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Building on Students' Perspectives on Moving to Online Learning during the COVID-19 Pandemic

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Building on Students' Perspectives on Moving to Online Learning during the COVID-19 Pandemic

Abstract
This paper provides insights from students and the author's experiences of the move to online course delivery in the current pandemic. Key issues students identified as impacting success include: student stress/distress related to the pandemic, challenges with Wi-Fi and connectivity, students' and instructors' technical skills, and issues related to course design and delivery method (synchronous or asynchronous). Students' insights, the instructor's experiences, and the academic literature on online education are used to provide suggestions for addressing these challenges. This analysis began as an exercise to inform my course planning but led to a recognition that (a) a successful transition requires action by students, instructors, and institutions and (b) that these actions are constrained making successful transitions both demanding and difficult.

Cet article présente des informations fournies par les étudiants et les étudiantes ainsi que par les expériences de l'auteure sur les cours enseignés en ligne durant la pandémie actuelle. Les problèmes principaux identifiés par les étudiants et les étudiantes qui risquent d'avoir des effets sur la réussite comprennent : le stress et la détresse des étudiants et des étudiantes liés à la pandémie, les défis relatifs au wi-fi et à la connectivité, les compétences techniques des étudiants et des étudiantes ainsi que celles des instructeurs et des instructrices, et les problèmes liées à la conception des cours et à la méthode d'enseignement des cours (synchrone ou asynchrone). Le point de vue des étudiants et des étudiantes, les expériences de la professeure et la documentation académique sur l'enseignement en ligne sont utilisés pour fournir des suggestions afin de répondre à ces défis. Cette analyse a commencé comme un exercice pour faciliter la planification de mes cours mais elle a mené à la reconnaissance que : a) une transition réussie exige des actions de la part des étudiants et des étudiantes, des professeurs et des professeures, ainsi que des établissement, et b) que ces actions sont limitées, ce qui rend les transitions réussies à la fois difficiles et exigeantes.

Keywords
online learning, pandemic conditions, students' perspectives; apprentissage en ligne, conditions durant la pandémie, perspectives des étudiants et des étudiantes

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This study began as a problem of practice: how to make the move from in-person instruction to online instruction, initiated by the pandemic, as effective as possible. What emerged was a dialogue between a course instructor and her students on the impact of the move to online courses. Reflecting on (a) the insights of students, (b) my experiences and my discussions with colleagues, and (c) the actions of the institution, I argue that a successful transition from in-person to online courses requires the engagement of students, instructors, and the institution and many actions can be undertaken by students, instructors, and institutions to achieve success.

Background

Moving to online course delivery has been a common response to the current pandemic in Canadian universities and colleges. This poses unique challenges because students and instructors have no option but to move online. A situation challenging, particularly, for those who did not view online learning as a preferred or desirable. Online learning was challenging pre-pandemic with respect to course completions. Online courses have high attrition rates - between 50% and 70% of students who take online courses do not complete them (Lehman et al., 2013). I was concerned that course completion would be negatively impacted because of the move to online and in the context of students being required to learn online rather than taking a course in a chosen/preferred delivery format. Ensuring that the move to online delivery was as effective possible was, therefore, important for students, instructors, and institutions.

To gain insights into effective course design in this context, students' perspectives are critical. Edenfeld and McBayer (2020) note that:

> The act of listening to students seems like a simple and obvious thing to do to inform institutional decision-making; however, actively listening to students and considering their perspectives when creating policies or designing programs which promote student success is not always the practice at colleges and universities (Templeton, Smith, & MacCracken, 2018). Too often, programs or practices are created without considering student perspectives because including students' voices might complicate the decision-making process (Schwartz, Craig, Tzeciak, Little, & Diaz, 2008). (p. 2)

While integrating student insights improves learning outcomes and academic success, the ability of instructors and institutions to respond to student needs is constrained (Cho & Heron, 2015; Cook-Sather et al., 2014; Edenfield & McBrayer 2020). Making a successful transition to online learning in the context of the pandemic involves considering the needs, responsibilities, and challenges students, instructors, and institutions face (Bonnicci et al., 2016; Kang & Im, 2013; Khu et al. 2006). In much research exploring online learning, instructors are positioned as part of the institution (Edenfield & McBrayer, 2020). While connected to the institution, instructors have academic freedom which provides some autonomy and with the isolation of instructors in their homes under the pandemic they are positioned between the students and the institution (management, staff, and resources). This paper treats instructors as connected to but also separate from the institution with respect to constraints. It integrates students' experiences and the instructor's perspective on the challenges of going online and then explores the literature to identify practices might assist students, instructors, and institutions in making a successful transition to online learning/teaching.

Course delivery format impacts on student success (c.f. McBrien et al., 2009; Seranno et al., 2019). It is important to define online course delivery. Three options were available for the move to online learning in my institution: synchronous, asynchronous, or blended course delivery. I chose synchronous delivery; this is a "live" version of the course held online at the scheduled time. The instructor deliverers the course material live and there are a variety of options for students to engage (e.g., breakout groups, presentations) and for students and instructors to communicate in "real time" (via text and talk, and asynchronously via email).

Methodology

This research is a qualitative study seeking answers to "what works" for addressing the challenges of moving to online course delivery during the current pandemic. Raffoul et al. (2021) argue that " … [t]he scholarship of teaching and learning (SoTL) as a field invites researchers to examine their teaching practice with the goal of understanding its impact and effect on student learning (Hutchings & Shulman, 1999)" (p. 1). This study addresses the issue of teaching practice and student learning under the constraints of the current pandemic and the relatively short timeframe in which to make the shift to online teaching. It reflects a commitment to engaging students in the teaching/learning process. Hutchings (2010) argued that

> one of the most powerful lessons of this [SoTL] work over recent years has been the value of involving students—both undergraduate and graduate—by inviting them into this work not (or not only) as objects of study, but as participants in exploring and shaping their own learning. (p. 69)

With this in mind, student insights provided core information in developing my online courses. Through exploring student experiences and reflecting on my own experiences it became clear that a successful transition would require commitment from students, instructors, and the institution.

I made the following decisions about course delivery in moving online: (a) use a synchronous delivery model and (b) cancel student presentations and adjust the grading scheme (the students had spent several weeks developing presentations). The first decision was chosen to give students connection and provide some structure to their studies and the second was due to my lack of familiarity with the online learning management system (LMS)[1].

The course was a third-year elective course in gender studies. Pre-pandemic the course format was a lecture with an intensive group work component. The students' data are from journal entries. Journals were part of the assessment pre-pandemic. They were to be completed weekly and were intended to provide opportunities for students to reflect on issues raised in lectures and course readings with a goal of increasing understanding

[1] Key to planning for the move online was consultation (via email) with the students and with the program chair. I sent an initial plan and asked for feedback. After receiving feedback, I decided to use synchronous delivery and to cancel the group presentations. After deciding on synchronous delivery, 11 emails were sent to students related to (a) synchronous delivery, (b) course assignments, (c) the online learning management system, and (d) reminders of class and due dates. I cancelled the small breakout groups because I was unfamiliar with the learning management system (LMS) small group feature and felt I had insufficient time to prepare. The original course design sought to limit the amount of lecturing time and to have students actively engage with the readings, topics, and issues, so cancelling groups was a major change.

and analytical skills. Entries varied in length from two paragraphs to two or three pages and students had to submit a total of nine weekly entries for grading. Some students were not able to attend classes due to the move online. To address this and to gain insight into the impact of the move online, two weeks of class journals were replaced with reflections on the move to online learning. Students were not limited to talking about this course nor did they have to focus on the academic impacts. The instructor's experiences are reflections based in moving two courses online, interactions with colleagues, and with institutional actors.

The instructions for the journal entries asked students to write about:

(a) the challenges, frustrations, and/or benefits of shifting to an online format, and
(b) the impact (if any) of not completing the presentations or to discuss their presentation.

These questions emerged from my own need for information to plan for the coming fall term.

Journal entries were coded using inductive coding (Saldana 2016) with a focus on recurring ideas or comments. Initial coding was done using NVivo[2] coding (i.e., identified key phrases and words (e.g., stress)). Related ideas or comments were then grouped into themes and each theme was described using a propositional statement. For each theme, I used the students' suggestions, my experiences and knowledge as an instructor, and then examined relevant literature to consider how to address issues[3].

In addition to the students' comments, my experiences of moving two courses online, interactions with colleagues, and with institutional actors provide insights into the process of making successful transitions.

A key requirement of using student journals for research was ensuring I met ethical guidelines. I applied for ethics review and requested permission to use opt-out consent. Opt-out consent allows the researcher to use participants' data unless they choose to have their data removed (Giesbertz et al., 2013; Olver, 2014; Vellinga et al., 2011). Using opt-out consent raised ethical questions. Olver (2014) has argued that opt-out consent is acceptable in " … low risk [research], of significant benefit to the population, and on a scale where it is impractical to obtain consent …" (p. 201). In this case, the information was important for making the transition online for the coming terms and the risks were extremely low. Further, there were few respondents (n=21), and the likely loss of participants under pandemic conditions made opt-out consent acceptable though still not ideal (Giesbertz et al., 2013). The Research Ethics Board (REB) approved the project and agreed to opt-out consent. To meet the ethical guidelines, students who had and had not submitted the journal entries were sent an opt-out email[24].

[2] NVivo coding was done by 'hand' and using the NVivo application/program.

[3] It is important to acknowledge that while addressing these challenges will help in making the transition to online learning better our ability to address them may be restricted because we have limited control over learning/teaching conditions at home and because mental health issues can limit the ability of students to seek support.

[4] The email provided information on the purpose of the study, confidentiality, the use of plural pronouns (they/them), how to opt-out, and REB contact information. Students were able to provide (opt-in) consent to their journal entries being included[2]. Any information that would allow the student to be identified was stripped out (e.g., names, references to place of residence, major, and or other personal information).

Findings & Data Analysis

Twenty-one[5] of the 32 students in the course (66%) wrote on topics related to moving to online course delivery. Coding resulted in the identification of five themes:

(a) challenges of learning from home,
(b) psychological impacts,
(c) instructor decisions,
(d) issues related to Wi-Fi and connectivity, and
(e) issues related to technical skills.

Challenges of Learning from Home

Students (30%) reported distractions (noise, family issues, digital devices) as a challenge. Learning from home under pandemic conditions can be distracting. Research has shown that distractions in learning environment can negatively impact the learning process. Mendoza et al. (2018) found that "[i]f one is unable to selectively pay attention, then important information runs the risk of not being encoded and later retrieved when needed" (p. 53).

Familial Distraction

Five students (25%) described their home environments as being noisy and reported that this interfered with their ability to focus during online lectures and to complete their assignments. Student #5 wrote that "[t]his online-based class has been very challenging and frustrating to me. Based on my situation at home, it is tough to find a quiet place where I can focus and get to work." Noise was also an issue for Student #7, "[b]eing in class helped me stay focused on the subject and on the notes, whereas when I am home, there are a lot more distractions, for instance my phone or my family making noise."

In addition to noise, the distractions of family issues were also a concern. Student #9 wrote that they were " … often distracted by the issues at home and I realized that although school is a learning organization, it can also be a place of escape. Being in class and focusing and learning keeps your attention from other things."

Digital Distraction

Digital distraction is not unique to the online learning. Most instructors and students will have had experience with students being on their electronic devices in class. Dietz and Henrich (2014) reported that digital distraction has multiple impacts. These include distraction, academic impairment, decreased completion of homework, lower recall of material, increased distractibility, and lower GPA scores (pp. 163-164).

Students have access to a range of digital devices at home (phones, tablets, computers) and they can use these devices when classes are not using video participation. The lack of video participation may contribute to an increased likelihood of students using their devices during class time and to decreased learning. While in the short term, such as moving online for the end of term, this may not have a significant impact, over a full term of work it may. Another source of digital distraction was students using private chat

[5] No information on the sample characteristics is used in this paper to protect student identity.

during the online classes. The online learning system showed when students were typing in the chat but only posted the public chats. There was extensive chat activity but few posts to the public chat suggesting that student were communicating with others in the class but not sharing that publicly.

Psychological Impacts

Students described the psychological impacts of learning online due to the pandemic including feeling stressed, losing structure, losing motivation/focus, and losing supports. Stoliker and Lafreniere (2015) reported that perceived stress[6] impacts on students' educational engagement (motivation and mental engagement in studies) and that " … educational engagement is important in order to do well and achieve at the university level" (p. 148).

Loss of Supports

Fifteen of the 21 students (71.4%) reported the loss of support. This included support from instructors, peers, and learning supports related to disability. Some instructors cancelled their lectures, and some students (4 of 21) felt that they had lost the instructor's support and had to learn the material on their own. Student #3 found it "… challenging to keep up with online class and teaching ourselves the content."

Seven of the 21 students (33.3%) reported loss of peer support. Student #9 wrote that, "[s]eeing students who are also learning and striving to be better alongside me, was very encouraging and motivational." Student #11's entry was specific to the course,

> What is very complicated with the online format of this course is that discussions were very important and really helped us or pushed us to engage with the course material. We were able to discuss and go further in the debate. What I mostly liked was that, during the activities, we were able to share our thoughts, and sometimes to have another point of view. I think it really helped [my] development ...

Loss of Engagement

Students reported that they found the move to online courses impacted their engagement with the course materials. These challenges are common in online courses (Lehman et al., 2013). Wu (2016) found that course design plays a key role in improving motivation and engagement. In the transition, there was little time to plan for engaging students and student engagement is important for both institutions and instructors moving forward. What factors did students identify? The loss of structure and routine was an issue. Student #8 wrote about this issue:

> The main challenge that comes from switching courses from in person to online is the sudden lack of structure that I had before. When I had to physically travel to campus, I had a routine and structure that was helpful for me to keep on track with my work and lectures. With the switch to online and having lectures available to watch and re-watch whenever I

[6] Perceived stress is defined as … "the degree to which individuals consider situations in their life to be stressful (Stoliker & Lafreneir, 2015: 148)."

> want it becomes a lot harder for me to motivate myself to watch lectures on time and work on assignments.

These concerns were reflected in Student #9's journal. They wrote that this was linked to motivation:

> … the most challenging aspect I found that I had with this new change was self-motivation. I found it difficult to motivate myself to attend these classes compared to when I had to wake up, take a shower, eat, and catch the bus. Not doing any of those things made me too comfortable.

Stress/distress

Students experienced stress in the move online. Stress has a complex impact on learning. Mellanby and Theobald (2014) note that "… we don't learn if we are worried excessively, but we don't learn if we are half asleep either" (p. 26). So, while some types of stress can be beneficial, worry is problematic. … [it] reduces goal-directed attention and diverts attention to irrelevant stimuli (ibid.)" (p. 26). Overall, perceived stress impacts grades, sense of achievement, dropping out, and psychological wellbeing.

Students were worried about:

(a) financial precarity,
(b) the demand they work longer hours,
(c) becoming ill or transmitting the disease to others,
(d) the impact of the pandemic on placements or other practicum courses that could not be easily moved online, and
(e) the decisions made by instructors (in an effort to be supportive) to not continue with lectures and to move due dates.

Below are some examples of the concerns they voiced.

Student #4 had financial stress. "To be frankly honest, nothing [in] this class interested me. I was too busy worrying about how I was going to get money to support my family through this pandemic." Student #6 had a variety of stressors this was exacerbated by " … the due date moving around, many assignments have been moved to the same week, which has added to the stress and made it nearly impossible to spend all the time needed on each assignment."

Other students cited the stress related to the pandemic. Student #12 found that "[i]t is also really stressful to think about how the situation globally has escalated so much to a point where we cannot attend school anymore and students have to teach themselves a topic in order to pass a class while also dealing with a lot of stress and anxiety from being contained in quarantine …" Student #3 was working in a high contact job and was living with their pregnant sister. They were concerned about transmitting the virus to their sister.

Research has shown that emotional distress (especially clinical levels of stress, depression, and anxiety) was expressed by many students in the first wave of the pandemic. Odriocola-Gonzalez et al. (2020) found that in the current pandemic about half the students in their study (50.43%) experienced subclinical levels of stress and that a significant number experienced moderate to extremely severe symptoms of anxiety (21.34%), depression (34.19%) and stress (28.14%) in the initial move to social

distancing. The "return to lockdown" during the second wave resulted in further frustration and distress. Emotional distress will continue to be impact on student success and addressing it will be challenging.

Instructor Decisions

Students talked about the impact of instructors' decisions. Each instructor chose how to move their course(s) online resulting in a variety of ways in which students completed term. Students focused on the impact on themselves. However, it is important to recognise that instructors made constrained choices. While those constraints impacted on pedagogic practices and student experiences they cannot be easily changed.

Going online (or not)

Instructors had the option to either deliver the final weeks of classes online synchronously, asynchronously, or to cancel the last two weeks of courses. Student #13 found the different delivery decisions were challenging and frustrating. Student #16 reported that "… only two of my professors [a typical course load would be five courses] decided on synchronous delivery. The remaining instructors allowed students to go through the course information in the course slides independently." This was perceived as " … requiring students to teach themselves a topic in order to pass a class" (Student #12). Student #6 concurred and wrote that "[a] lot of classes have not been able to make the shift online. I feel like the money I have paid for these classes has been wasted as a lot of teachers are expecting us to self-teach [sic] the material."

Most of the student comments were focused on the use of synchronous delivery in this course. Student #4 wrote "I found the online class pretty useful and manageable/effective. I have taken online classes before, but using the live version still made me feel as if I was in class and made it better in terms of transitioning from offline to online." Student #17 agreed writing that "[t]he lecture is very easy to follow and overall makes the shift to online lectures less overwhelming and rather positive."

Another feature that was noted was that more students asked questions in the online class. Student #16 – "students were able to watch and listen to the Professor, as well as other students through audio and a chat feature. I found this to be extremely beneficial in the classes that I took online, since I noticed that for many students it became easier to speak and participate in class through chat." Student #14 also "… enjoyed being able to ask questions on the chat, and the professor answering them verbally, it felt more personal, and easier to understand."

Asynchronous delivery was valued by some students. Student #2 preferred the online environment noting the advantages for them. "I prefer to learn online, as it is easier for me to work at my own pace, and also take notes at my own pace. I often times like to go back to PowerPoint slides to review the key points talked about in each class, that way I can refresh my memory for quizzes, exams or even essays."

Course Assignments and In-class Activities

Instructors' decisions about course delivery impacted on students' ability to complete assignments. For example, consider the impact on students of having synchronous online quizzes related to the lecture in the context of slow Wi-Fi or losing their connections. If quizzes are synchronous, students may not be able to complete the quiz if they lose their connection or may not perform well if they have not heard key

material. These experiences will cause stress and distress for some students. For this course, the loss of small group interactions impacted on both learning and the completion of assignments.

"The in-class activities helped me gain a wider understanding of [the course topic] and I was able to ask questions to my peers if I did not understand a reading or a term. Being able to engage with the material in class and type my own notes also helped me learn" (Student #7). Student #14 wrote that "[l]earning with examples, and group activities has helped me understand the material more in depth. Group activities was a section of class that I enjoyed because it was an opportunity to work collectively with peers before discussing it with the whole class, allowing myself to understand the material better." Student #11 linked the challenge directly to the move online reporting,

> [w]hat is very complicated with the online format of this course is that discussions were very important and really helped us or pushed us to engage with the course material. We were able to discuss and go further in the debate. What I mostly liked was that, during the activities, we were able to share our thoughts, and sometimes to have another point of view. I think it really helped the development of my feminist thought, but also to open up a bit more to feminists around the world."

Connection to Instructors

Students discussed changes in their contact with instructors. Instructors recognised the impact of the move online on students and on their learning experience. Student #7 wrote,

> [T]he last challenge for me in regard to online classes is the minimal contact with professors. For instance, in one of my other courses, I tried emailing my professor multiple times regarding an assignment, but they did not answer my emails until 2 weeks later when the paper was due, therefore the lack of communication makes it really difficult to adapt.

Five students reported that their instructors accommodated students' needs when face-to-face classes ended. Student #3 wrote "The teachers have all been great with accommodations and the grading options will definitely help many students." A common accommodation was to move final assignments to a later date. Student #6 wrote that "[m]oving the due dates … was very helpful, as was the fact that many other teachers moved due dates to the week of the 25th as well." While this was a positive accommodation for some students, for others these extensions resulted in all the assignments being due in the final week of term.

Wi-Fi & Connectivity

Issue

Students (57%) cited challenges related to internet connections. They reported sharing their Wi-Fi with partners, siblings, parents, and roommates. With multiple users on the same connections, students faced problems with the speed of and maintaining their connections. During class, connection problems increased as more people were online. The lack of reliable internet connections and challenges connecting to the University's website impacted on a range of learning activities.

Accessing Course Resources

Accessing resources online is critical for online courses. Student #3 wrote: "The online system has been super slow and keeps crashing. The other day it took me almost an hour just to try to access one of my readings. The internet is also slow due to everyone being home and using it."

Student #10 was dealing with a quite difficult situation. They moved during the pandemic and, once in their new residence, found that they would not be able to get connected to an internet service provider. "The last frustration was not being able to have Wi-Fi since we moved March 29th. This made it very difficult to complete my assignments and access the readings on [the LMS] to support my arguments for my essay."

Accessing Support Services

Two support services raised were the library and support for students with disabilities (3 of 21 students). Student #20 reflected that "… as classes were switched online and not everybody has reliable internet and resources like libraries are closed …." The library being closed meant that students no longer had access to any resources (primarily books) that were not online. Loss of learning accommodation supports for students with disabilities was cited by two students. Consider what Student #6 wrote,

> As a [student support services] student, I am now lacking a lot of services that I need." Student support services had little time to make the transition online. The student support center has subsequently done outreach to new and continuing students, and they have worked to provide accommodation for students doing online exams at the end of term.

Loss of Information

The loss of connection, especially during live lectures, impacted on students' learning. Student #4 found that " … it was somewhat difficult to pick up all the information because sometimes the Wi-Fi would be slow or many people would be using the platform so it would slow down the connection. Student #7 shared the following, " … a frustration that I had with this online format includes technical difficulties. In numerous classes, I've had my computer freeze, or I'm unable to hear the professor talk. … This can be problematic because I am unable to catch up with what the professor says, and I get lost when the connection comes back on." Overall connectivity issues made " … the online class a little bit harder (Student #9)."

Technical Skills/Knowledge

The technical skills required to use the online learning program and to connect into class were also raised by the students. The current generation of students are perceived as being tech savvy. While they typically have a considerable depth of knowledge about specific technology (e.g., smart phones), they often have quite limited knowledge about other technologies. One third of the students (7 of 21) discussed issues related to their or their instructors' technical skill and knowledge.

Students' Technical Skills/Knowledge

Students stressed that the remote learning platform used should be easily accessible. They had been using the university's LMS over the course of the term and had some familiarity with it. They did not have experience with the remote learning tool used to deliver the online classes and they did not have experience connecting to class remotely.

Despite being familiar with the LMS, they reported challenges using the technology. Student #2 recognized this diversity of knowledge noting that "[a]nother challenge online learning present [sic] is the knowledge of navigation. Many students who are not familiar to [sic] using technology, may have a hard time navigating through the LMS site to access to online lectures." Student #14 wrote, [t]his week we experienced using a new system called the 'XXXX', a system I am not familiar with. Entering the online class was challenging for me because, I would like to think I am not the techiest person." Students had these problems despite being provided links to information (on the online LMS via email).

Students' strong social networking skills and proficiency in using social media supported the move online. Student #14 reported their group used FaceTime and texting to stay connected and provide support to one another. This information suggested that using these skills may be a tool to provide additional support for students.

Instructors' Technical Skills/Knowledge

Some students raised the issue of instructors not having requisite technical skills for moving courses online. Four students (20%) raised this issue. Students assumed a lack of technical skills was what determined instructors' decisions about moving online.

Students commented on how instructors' lack of knowledge impacted on them. Student #18 reported that "… some teachers have a struggle with trying to deal with technology, and it makes it harder for some to upload the correct material online and providing the necessary tools to assist students with their learning." Student #6 had instructors who opted not to go online and finished the term without any further in-class contact. This was perceived as having the student self-teach and a sense that students were not receiving the educational support/experiences they had paid for.

Addressing Challenges

The students' insights provide guidance in developing responses designed to ensure greater success in the move to online learning during pandemic conditions. I argue that (a) achieving success requires action by students, instructors, and institutions, (b) there are factors that limit responding effectively, and (c) the process of responding should be iterative.

1. Learning from Home

Students

Students have primary responsibility for managing the impacts of learning from home. This includes being self-aware and practicing self-efficacy, self-monitoring, and self-regulation. Being self-aware includes having a sense of their learning style, their level of motivation, and distractions impact on their learning. They also have primary responsibility for monitoring impacts and reaching out for help when then find themselves

struggling. To increase success in learning from home we might consider telling our students to:

(a) prioritise their learning and assess the impact of the demands of online classes in the context of their circumstances,
(b) find strategies to manage distractions that impact learning and course work completion,
(c) monitor their progress through the course and ensure they meet deadlines, and
(d) turn off their devices.

These suggestions are grounded in an understanding that there are limits to students' abilities to manage learning from home. Distracted learning is shaped by a range of pandemic-related factors they may not be able to control including the household structure (who's present), family demands (e.g., providing childcare), and the availability of quiet workspaces. Further, because students are not able to choose to be online (without delaying their progress in their programs) they may be facing more challenges that the 'average' online learner.

Instructors

Instructors' awareness of the constraints facing students is an important consideration in their planning generally. In the context of pandemic conditions, this is even more important. So, while the literature provides ideas that may assist instructors in moving online (e.g., there are a variety of techniques to address the use of digital devices), their efficacy in pandemic conditions is not guaranteed.

Instructors may want to consider being proactive in addressing issues of distracted learning. To increase engagement and reduce digital device use during synchronous classes, setting time limits on individual or small groups activities has been found to be effective. However, with the stress of the pandemic and lock-down, time limits may exacerbate frustration and stress. Instructors need to ask for and consider student input in setting time limits and assessing the impact of time limits. They might want to monitor activity in breakout groups to ensure people are engaged and on task. In asynchronous classes, digital distraction may be less of a concern, but engagement remains a concern.

Another method for increasing engagement is through integrating intensive processing techniques, such as matrix notes, into the teaching/learning process. While the technique has been shown to increase engagement, Instructors may want to use ongoing assessment to see the impacts of these decisions under pandemic conditions.

Instructors might want to increase their outreach (e.g., increase email communication) to students and ask for student input about how well engagement strategies are working. This could include emailing students who miss classes or submission deadlines and sending general emails to students asking if they require support or are facing challenges.

Institutions

Institutions also have a role here. They have a responsibility to support student success, to support instructors as employees and in course delivery, and to recognise the impact of pandemic conditions on both.

Institutions are key actors. Most currently communicate with students about available supports. The pandemic context suggests that they may wish to develop communication strategies grounded in the pandemic context. One simple strategy is to provide a PowerPoint slide each week for instructors to integrate into their course. Each slide would provide information or resources related to stress, lack of motivation, and distracted learning or reminders about time management, due dates, and training. These can also be posted online for easy access.

Institutions may want to consider reaching out to instructors and provide them information of how to best provide support to students. This includes supporting online learning, managing expectations with respect to assignments, and working to identify and support students who are in crisis or at risk of dropping courses or failing. Training for faculty already exists in many institutions, but the focus is often technical. One challenge in my institution was instructors not managing expectations related to workload. This resulted in students developing an online petition which identified the impact of this failure. However, these discussions occurred after courses were well underway and put student success in jeopardy.

Institutions have a responsibility to support their instructors. In the context of the pandemic, they may wish to consider that course design decisions may be made in suboptimal working conditions. This would include more than just providing technical support for moving online. Institutions may be able to improve student and faculty experience with the move to online teaching by raising awareness of the challenges of online learning for students, providing information on strategies (such as matrix notes) to support learning, and, also, recognising the time required for instructors to develop appropriate approaches.

2. Psychological Impacts

Students

Students' comments indicate that emotional distress (especially clinical levels of stress, depression, and anxiety) is a concern and as was noted above, Odriocola-Gonzalez et al. (2020) found that in the current pandemic many students experienced distress in the initial move to social distancing. Multiple waves of the pandemic and new variants may result in increased frustration and distress. Monitoring these factors and doing outreach are likely to be important. Instructors can be a key first line of response. While we may view this as primarily a student responsibility, students may have limited control over living conditions that negatively impact on their learning. It may be helpful to ground responses in a belief that primary responsibility for proactive support lies with instructors and institutions. There is an onus on students to use support networks to assist them in managing their (dis)stress. Ideally, when students access institutional supports garnering feedback on the effectiveness of supports and services may provide key information to improve those supports.

Instructors

Instructors may want to consider ways that they can provide psychological support to their students. In this course, at the beginning of each PowerPoint presentation, a slide was included that provided students with contact information for support: psychological and learning supports. This proactive measure provided both recognition

of the strain students face and contacts for appropriate services (institutions must be willing and able to provide support) without singling out any particular student.

It is important to recognise that faculty are also undergoing emotional strain. Further, many of the suggestions I have made would, if implemented, place increased demands on instructors including developing or locating assessment tools, assessing student preparedness, working to improve student engagement and experiences, adjusting, or developing course materials, increasing communication with students, and managing the challenges of learning the technical and management skills to teach effectively online. The increased demands on instructors (especially those teaching large classes or many courses each term) may be overwhelming for instructors who are also dealing with demands of changes in their working context.

Institutions

A concern that this paper began with was that if the transition to online teaching was not successful that institutions could be at risk of higher attrition rates. The students' reports on their increased psychological distress and the distress experienced by this course instructor may offer directions for institutions in proactively addressing challenges. It may be prudent to monitor for signs distress and burnout and to develop strategies to assist instructors and students.

3. Instructor Decisions

The impacts of course delivery and design decisions are constrained choices for students and for instructors. I consider the role of students, instructors, and institutions with respect to design decisions and student success.

Students

While students may recognise that different forms of course delivery work better and suit their circumstances, they may not be able to choose courses that use delivery methods that are optimal because they cannot always choose what courses to take. Some courses are required by their programs or have specific prerequisites. Where they can, students may want to:

(a) consider whether synchronous or asynchronous delivery better suits their learning styles and personal circumstances,
(b) monitor and address any challenges they experience early in the term,
(c) seek out support to address any challenges.

Instructors

As instructors make decisions about course format best suited to their circumstances and the course content, the pandemic makes the challenges facing their students more important. Instructors may want to:

(a) communicate the "whys" of course design to students linking course delivery to the instructor's assessment of the best way to deliver their material in the circumstances,

(b) reach out when students are not attending lectures, reviewing online material, or meeting course deadlines or expectations,
(c) be flexible in course design, monitor the impact of design, and adjust as required,
(d) consider how increased demands to support online learning impact on their workload and consider adjusting course requirements,
(e) consider how the demands to monitor and communicate impact on the workload of teaching assistants (TAs) and on the number of TAs they require, and
(f) communicate their needs to their institution.

Institutions

As institutions continue to work to support students and instructors, the pandemic has posed new challenges. Institutions may want to consider:

(a) providing information to instructors (as they design their courses) on the impact of course design on student outcomes,
(b) providing information to students on an ongoing basis and in a variety of ways. (e.x., as was discussed above, providing slides with this information for instructors to include in course PowerPoints or embedded in live or recorded lectures),
(c) fore-fronting issues of accessibility and how online course delivery impacts on students with learning support requirements,
(d) acknowledging the impact of increased demands on instructors as they consider compensation, course load, promotion, and other work-related decisions,
(e) planning for ways to be more open and flexible and how to adjust in real time, and
(f) proactively developing, assisting with, or managing the monitoring of student engagement to reduce the risks of students withdrawing from or failing courses.

Reactive solutions take more time.

4. Wi-Fi/Connectivity Challenges

Addressing these challenges can be difficult as they may be related to Internet service providers' actions (e.g., throttling) and students' data limits. There are several proactive actions that students, instructors, and institutions can take to address these issues.

Students

Students may have the least ability to address connectivity issues. They may have limited control over the demand for Wi-Fi within their households and virtually no control over their ISPs. Further, they may be limited by financial constraints, constraints that are likely to be exacerbated in the pandemic. Students can let their instructors know that they are having connectivity issues and request support and assistance as needed. This is not solely a student responsibility. Providing key information to students such as that access has peaks and lows and suggesting that (where possible) they consider structuring their online access to resources during off-peak hours. This works especially well for asynchronous courses but may also assist in synchronous courses.

Instructors

Instructors are on the frontlines of how connectivity issues impact on students. They can do a variety of things to address problems related to connectivity. One simple strategy is polling students (periodically) about any connectivity issues. Knowing the extent of the problem may assist in developing strategies to deal with the issue (generally and for the instructor's specific courses).

Examples of how to address issues may include providing as much material as possible online prior to classes and encouraging students to review and download it during off-peak times. This is especially important if students are joining by phone. Recording classes/lectures may also assist students who lose the flow of a lecture due to slow or dropped connection.

Instructors may want to consider planning extra time to assist students with the understanding the material when Wi-Fi issues impact on students following the lectures. This might mean extra office hours or managing a message board dedicated to issues resulting from lost connectivity and finding the needed information.

Students connecting through different media (e.g., students attending class via their phones) was also found to be challenging for instructors. Following on the phone, for example, may mean loss of visual material and difficulty following the slides or other material they have downloaded. Instructors may be able to find strategies to assist. For example, instructors can number slide and alert students as they move from slide to slide or page to page may assist here.

Institutions

Ideally, institutions may want to consider spreading demand on the system over the course of the day. This might involve having large classes at times when fewer classes are online or finding a balance between larger and smaller classes. Institutions may wish to limit other forms of online activity during peak teaching times. They may also want to consider balancing the number of synchronous and asynchronous courses delivered as a way of managing demand. Institutions may also have to assess their capacity and to expand that capacity if necessary.

Institutions require information to effectively address technical and connectivity issues. It might be useful if the institution could have instructors provide feedback on challenges related to connectivity to assist them in improving the institution's provision of services. Students' insights will assist institutions in responding. Institutions may want to consider how to prioritise their provision of support to allow them to respond to high pressure demands (e.g., students losing connectivity or having other technical problems during class or during an online quiz). They may also want to anticipate that many of the questions they will be asked about the students' Wi-Fi systems are usually beyond the scope of institutional support. Addressing these concerns (as best as they can) will make students feel supported and will play a role in educating students about the technology. Institutions may also have to consider ensuring that instructors have access to reliable Wi-Fi and technical resources. Here again, being proactive and raising issues with instructors might be important.

5. Technical Skills/Knowledge

Addressing technical skill deficits requires training and on-going support.

Students

We often assume that our students are computer literate. However, an OECD (2013) study found that:

> Even among adults with computer skills, most scored at the lowest level of the problem solving in technology-rich environments scale. … Only between 2.9% and 8.8% of the population demonstrate the highest level of proficiency on the problem solving ... (p. 56).

Research (Dow, 2008; Purarjomandlangrudi & Chen 2019) indicates that ease of use is an important factor in student engagement. When the online learning system is easy to navigate, and user-friendly, student engagement increases. Students may require training on their institution's LMS and other tools needed for their courses. Students have a role here in educating themselves, but those efforts can be supported with access to information, tutorials, and support online. Students may also benefit from communication related to technical issues (e.g., communication on common challenges, on how to connect, on who to contact if they are having problems will all assist students).

Instructors

For instructors, training and support are also important. Most institutions offer such training and are being proactive in training instructors, but instructors may require support to connect technical skills to how the technology can be used to assist with teaching/learning and to improve the students' experiences (e.g., using the LMS to connect students via breakout groups).

Institutions

Institutions require information to provide the best possible training and support for instructors and students. This may require developing an assessment plan (e.g., pre-course surveys related to specific courses and technical skills, knowledge of the learning management system, and the ability to apply this knowledge).

Institutions may find that training instructors requires an investment of time and energy at a time when many instructors are facing added demands (e.g., family and childcare) and also experiencing added stress (related to the pandemic, social isolation, and changes in work, social, and family life) that make taking on additional work challenging.

Conclusion

It is now nearly 24 months since the pandemic began and we moved to online teaching. The past two years have revealed that many of the challenges students experienced in the initial move online continued into the current academic year. I taught four courses online and sought to integrate the recommendations developed in this article. Overall, the research was useful in making my courses effective and helped to make the move online a positive experience. Attrition rates were higher than for in-person courses but well below the attrition rates found in the literature. Students were struggling with additional stressors as the pandemic dragged on and stress levels were quite high. They

indicated that they appreciated the added support and attention. One student noted that in none of their other courses were slides providing links to support included.

What began as responding to the "practical problem" of moving to online teaching during a pandemic ended up providing multiple insights into the process of teaching and learning. It heightened my awareness that successful teaching involves not just the instructor and his/her/their commitment to their course but requires reflection on the insights of students and peers, and the support of the institution. The beauty of being challenged to teach in a new way (online) without option was that the new environment was unknown and to explore that environment required not just examining the research on online teaching but to return to basics and to consider the actual experiences of students and teachers with online learning. This, in turn, led to insights on how the actions of institutions shaped success.

The engagement of students, instructors, and institutions in the teaching and learning process that contributes to successful courses requires communication, information gathering, listening, and assessing the impact of choices and decisions. The experience of moving online during this pandemic showed that there are small measures that instructors, students, and institutions can undertake to improve the teaching and learning processes.

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