Faculty and Student Online Experiences Amidst the COVID-19 Pandemic: A Descriptive Study (Part 2)

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Introduction

The use of virtual meeting platforms has increased exponentially in nursing educational programs and for other consumers in the past two years during the COVID-19 pandemic. Zoom reports its app was downloaded more than 485 million times in 2020, and currently, in 2022, 300 million active users access their platform daily (Woodward, 2022). Microsoft Teams reports 145 million daily active users (Curry, 2022). This article, which is Part 2, explores the experience of undergraduate nursing students and faculty while learning and teaching online at the beginning of the COVID-19 pandemic. A review of recent literature related to the pedagogy of teaching and learning online in a practice profession is presented, followed by insight into the qualitative findings from our study, including associated implications and opportunities for nursing education as we continue to teach and learn during the pandemic and in moving forward. Nursing students and faculty experiences of learning and teaching during the initial wave of the COVID-19 pandemic help to record this historical global event and its impact on nursing education, including critical insight into effective online pedagogical practices.

Background

A recent qualitative study using a purposive sample aimed to describe the experiences of nursing education during the pandemic and concluded that there have been many unprecedented changes in nursing education as a direct result of the pandemic (Tolyat et al., 2022). These authors identified themes that highlighted unpredictable preparatory opportunities, changes in the priorities of nurse educators, insufficient clinical competence among students, and opportunities for learning in the COVID-19 pandemic. A similar descriptive qualitative study (Hu et al., 2022) with a convenience sample of 33 nursing students investigated undergraduate nursing students' experiences with home-based learning as a pedagogy during the pandemic. Their main themes included the challenges and effectiveness of home-based learning and students' motivation to learn. Some students preferred pre-recorded lectures to assist them in balancing their home/family responsibilities while others struggled with technological, environmental, physical, and social issues.

Academic success in online learning in nursing education during the pandemic was investigated by Kim et al. (2022) using a cross-sectional descriptive design with a convenience sample of 200 nursing students. The authors examined self-directed learning, cyber-class flow, obstacles to online learning, and satisfaction with online classes. Self-directed learning and satisfaction with the online class were found to be significant predictors of academic success (Kim et al., 2022). The authors suggested that nurse educators pay attention to the course design and learning methods used online and align them with students' feedback and unique needs, using a variety of tools and means to interact with students to improve their satisfaction with online classes.

Hao et al. (2022) conducted a systematic review to synthesize information related to the application of digital education in undergraduate nursing and medical internships during the pandemic. The authors reported that digital education played a significant role in distance education during the pandemic and will continue to do so into the future. They suggested combining the advantages of digital education and face-to-face teaching methods to maximize the benefits of learning and to lead a new wave of digital learning for future education in health professions.

The emerging body of knowledge related to nursing education throughout the pandemic highlights opportunities, system efficiencies, and challenges, but no Canadian qualitative studies

were located at the time of our study. The related research question for the qualitative component of this study was "What was the experience of nursing students and faculty at three university schools of nursing in one Canadian province, when learning and teaching in the fully online environment during the COVID-19 pandemic?" Students and faculty moved to a fully online environment at the time of data collection because of universities closing their campuses, including for in-person classes, labs, and simulation centres. At the same time, clinical placements were suspended by the clinical agencies.

Methods

A detailed discussion of the study methodology has been reported in Part 1 (Cobbett et al., 2022). The research involved the distribution of two surveys: the Faculty Survey of Online Teaching Amidst the COVID-19 Pandemic and the Student Survey of Online Learning Amidst the COVID-19 Pandemic. The surveys contained quantitative and qualitative questions. Qualitative questions from the online survey are detailed in Table 1. The quantitative results were reported and discussed in Part 1 (Cobbett et al., 2022) and this article, Part 2, focuses on the qualitative data analysis and results. Ethical approval for this study was received from all three university ethics review boards.

Table 1

Qualitative Survey Questions

Student survey questions	Faculty survey questions
How would you define effective learning in the spring/summer session?	How would you define effective teaching in the spring/summer session?
What types of course and/or virtual clinical activities or assignments do you prefer to do online?	The top 3 challenges/issues for your students were…
How did missing the clinical practice component impact your learning?	The top 3 challenges/issues you encountered were…
My top 3 challenges/issues encountered this spring/summer were…	Opportunities for future online learning and teaching are…
Recommendations or additional thoughts related to the spring/summer semester and/or online learning?	Recommendations or additional thoughts related to the spring/summer semester and/or online learning/teaching?

All undergraduate BScN students and faculty in Nova Scotia were invited to participate in the research via email invitations sent from the administrative assistant in their home university. Data were collected from a convenience sample of 38 faculty (75% response rate) and 195 undergraduate nursing students (31% response rate) between July 24 and September 7, 2020. The three nursing programs in this study offer the BScN degree on a tri-semester basis, which means that students typically completed classes and/or clinical practicums during the summer months. With the immediate and widespread shut down of class and clinical learning space, as well as the unavailability of clinical practice placements, faculty and students were actively engaged in learning and teaching throughout this time frame in a fully online environment. All students who

were enrolled in nursing courses were invited to participate. Just over half of the sample were students who entered the BScN program from high school or had no previous university experience. The survey was administered anonymously through the online platform Opinio. The sample characteristics are detailed in Part 1 (Cobbett et al., 2022).

Qualitative data were analyzed using thematic analysis, following a six-step process as outlined by Braun and Clarke (2006). The research team became familiar with the data by reading and rereading the transcripts. Initial codes were generated by partners within the team and collated into potential themes. The entire team met to compare codes from each dyad, generate a thematic map, and then define and name the themes while validating related data by using quotes from participants. The final report was created by the team, relating the confirmed themes back to our research question and current literature.

Results

The results reported here are limited to the qualitative data and are organized using three main themes and 10 sub-themes in relation to faculty and student data. A thorough discussion of the quantitative data is in Part 1 (Cobbett et al., 2022).

The team conducted thematic analysis and determined a pattern of primary themes: Learning and Teaching, Relationships, and Mental Health. Each theme and related sub-themes are captured in Figure 1.

Figure 1

Themes and Related Sub-themes

Theme: Learning and Teaching
- Sub-themes
  - Environment
  - Evaluation

Theme: Relationships
- Sub-themes
  - Social isolation
  - Virtual relations
  - Communications

Theme: Mental Health
- Sub-themes
  - Academic shock
  - The waiting game
  - Technology
  - Resiliency
  - Work-life balance
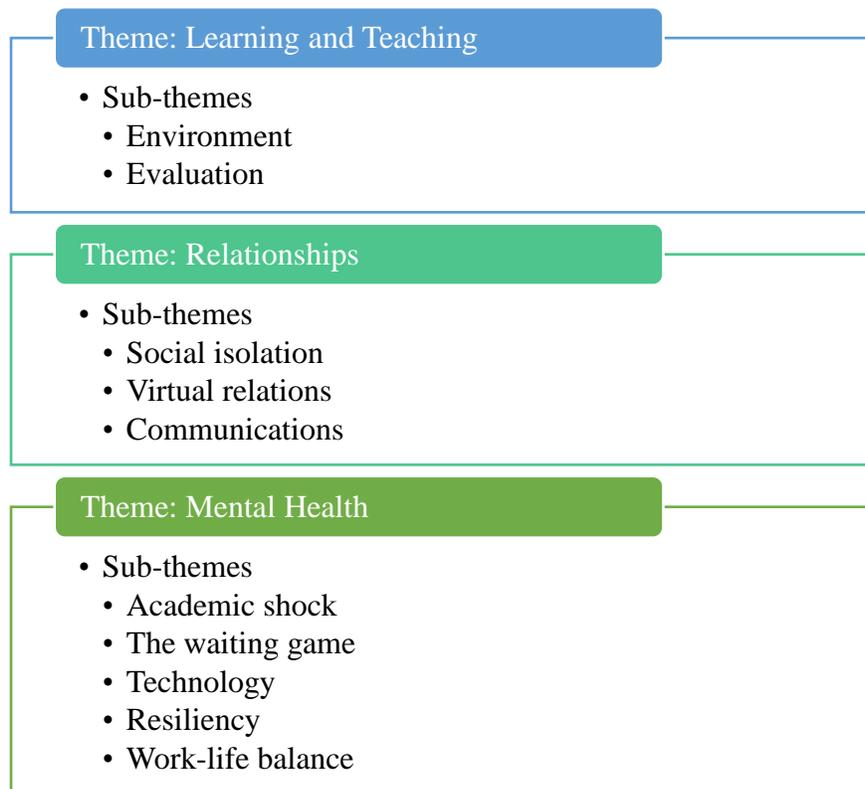
Theme One: Learning and Teaching

The theme Learning and Teaching captured students' perceptions of how they learned and what they considered to be effective learning during the first spring and summer of the pandemic. The theme also captured faculty perceptions of how they taught and what they considered to be effective teaching. The theme of teaching and learning was characterized by two sub-themes: the learning environment and evaluation. Our analysis identified consistencies and interesting variations between student and faculty data in relation to the two sub-themes.

Learning Environment

Student Experiences. The learning environment sub-theme captured students' experience with online course delivery platforms, the challenges faced, and related recommendations. Students' courses, during the first spring and summer of the pandemic, shifted from face to face to a fully online format (including simulation activities) with minimal clinical experiences available. The only cohort of nursing students in the province to attend clinical practice during the data collection period were students in their final preceptored clinical practicum, comprising approximately 10% of the study sample. Online courses were offered through either synchronous mode, asynchronous mode, or a combination of both. Asynchronous offerings included mainly posting lectures and recordings, and students moved between online classroom platforms and isolated self-directed learning.

Some students denied the effectiveness of any virtual learning and considered effective learning to be only face-to-face: "I do not feel that I learned as much or able to retain as much with online courses as I do when attending classes." Students with competing responsibilities found online learning a better fit for their personal life and familial obligations; for instance, one student indicated that "online made my experience less stressful as a single mother because I was able to be home with my daughter when school was closed due to covid." Others considered a hybrid platform to be necessary to ensure learning: "There has to be an in-person component. At a bare minimum a skills lab. It would be good if we were in-hospital for a clinical component as well. Lectures are the only thing that should be online, in my view."

Most of the students emphasized the importance of synchronous interactive sessions and active learning, while others with competing demands favoured recorded sessions and asynchronous platforms. Students who preferred synchronous sessions shared a "frustration with [the] asynchronous format… created feeling of isolation/lack of support." They found it "difficult to be motivated due to lack of engagement" and considered that effective learning "requires synchronous lectures that are engaging and capture our attention" and that "the tutorials are where I found I was learning most effectively." On the other hand, students with competing demands found themselves disadvantaged by the synchronously offered courses: "I worked full days 7am-5pm and was not able to watch the lecture live. It was difficult to stay up to date and was very out of the loop for class discussion." Almost two-thirds of the student participants chose to work during this spring-summer semester, with many of them working in health care-related positions. It is assumed that many students were taking on employment roles as essential workers during the pandemic, which may have affected their levels of stress, including their availability to participate in courses where synchronous classes were required. Although some courses were asynchronous, others required synchronous classes aligned with the pre-pandemic class schedule. These students found recorded sessions would enable access for all and that the ability to review information at their own pace was a definite advantage.

Several students found the online platform challenging in relation to course load, access to online resources, course delivery, assessment elements, and clarity. Students found that course expectations and requirements increased in the online environment. The workload, number of assessment elements, and pace of the courses were often not realistic and not supportive of their learning: "Effective learning would have been if we had a manageable course load. I found it insane the amount of extra work and projects that occurred due to the switch to online." Students also shared the difficulty of navigating the course learning management systems and accessing online resources; what they needed was "*not just being told about resources but being told how to access these resources … [had to] search multiple platforms to find the answer*."

Students shared their struggles with the variations in course delivery methods, for instance, there was "inconsistency in how a course is delivered by different professors (i.e., some uploaded videos, some uploaded PowerPoints with audio, some audio was very poor, some uploads were in PDF while others were in PowerPoint." Other students reported a struggle with online teaching strategies that perpetuated independent learning and preferred lectures as evident in the following quote: "Effective learning is accomplished when course instructors actually teach the content to the students rather than assigning an abundance of reading/required materials and expecting students to teach themselves the main content." Students wanted clear instructions and requested more manageable workloads to enhance their ability to learn. They felt they needed to have more input into decisions related to the number and type of assignments and exams and due dates. One student expressed their feelings of lack of empathy from their professors: "Not feeling like we the students had any say how the courses are organized, presented, or how much they will cost. Feeling like the people making these decisions are disconnected from the students' realities."

Faculty Experiences. Faculty acknowledged the challenges associated with online teaching including the lack of interaction and feedback. It was challenging for professors to redesign their courses in a very short time and some reported difficulties related to "getting to know their students," as evident in the following quotes: "More challenging to recognize students who may be struggling," and "there was a great deal of uncertainty as to whether or not the students were grasping the material or not as we had limited contact with them."

This pedagogical shift required extensive capacity building among professors to develop new and engaging teaching strategies. Some faculty tried to be innovative, introducing humour and gaming in new virtual settings to increase the engagement and motivation of students—for example, virtual simulation games, escape room scenarios, and gaming PowerPoint exercises (e.g., Jeopardy, Who Wants to Be a Millionaire). Faculty emphasized the importance of students' access to online resources and active participation in learning activities, especially in tutorial activities. For example, "I would define effective teaching as high level of engagement of students with the course resources, peers, and course professor" and "student engagement within their smaller tutorial group for completion of case studies."

In general, some faculty revamped their courses to meet the new delivery platforms, and some were satisfied with the teaching experience: "Overall, the students spoke very positive about their experience and learning. I am more comfortable with facilitating group discussions etc. online. I believe the synchronous and asynchronous methods worked well together for a valuable learning experience and rich group sharing/learning discussions." This area highlighted an opportunity, perhaps an efficiency, that was not realized before the pandemic related to flexible, accessible, and varied learning opportunities. Some faculty reported that they plan to maintain the

pandemic approaches that resulted in efficient and effective learning opportunities: "Redesigned my fall course, many of the changes I will keep no matter how we moved forward."

Evaluation

Student Experiences. In relation to evaluation, students shared their concerns with the evaluation methods used (or lack of) and questioned the appropriateness of the written assignments instead of quizzes as an evaluation method. One student shared, "Testing should be required. Assignments are good but it doesn't actually test our knowledge of the subject… I cannot stress this enough. 7 months without a proper test and then give a [standardized] exam was absolutely mind boggling."

As a result of relying (perhaps even an overreliance) on written assignments, students were overwhelmed with the number of required assignments in each course. Students indicated that they were juggling assignments without really learning the content, and they even questioned the relevance of some assignments for which content was not relatable to the course learning outcomes. For instance, a student indicated that "the instructors put so many assignments on us that it made it almost impossible to study as well. It took up all of the time and honestly, many were not relevant to the class material." Students also struggled with the lack of regular personal feedback, especially during asynchronous learning requirements. They emphasized the importance of regular feedback as a way to check their understanding of concepts and to "get reassurance that they were on the right track."

Students did not consider good grades as an indication of effective learning; they focused on the long-term student learning outcomes such as retaining information, relating the content to nursing as a career, and applying the knowledge in different contexts, such as in future classrooms and clinical settings. They doubted their success in comprehending and retaining the content taught through the online experience; for instance, one student indicated that "I am a fairly good student. I did learn things, but how much I retained overall, I cannot say." Students wanted the opportunity to provide feedback to faculty as a step to improve course delivery.

Faculty Experiences. Professors found it difficult to determine if students understood the expectations of the course and emphasized the importance of providing students with regular feedback. Professors also struggled with creating virtual e-assessment tools which were innovative and capable of evaluating students' knowledge and competency while not prone to lapses in academic integrity and subsequent integrity violations. Some faculty opined that more innovative assessment methods appropriate to the online platform were required:

> Need to explore testing methodology[;] the current strategies are not effective. As a professional school if we are to utilize quizzes as a methodology to assess assimilation of important foundational knowledge we must ensure a measure of rigour! If this is not possible we must abandon online testing and explore other avenues for assessment.

Faculty members considered their teaching to be effective when students met all the course requirements on time and achieved a passing grade in their exams/assignments while being engaged in the course content and asking questions. Faculty expected all students to meet the course assignment deadlines and considered the hardship of navigating the online workload as an individual challenge of "some" students but not most:

> Students were engaged, they showed up and participated and were able to meet their Course requirements and Objectives for the most part. Some struggled more than others to keep

up especially with all of the reading and online learning works differently for different people. They related the struggle of some of these students to lack of fully acquainting themselves with course guidelines.

Moving forward, faculty would default to using the available resources and await formative evaluation to figure how best to proceed with online teaching: "Continuing to utilize all of the resources and supports available at this time. Formative evaluation of the courses as they evolve over the terms."

Theme Two: Relationships

Relationships emerged as a central theme of critical importance to students as they navigated through an unfamiliar learning environment. Sub-themes of Communication, Social Isolation, and Virtual Relations emerged as notable by student and faculty participants. Students expressed frustration when communication was not clear and forthright. Students also felt disadvantaged by limited opportunities to clarify expectations directly from their professors in an online platform. The limitations of living and studying in an environment that restricted social contact, relying on virtual relations because of mandatory physical distancing, had a profound influence on the health and well-being of nursing students and nursing faculty.

Communication

Student Experiences. The emerging sub-theme communication was a critical component to the successful transition from face-to-face teaching to an online learning platform and virtual nursing practice environment.

I noticed that a lot of my peers did not participate very well during class and clinical discussions. Online learning makes it very easy for the more quiet or shy students to hide behind a black screen. It would be beneficial to provide greater opportunity for everyone to participate in discussions.

Students were frustrated by the lack of information related to their clinical practice during the first spring/summer session of the pandemic: "[I had to] search multiple platforms to find the answer," and "There was not enough support and guidance from professors and school." The provincial health authority was strategizing to determine the best course of action for students and was understandably cautious in its approach. The lack of information related to their nursing practice placements contributed to the uncertainty and fear felt by students, particularly as it related to course and graduation requirements.

Students emphasized the importance of clear communication and the desire for establishing a human connection with their professors. Communication between professors and students was strained, with frequent misunderstandings compounding their discontentment, for instance, "effective learning requires open communication through appropriate means from course professors that are timely and clear." Virtual communications were impersonal and, at times, asynchronous, with less opportunity for students to ask questions and discuss answers, as noted by students: "Not being able to ask the professors questions after class or during office hours (not all professors had standard weekly online office hours)," and "Achieving a personal approach to communication with faculty." Students described the difficulty they faced as they navigated the course learning management systems and accessed online posted resources: "There should be a single calendar with all the due dates for all of our courses, it was a scavenger hunt this past semester to find what was due and when."

Faculty Experiences. Communication also emerged as an important consideration among faculty participants. Faculty expressed they were overwhelmed by the increase in meetings, phone calls, and emails from colleagues: "There was an increase in the number of meetings and increase in phone calls and emails from colleagues." The deluge of emails contributed to stress and work-life imbalance. The necessity for clear communication and efficient use of time to manage the changing workload became obvious. The ever-changing landscape of the pandemic and the need for continual strategic planning to manage student and faculty needs contributed to information overload and enhanced stress and imbalance in the work environment: "reduce or monitor hours spent responding to student questions/concerns; pursue connection with colleagues in a way that is not burdensome"; "More open communication—this is what is happening and this is the plan for now." Some faculty suggested having intentional virtual get-togethers each week to support each other and to "have coffee sessions once a week to stay connected." Faculty were also frustrated with the increased amount of time required to support themselves, their families, one another, and students' learning in a fluid, rapidly changing pandemic environment.

Social Isolation

Student Experiences. Social isolation was a phenomenon unique to the student responses and ever-present in the online learning environment. The impersonal nature of courses, the inability to engage in-person with peers and professors, and the forced and often unfamiliar online teaching and learning environment led to a sense of isolation and loneliness among students as expressed in the following quote: "Not being able to meet the profs face to face, caused me to feel disconnected." Students expressed disappointment with not having enough support, "not having access to peer support was difficult," and faculty felt inept dealing with this widespread deficiency. The inability to practice newly acquired psychomotor skills was a source of stress to nursing students: "Retaining the information I was learning [was challenging] because I wasn't having to use it hands on." This, coupled with the uncertainty of when they would be able to practise their new skills, proved to be disconcerting for students: "Being isolated from others, and not absorbing the information was challenging." Although students and faculty were cognizant of the provincial mandate required to contain the COVID-19 pandemic, frustration and discontent still prevailed.

Virtual Relations

Faculty Experiences. Under the theme of relationships, the sub-theme Virtual Relations emerged uniquely within the faculty data. As a result of public health restrictions and the associated provincial lockdown, normal communication channels were abruptly suspended. Faculty experienced a disconnect from their work-based support systems at a time when there was also a disconnect from family and friends, further taxing their coping mechanisms. Faculty were also dealing with a significant increase in work related demands, including the "number of meetings and increase in phone calls and emails from colleagues."

Faculty were forced to adopt a new primary method of communication. Faculty were familiar with alternative methods of communication (e.g., Zoom, Microsoft Teams); however, it was not the primary method to conduct meetings and educational sessions or to converse with students: "distance from students and hence not able to assess what they are going through and their challenges in the material." Faculty felt less supported in the workplace due to a reduction in social interactions created by working remotely during the pandemic. The deficit was exacerbated by the need to adopt and execute a virtual learning platform, which was new to many faculty and

students. Faculty articulated frustration with the limitations created by working in an environment that restricted their ability to consult with colleagues as they learned new educational platforms.

Faculty experienced intense pressure to switch their teaching platform from face-to-face to an online environment for classroom teaching and to a virtual learning experience to replace clinical practice. This, compounded by the brief period to adopt, familiarize, and execute the learning platform added to the degree of stress experienced by faculty. Not surprisingly, the level of technological support required for faculty multiplied: "Supporting students in their learning; creating a community of learning and encouraging students to learn with and from each other." Further contributing to the sense of frustration was the lack of experience with virtual technology. Several faculty had a fundamental understanding of virtual learning environments particularly related to clinical environments: "I think we can learn a lot more about how to do this well, and we have to keep our students front and center in the approaches we use."

Theme Three: Mental Health

Mental health is a complex theme rooted in experiences of shock and uncertainty. The theme captures the emotional burden of building capacity to transition online, the necessity for resilience to cope, and the struggle with work life balance while working at home. Sub-themes included Academic Shock, the Waiting Game, Technology, Resiliency, and Work-Life Balance. These subthemes acknowledge the myriad of factors influencing mental health for students and faculty who forged ahead in nursing education during a pandemic.

Academic Shock

Student Experiences. The pandemic prompted a near immediate transition to online learning without time to adequately build capacity for navigating online learning platforms, adapting to changes in class and clinical schedules, or keeping on top of new and ever-revised guidelines and policies, essentially described by some as information overload. These unexpected changes furthered the shock and fear of the more critical context concerning the new virus circulating in the population, all of which was intensified by the enforcement of serious public health emergency measures, as expressed by a student who indicated that "concentrating on schoolwork amidst the distress, confusion, and fear of the worldwide pandemic, uncertainty of the constant changing, and all the fear… It is impossible, most days, to focus on school above priorities of safety and health."

Although data revealed glimpses of optimism, hope, and gratitude, many students felt a lack of motivation and had difficulty navigating the changes and fear while managing their time and energy at home. As one student indicated: "It was difficult, remembering which platform we were learning on that day and keeping my procrastinating to a minimum." Another expanded on the challenges and the shock of moving online and shared the following:

> Nothing can replace the amount of experience, confidence, and skills clinical practice brings students. This is how we become closer to feeling like a nurse, understanding the healthcare system, decided what area of practice we want to work in, practice real communication, and procedures. My learning without clinical practice feels one dimensional, forgettable, and nonessential without application-based practice and hands-on learning.

There was also a sense from some that their professors were not empathetic to their concerns and lacked support from the school. For instance, one student reported:

Having faculty actually listen to why online learning is challenging instead of constantly comparing our situation to theirs. I feel extremely behind in the clinical aspect of my coursework, missing clinical time increased my stress and anxiety and kept me from being engaged whatsoever in course content.

Academic shock was not evident in faculty data but clearly described by students as they transitioned to life during a pandemic entrenched in fear and uncertainty while navigating online courses and studying at home.

The Waiting Game

Student Experiences. Although the subtheme of the Waiting Game was also not evident in faculty data, it was a pertinent component of the student perspective and tied closely to their academic shock. The pandemic created uncertainty on many levels, including clinical practicum hours, which were put on hold or delayed because of the changing landscape of public health guidelines and learner placement restrictions in the province. Students were on edge waiting for notice of when their courses or practicums were to start again. Their professional education was at stake and their anxiety high, given the uncertainty about if and when they would be able to progress in the program and graduate as planned. These decisions also impacted where students needed to live and their ability to fulfill employer and family obligations, many of which heightened during the pandemic. Several students explained further, indicating that "waiting for information regarding clinical placements was horrible… left sitting and wondering for months"; that "the unknown of when semester/clinical would be starting, the lack of notice between finding out placement and starting placement. I had only 7 days to contact my preceptor and get my schedule and make adjustments to my work schedule"; and that "with 4 months of knowing we had to complete our exit exams we were only given a week and a half notice of when our exit exams were."

Technology

Faculty Experiences. Faculty data were unique to the theme of technology compared to student data. Student data did not reveal issues related to capacity building. Capacity building for faculty in the use of technology was deemed essential in the implementation of online course delivery. For example, learning how to navigate various virtual simulation programs, meeting platforms, and online educational tools to create new ways of interacting and evaluating students online was critical in the capacity building needed among faculty. Faculty indicated that the university provided many resources for online delivery and virtual meetings, as well as capacity building workshops. Yet the extra time and energy needed to participate in meetings and workshops created added stressors. For instance, one professor indicated that it was "a quick turnaround to online learning; not familiar with all of the virtual tools." Some professors also had challenges with internet connectivity at home and shared that they were "trying to learn how to be an effective teacher in this platform and manage the technical aspects required."

Resiliency

Faculty Experiences. Resiliency was not a sub-theme evident in student data but revealed in the coping strategies described by faculty. Many professors joined forces to manage their stress by sharing resources and collaborating to develop new online assignments and virtual simulations among other course expectations. As a result, many innovative strategies and contingency plans were developed to help navigate student learning and progression in the program. This required

resiliency among professors in their implementation of strategies to manage issues. Resiliency was palpable in faculty responses such as the following:

> The collaboration between faculty was awesome as the team all stepped up to the plate using their strengths. Each person had different strengths which created opportunities to learn from one another in terms of their learning and teaching pedagogical point of view and mastery of different technological components. The act of coming together so quickly for an extended period of time has provided a foundation for true collaboration in the future which is stronger than one meeting or faculty retreat could have provided. Even though collaboration is time consuming, I think a team of people can put forth a stronger product for the students.

> I had some experience of what good teaching felt like in that mode (virtual learning) and I tried hard to model that in my approach which I think helped me a lot.

> It was an interesting experience… I think it worked better than I thought it would… it takes a lot of attending to the process, it can be exhausting in a different way and I was fortunate to have a lot of support… in all ways at home... although it was stressful at times.

Work-Life Balance

Student Experiences. Work-life balance was a sub-theme evidently connected to mental health. For students, the stress of balancing home life and online learning was overwhelming. There was little separation between work and home life for some students, which created layers of stress, including fewer opportunities for breaks from work or family and a possible increase in procrastination, "procrastination because I was at home." Other examples from students included the following:

> Studying at home with no ability to find a completely quiet space (children at home, spouse working from home etc.). Inability to go to the library for quiet space.

> For my mental health, I need my home to be my home again. When I tried to do things that were not school related, I felt like I should be studying/reading and when I was studying/reading, I saw things that needed to be done in my home.

Although some students managed online learning and excelled, others felt disadvantaged with low bandwidth, poor internet, and the struggle to balance family and a chaotic home environment. Students shared that "effective learning… to complete the courses and not being distracted at home!" and "Wi-Fi connections were challenging," all of which added to challenges of balancing their work and family life.

Faculty Experiences. Along with the increased work time required to rapidly transition to online teaching and keep abreast of the latest public health pandemic guidelines on often a daily basis was the need to navigate work at home alongside competing demands from family members. Many faculty had children or grandchildren in their homes and were assisting with childcare during this time when most daycare agencies were closed because of the pandemic. Many found it difficult to achieve their "usual" work-life balance, "balancing family commitments with teaching" and consciously sought alternatives to screen time, "strictly adhere to 'life'/'me' time, no exceptions; find alternatives to screen time."

In addition, competing demands on internet connections/bandwidths from partners and other family members working from home contributed to the loss of the concept of working during

the day. Many faculty had to negotiate available times to balance work, family, and other responsibilities. Faculty indicated that there was an "increased workload related to going online," with some reporting that their vacation time was cancelled or lost.

The qualitative data shaped three primary themes of Learning and Teaching, Relationships, and Mental Health. These themes reflected student and faculty perspectives which help to inform and contribute to an emerging body of knowledge in nursing education related to virtual teaching and learning into the future.

Discussion

Data on student and faculty experiences of learning and teaching fully online during the first wave of the global pandemic have revealed similarities, differences, opportunities, and challenges. Each of the three main themes are discussed below.

Learning and Teaching

The findings related to the Learning and Teaching theme showed some students struggled with the teaching strategies adopted by educators with the shift to online education during the spring/summer of 2020. These strategies included asynchronous teaching, self-directed learning, and a focus on written assignments as evaluation methods. It is important to understand what informed educators' choice of these strategies and explore what can be done differently to enhance students' learning.

Faculty members resorted to asynchronous, synchronous, or hybrid teaching as influenced by internal directions within their universities. Equity was the main value/goal that shaped these directions because students in different parts of the province differed in their accessibility to reliable internet connection, electronic devices, and daycare services for their children. Several students also had to assist with personal financial strain caused by the provincial lockdown by initiating employment, often in health care, as other family members lost their jobs during the pandemic.

Students' experience with asynchronous and synchronous learning was diverse: some verbalized that one mode was appropriate for them while others considered it to be ineffective for their learning. We expected this variation because we know that students are diverse. Students are diverse in their learning styles, self-directedness, skills in navigating online platforms, previous online learning experience, motivation for learning, level of maturity, and personal responsibilities like work or family. Diversity among students has always existed and did not start with the pandemic. One plausible approach to meet the diverse needs of our students is to use the Universal Design for Learning (UDL) as a framework to guide our teaching methods and course delivery, with consideration on how to apply UDL in the online environment and on an asynchronous platform (Rao, 2021). For example, sessions can be offered synchronously for those who can attend in person and be recorded for other students. As our findings showed, all students valued recorded sessions because students were able to visit and revisit lectures at their own pace and in their own time.

Self-directed learning has been identified as an important skill that nursing students should acquire to meet the current and upcoming challenges in health care practice and academic settings, including the COVID-19 pandemic (Ballad et al., 2021). To promote the development of self-directed learners, nursing schools adopted problem-based learning, team-based learning, simulation, reflections, case study, and online learning (Ballad et al., 2021). The fact that students

found it hard to be independent self-directed learners might indicate that they had not previously acquired that skill. A plausible solution would include weekly directions by the instructors on how to learn by providing strategies to navigate the week's content. Another consideration is to have consistency in this approach among professors, an aspect that students called for in our study. For example, instructors could use a consistent learning management style for all courses set up with a departmental template; once the student is familiar with one course, the navigation for their other courses will be minimal. Also, it is unreasonable to expect students to learn several platforms that have similar functions, and it is an inefficient use of time. Faculty should choose one video-conferencing platform and use it in all courses/student meetings so that students become comfortable with repeated use.

Another aspect that students found challenging was the course load and number of assignments, with less use of the conventional evaluation methods (i.e., testing). With the shift to online learning, university centres for teaching and learning and educators promoted an overabundance of written assignments and projects (as evaluation methods) instead of traditional exams. This direction was driven by expected issues with students' access to the internet and electronic device problems, the challenges and ethical issues accompanying invigilating students in the online environment, and educators' beliefs about academic integrity issues and their inability to confirm that academic integrity was maintained during test and exam writings. Several studies addressed academic integrity as an issue with the online transition during the COVID-19 pandemic. Wiley (2020) found that 93% of the 789 instructor participants believed students would cheat in an online environment.

Augusta and Henderson (2021) addressed the subject of academic integrity during the pandemic and called for educators to tackle the factors that led students to cheat, including students' lack of motivation, trust, clarity, and engagement. Our findings shared several quotations that expressed students' lack of motivation, their perceived lack of support, and their struggle with the limited engagement and lack of clarity of content and expectations. The authors provided some suggestions to mitigate academic integrity issues, including maintaining the same course and assessment formats when courses move from in-person to online (Augusta & Henderson, 2021). This approach could have helped in providing clarity in and familiarity with the course, an issue that students in our study struggled with. They also emphasized the importance in asynchronous teaching of instructors' having a predictable and constant online presence, such as through email. In relation to testing, they recommended open book exams if instructors were concerned with students' accessing their notes and books. Whether the exam was open book or closed book, the items should be constructed from a randomized question set designed by the instructors themselves since publishers' test banks are readily accessible by students online. To mitigate the technological issues associated with poor internet connection or availability of devices, the authors suggested allowing multiple attempts at the exam (with each exam having a question set randomly drawn from and designed by the instructor), with a wide time interval of availability (12 hours) and limited duration. There is a current debate in the literature related to testing time frame availability and interval, with some researchers advocating for the avoidance of time-limited testing in higher educational settings (Gernsbacher et al., 2020).

Our findings showed that whereas some students associated effective learning with long-term goals of retaining and applying knowledge in future clinical experiences, faculty members considered their teaching to be effective when students attended classes, participated, and passed exams. This is an interesting finding that raises questions related to the theories and goals that

guide the development of the courses' learning objectives, recalling that students did not equate getting a good grade in the course with effective learning. The data illuminated differences in perceptions about learning and teaching between students and educators. It is important to strategize as to how schools of nursing can engage students in meaningful discussion about learning and teaching to help align these perceptions. Further exploration of how best to gather and use student input to design course learning outcomes and goals is recommended.

Relationships

Stress is a commonly voiced concern among students in most educational environments, regardless of whether the academic term is routine and predictable or chaotic and unstable. It is not surprising when an unpredictable and shifting public health crisis such as the COVID-19 pandemic strikes that stress levels among students soar. The reasons for feelings of stress and anxiety during this time are multifactorial and are a microcosm of what is happening across the country (Grande et al., 2022).

Stability and consistency are two highly valued qualities held by university nursing students. Students draw support from each other during times of stress. The modern student has a plethora of methods to maintain and nurture connectedness to each other (e.g., Facebook, private and group sites; Messenger; Twitter; and various other social networking groups). Students' access to and use of social networking have been shown to increase individual and group resilience (Warshawski et al., 2016). The COVID-19 pandemic challenged the qualities of stability and consistency. Adapting to strict social distancing guidelines to curb the spread of COVID-19 proved isolating and debilitating for many. Accentuating the difficulty of this restriction was the urgency with which these measures were implemented. The lack of time to prepare nursing students in advance likely attributed to feelings of powerlessness and isolation. Adhering to public health guidelines, the world attempted to restrict the number of COVID-19 cases. Global and regional measures were undertaken. Conferences, educational programs, and social and family events were prohibited. The effect was far-reaching, impacting all members of society (Alici & Copur, 2022). Nurse educators need to be mindful of the intensified social isolation experienced by our international students during the COVID-19 pandemic, with mandated travel restrictions and isolation in a foreign country (King et al., 2020).

This study highlighted the importance of being connected to one's peers and the stress that occurs when this process is interrupted. Findings of the study show that many students suffered from social isolation and expressed dissatisfaction with the level of support offered by the university and nursing faculty. In a longitudinal study regarding the mental health impacts of COVID-19 among 733 Canadian university students, Hamza et al. (2021) reported that the social isolation contributed to increased risk of sadness, depression, anxiety, self-harm, and burdensomeness for students who had not previously reported any pre-existing mental health conditions. It is important to ensure that there are readily available and accessible mental health supports for students. Other studies have shown similar psychological findings in nursing students enduring the hardships of dealing with the COVID-19 pandemic (Alici & Copur, 2022; Grande et al., 2022).

Social media platforms have become an integral part of building and maintaining social relationships. Virtual relations extend far beyond casual interactions and are an essential component of a structured network supporting a student's educational process. Research supports the notion that virtual platforms are pivotal and positively influence academic performance and

collaboration (Warshawski et al., 2016). The findings of this study suggest that although virtual platforms may be widely used and accepted, they do not replace face-to-face interactions. Other studies have shown the importance of routines, such as attending classes, in effectively connecting with classmates and teachers (Usher et al., 2020).

The findings of this study highlighted the importance of communication particularly during a pandemic, which by its very nature imposes significant limitations on relaying information and networking with others. The findings underscored the value of communication to achieving a smooth transition from the in-person, face-to-face method of teaching to an online modality. Faculty and students expressed a strong need to be kept abreast of changes in the status of the pandemic and changes in expectations and responsibilities as a result of the adaptation to COVID-19 restrictions. Information overload and the time required to navigate through increased email traffic was a challenge encountered by students and faculty. Strategic planning to moderate this undesirable sequela of the pandemic would have lessened stress experienced by faculty and students.

Virtual Relations

Results of our study showed that nursing faculty experienced significant adjustments when shifting to virtual online teaching during the COVID-19 pandemic. Nursing faculty experienced stress related to their lack of familiarity with new online teaching platforms as well as from dealing with stress faced by nursing students as they adapted to the changing expectations of virtual learning. Similar studies identified that students experiencing anxiety, loneliness, and lack of support, as seen in the pandemic, find learning more burdensome (Culp-Roche et al., 2021; Shah & Cheng, 2019; Terzi et al., 2021). Managing multiple sources of anxiety further taxed nursing faculty, making a challenging situation more difficult. Making meaningful connections with students and assessing their progress proved difficult with synchronous and asynchronous learning. The inability to assess students in person with the aid of body language and verbal cues added to a disconnect experienced by many nursing faculty. Another source of stress for nursing faculty was the increase in email traffic and online communication, which was often overwhelming. Paradoxically, many faculty also expressed a powerful desire to be kept up to date in a rapidly changing educational environment amid a public health crisis. Many nursing faculty took advantage of online instructional resources and activities and indicated these were beneficial in adapting to virtual learning platforms. Engagement in the instructional resources helped foster a sense of support and community among nursing colleagues, in addition to generating more confidence in navigating virtual environments. Feelings of support were also seen in other similar studies (Culp-Roche et al., 2021; Hampton et al., 2020).

Mental Health

The pandemic significantly impacted the mental health of students and faculty in BScN programs across the province. Shock and fear reverberated among students (Fitzgerald & Konrad, 2021) as they sought support and resources needed to transition online and to work from home under the uncertainty of the pandemic trajectory. Many students were not able to focus on their studies or organize and manage their workload in ways that had helped them be successful in the past. Support for students at this time required a humanistic (Christopher et al., 2020) and flexible approach involving ongoing and open communications between faculty and students in efforts to understand students' unique needs and circumstances (Gaffney et al., 2021).

Many students were further challenged by the social determinants of health, including access to safe and constructive environments for learning, as well as internet connectivity and the affordability of the technology needed to learn from home. Students with higher stress levels often have more financial and family challenges (Gallego-Gomez et al., 2020). Faculty did not experience the same level of challenges related to such social injustices and were able to exhibit resiliency that was not evident among students. Faculty were more able to easily access and share resources and collaborate with one another virtually.

Students struggled to stay motivated to learn and participate in their studies because of overwhelming pandemic concerns and the transition to the online learning environment at home. Both faculty and students grappled with the balance between personal issues, family commitments, and workload. It was stressful for those caring for family members while working from home in often distracting and noisy environments. Separating work from family became indiscernible for some as they tried to navigate heavy workloads and family responsibilities. An increase in workload and burden of responsibility is known to contribute to burnout (Pautz & Vogel, 2020) and an increased risk of health problems (Giménez-Espert et al., 2020).

The findings pointed to the critical need to invest in expanding opportunities for equitable access to resources and support aligned with individual needs and circumstances. This involves a vital call for more humanistic approaches in our educational tactics with students and one another. We also need to strengthen our commitment to develop strategies for work-life balance and self-care, all while supporting one another in managing workload and navigating innovative and ever-evolving teaching and learning strategies online and otherwise.

Limitations

Limitations to this study are the same as those reported in the quantitative findings from this study (Cobbett et al., 2022) and include the use of a convenience sample, a potential response bias, a low response rate from the student participants (31%), and the fact that during data collection, participants were still immersed in the realism of studying nursing during a global pandemic, which was the focus of our research. Participant quotes were used throughout the results section to enhance the trustworthiness of the findings.

Conclusion

Adhering to public health restrictions while trying to curb the spread of a highly communicable disease and deliver a BScN program is considerably challenging. The findings of our study suggest elevated levels of frustration among nursing students and faculty during the COVID-19 pandemic. While some nursing students and faculty adapted well to the changing teaching modalities, some were negatively impacted by the fast-paced change to an online teaching platform. Nursing students felt disadvantaged with the lack of face-to-face contact and frustrated that faculty and the university were not providing the support they needed for continued success in a demanding BScN program. The majority of nursing faculty, although challenged by the increase in email traffic, were grateful to use various social media platforms to collaborate with colleagues. The ability to remain connected proved to be pivotal to supporting students and faculty during the pandemic. It is paramount to learn from student and faculty experiences and design programming that is meaningful, realistic, and responsive to achieve educational goals, particularly during a public health crisis.

References

Alici, N. K., & Copur, E. O. (2022). Anxiety and fear of COVID-19 among nursing students during the COVID-19 pandemic: A descriptive correlation study. *Perspectives in Psychiatric Care*, *58*(1), 141–148. https://doi.org/10.1111/ppc.12851

Augusta, C., & Henderson, R. (2021). Student academic integrity in online learning in higher education in the era of COVID-19. In Cheong, C., Coldwell-Nielson, J., MacCallum, K., Luo, T., & Scime, A. (Eds.). *COVID-19 and education: Learning and teaching in a pandemic- constrained environment* (pp. 409–421). Informing Science Press.

Ballad, C., Labrague, L., Cayaban, A., Turingan, O., & Al Balushi, S. (2021). Self-directed learning readiness and learning styles among Omani nursing students: Implications for online learning during the COVID-19 pandemic. *Nursing Forum, 57*(1), 94-103. https://doi.org/10.1111/nuf.12664

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101.

Christopher, R., de Tantillo, L., & Watson, J. (2020). Academic caring pedagogy, presence, and Communitas in nursing education during the COVID-19 pandemic. *Nursing Outlook*, *68*(6), 822–829. https://doi.org/10.1016/j.outlook.2020.08.006

Cobbett, S., Hansen-Ketchum, P. A., Ezzeddine, N., Nemeth, W. I., & Brennick, D. (2022). Faculty and student online experiences amidst the COVID-19 pandemic: A descriptive study (part 1). *Quality Advancement in Nursing Education/Avancées en formation infirmière*, *8*(1), Article 4. https://doi.org/10.17483/2368-6669.1317

Culp-Roche, A., Hardin-Fanning, F., Tartayoulle, T., Hampton, D., Hensley, A., Wilson, J., & Thaxton Wiggins, A. (2021). Perception of online teacher self-efficacy: A multi-state study of nursing faculty pivoting courses during COVID-19. *Nursing Education Today*, *106,* 105064. https://doi.org/10.1016/j.nedt.2021.105064

Curry, D. (2022). *Microsoft Teams revenue and usage statistics—2022.* https://www.businessofapps.com/data/microsoft-teams-statistics/

Fitzgerald, A., & Konrad, S. (2021). Transition in learning during COVID-19: Student nurse anxiety, stress and resource support. *Nursing Forum*, *56*(2), 298–304. https://doi.org/10.1111/nuf.12547

Gaffney, M. K., Chargualaf, K. A., & Ghosh, S. (2021). COVID-19 disruption of nursing education and the effects on students' academic and professional confidence. *Nurse Educator, 46*(2), 76–81. https://doi.org/10.1097/NNE.0000000000000986

Gallego-Gómez, J. I., Campillo-Cano, M., Carrión-Martínez, A., Balanza, S., Rodríguez-González-Moro, M. T., Simonelli-Muñoz, A. J., & Rivera-Caravaca, J. M. (2020). The COVID-19 pandemic and its' impact on homebound nursing students. *International Journal of Environmental Research and Public Health*, *17*(20), 7383. https://doi.org/10.3390/ijerph17207383

Gernsbacher, M., Soicher, R., & Beycker-Blease, K. (2020). Four empirically based reasons not to administer time-limited tests. *Translational Issues in Psychological Science, 6*(2), 175–190. https://doi.org/10.1037/tps0000232

Giménez-Espert, M., Prado-Gasco, V., & Soto-Rubio, A. (2020). Psychosocial risks, work engagement, and job satisfaction of nurses during COVID-19 pandemic. *Frontiers in Public Health, 8,* 566896. https://doi.org/10.3389/fpubh.2020.566896

Grande, R. A. N., Berdida, D. J. E., Paulino, R. R. J. C., Anies, E. A., Ebol, R. R. T., & Molina, R. R. (2022). The multidimensionality of anxiety among nursing students during COVID-19 pandemic: A cross-sectional study. *Nursing Forum*, *57*, 267–276. https://doi.org/10.1111/nuf.12675

Hampton, D., Culp-Roche, A., Helsley, A., Wilson, J., Otis, J., Thaxton Wiggins, A., Fruh, S., & Moser, D. K. (2020). Self-efficacy and satisfaction with teaching in online courses. *Journal of Nursing Education, 45*(6), 302–306. https://doi.org/10.1097/NNE.0000000000000805

Hamza, C. A., Ewing, L., Heath, N. L., & Goldstein, A. L. (2021). When social isolation is nothing new: A longitudinal study on psychological distress during COVID-19 among university students with and without preexisting mental health concerns. *Canadian Psychology, 62*(1), 20–30. https://doi.org/10.1037/cap0000255

Hao, X., Peng, X., Ding, X., Qin, Y., Lv, M., Li, J., & Li, K. (2022). Application of digital education in undergraduate nursing and medical interns during the COVID-19 pandemic: A systematic review. *Nurse Education Today, 108*, 105183. https://doi.org/10.1016/j.nedt.2021.105183

Hu, Y., Yong, J., Chng, M., Li, Z., & Goh, Y. (2022). Exploring undergraduate nursing students' experiences towards home-based learning as pedagogy during the COVID-19 pandemic: A descriptive qualitative exploration. *BMC Nursing, 21*(13), 1–9. https://doi.org/10.1186/s12912-021-00788-9

Kim, S., Jeong, S., Kim, H., & Jeong, Y. (2022). Academic success of online learning in undergraduate nursing education programs in the COVID-19 pandemic era. *Journal of Professional Nursing, 38*, 6–16. https://doi.org/10.1016/j.profnurs.2021.10.005

King, J. A., Cabarkapa, S., Leow, F. H., & Ng, C. H. (2020). Addressing international student mental health during COVID-19: An imperative overdue. *Australasian Psychiatry, 26*(3), 255–257. https://doi.org/10.1177/1039856220926934

Pautz, M., & Vogel, M. (2020). Investigating faculty motivation and its connection to faculty work-life balance: Engaging public service motivation to explore faculty motivation. *Journal of Public Affairs Education, 26*(4), 437–457. https://doi.org/10.1080/15236803.2020.1776076

Rao, K. (2021). Inclusive instructional design: Applying UDL to online learning. *The Journal of Applied Instructional Design, 10*(1). https://doi.org/10.51869/101/kr

Shah, M., & Cheng, M. (2019). Exploring factors impacting student engagement in open access courses. *Open Learn, 34*(2), 187–202. https://doi.org/10.1080/02680513.2018.1508337

Terzi, B., Azizoglu, F., & Ozhan, F. (2021). Factors affecting attitudes of nursing students towards distance education during the COVID-19 pandemic: A web-based cross-sectional survey. *Perspectives in Psychiatric Care, 57*(4), 1765–1773. https://doi.org/10.1111/ppc.12747

Tolyat, M., Vagharseyyedin, S., & Nakhaei, M. (2022). Education of nursing profession amid COVID-19 pandemic: A qualitative study. *Journal of Advances in Medical Education and Professionalism, 10*(1), 39–47. https://doi.org/10.30476/JAMP.2021.90779.1422

Warshawski, S., Barnoy, S., & Itzhaki, M. (2016). Factors associated with nursing students' resilience: Communication skills course, use of social media and satisfaction with clinical placement. *Journal of Professional Nursing*, *33*(2). https://doi.org/10.1016/j.profnurs.2016.08.006

Wiley. (2020). *Academic integrity in the age of online learning*. http://read.uberflip.com/i/1272071-academic-integrity-in-the-age-of-online-learning/1

Woodward, M. (2022). *Zoom user statistics: How many people use Zoom in 2022?* https://www.matthewwoodward.co.uk/work/zoom-user-statistics/

Usher, K., Wynaden, D., & Bhullar, N. (2020). The mental health impact of COVID-19 on pre-registration nursing students in Australia. *International Journal of Mental Health Nursing*, *29*(6), 1015-1017. https://doi.org/10.1111/inm.12791