitation, structures, and resources that help academic staff cope with educational change and uncertainty and to commit to establishing mentorships or faculty communities of practice to give instructors a sense that they can face challenges as a community rather than as individuals.

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