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Undergraduate student nurses' views of online learning

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ABSTRACT

Background: The COVID-19 pandemic and resultant public health restrictions saw the mass movement of higher education to online, remote delivery. There was wide variation in how this was implemented, and for many undergraduate programs, this was the first time teaching was conducted remotely. The aim of this study was to explore undergraduate student nurses' views of online learning.**Methods:** Reflexive thematic analysis was used to analyse focus group data from undergraduate nursing students.**Findings:** Two central themes described student preferences for learning environments and challenges associated with asynchronous learning. Participants reported a preference for face-to-face learning. Suggestions for optimising remote learning include an emphasis on synchronous live sessions rather than asynchronous learning, incentivised learning, and a focus on ongoing formative informal assessment to maintain engagement. Specific challenges related to poor retention, difficulty remaining motivated, and maintaining focus on content and learning outcomes.**Conclusion:** As more opportunities arise to engage with online pedagogies for undergraduate nursing students, educators need to ensure their approaches are evidence-based and learner-centric.© 2022 The Authors. Published by Elsevier Inc. on behalf of Organization for Associate Degree Nursing. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>)

Introduction

The growth of online learning has proliferated in the past decade (García-Morales et al., 2021; Scagnoli et al., 2019). This is owing to a number of factors including improved internet access (Casey, 2008) and greater access to learning technologies (Lamon et al., 2020). Online delivery mitigates many of the barriers associated with higher education, such as issues of time, space, avoiding re-location, and maintaining employment (O' Shea et al., 2015). Additionally, it can help departments meet increasing enrolment demands (Willett et al., 2019). This method of learning had become a stated "norm" across many postgraduate programs; however, it is uncommon within undergraduate nursing education (Ota et al., 2018).

The rapid spread of the COVID-19 virus led to the World Health Organisation (2020) classification of a pandemic (WHO 2020). This had a profound impact on higher education. The public safety advice from agencies such as the Centres for Disease Control prompted higher education institutions worldwide to significantly reduce in-person academic activities and to begin a process of rapid pivoting to online teaching (Chick et al., 2020). Higher education institutions and

educators have increasingly been required to respond to and address these changes (Downes, 2021). Marinoni et al. (2020) indicated that 1 billion learners were impacted by closures, with 89.4% of those enrolled in higher level education. This is significant when we consider that online learning differs greatly from face-to-face teaching (Fawns et al., 2019). It has been argued that in order to be effective, a significant adjustment and learning curve is required (Kebritchi et al., 2017).

However, there has been little time for planning and owing to several causative factors, there has been wide variation in the implementation of online learning. In some cases, synchronous (live) learning was used, and in other cases, students were provided with pre-recorded sessions and self-directed content. Educators used different platforms for e-lectures, study material sharing, and learning evaluations (Kapasias et al., 2020). In a study by Kapasias et al. (2020), it was reported that students faced enormous challenges in learning. Learners at undergraduate and postgraduate levels experienced stress, depression, and anxiety, reported problems due to poor internet connectivity, and unfavourable study environments (Kapasias et al., 2020). Findings from Andrés-Guerrero et al. (2020) highlight the different needs of undergraduates and postgraduates in relation to online learning. For example, undergraduate students were less likely to report lesson objectives as clear, and less likely to agree that

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the timing of modules was appropriate. As it stands, the consequences of this pivot to remote learning are largely unknown.

Evidence is available regarding educators' views on online learning. For example, a survey of US-based educators reported that a majority (71.4%) rated the learning outcomes in online education as superior to those of face-to-face instruction, and additionally, 63.3% rated online education as critical to the long-term direction of the institution (Allen et al. 2016). While much of the research centres on educators' perspectives, there remains a lack of systematic evidence evaluating undergraduate students experiences with online learning (Adnan & Anwar, 2020).

COVID-19 has provided us with an opportunity to transform teaching and learning (Ballad et al., 2021). However, understanding learners' challenges and preferences is vital, particularly if online delivery is required in the future (Aguilera-Hermida, 2020). Addressing issues in relation to online learning and differing needs for undergraduate students will promote the improvement of online learning, teaching and evaluation, and the establishment of good practice in future design (Andrés-Guerrero et al., 2020; García-Morales et al., 2021). Henceforth, this study set out to answer the following question: what are undergraduate student nurses' views of online learning?

Methods

Design

A qualitative descriptive approach guided this study (Bradshaw et al., 2017). Qualitative descriptive studies are concerned with understanding and describing phenomena rather than providing evidence to support existing theories. Researchers engaging in qualitative description stay close to the data and develop inductive insights (Bradshaw et al., 2017).

Data collection

The University's Social Research Ethics Committee approved this study. Details of the study were explained in writing and verbally before the focus groups. Informed consent was obtained from each participant. Once focus group data were transcribed, all recordings were destroyed.

A purposeful sampling approach was employed. Fourth year mental health nurses were approached to participate, given their experiences with both in-person and virtual learning experiences of the programme. An announcement was made on the students' virtual learning environment, informing them of the study, and inviting them to participate. Students who were interested in partaking in the study were encouraged to contact the researcher via email.

Twelve students agreed to partake in the study. Students identified times and dates that suited them to participate. Based on this information, three focus groups comprising four participants each were organised (see Table 1). Each focus group was conducted by a different member of the mental health nursing team (with whom participants had a relationship, as these team members teach on the mental health nursing programme which the participants were undertaking). Focus group participants were asked an initial open question about their experiences with synchronous and asynchronous approaches to learning. Follow-up prompts were informed by a review of the literature and included questions in general about online learning, their preferred approaches, and approaches they felt impeded their learning. Focus group interviews were conducted and recorded on Microsoft Teams (online) and each interview lasted approximately 40 minutes. Due to the pandemic, it was not possible for participants to be on campus, and so each participant took part from a separate location.

Table 1
Focus Group Demographics.

	Male	Female	Total number
Focus Group A	1	3	4
Focus Group B	0	4	4
Focus Group C	1	3	4

No incentives were provided for participating in focus groups. Data saturation was reached after the third focus group, with no new information arising; no repeat interviews were deemed necessary.

Data analysis

Reflexive thematic analysis was used to analyse data (Braun & Clarke 2019). Interviews were listened to multiple times by SW and JG so that the researchers were immersed in the data; these were then transcribed by SW. Transcripts were coded by JG and cross-checked by SW. Once agreement was reached regarding codes, initial themes were generated by JG. These were cross-checked by SW and refined. Themes were then written up, with verbatim quotations from participants used to support interpretations (Braun & Clarke 2021).

Reflexive thematic analysis considers the researcher to be at the heart of knowledge production. As such, it is recommended that full transparency is demonstrated regarding philosophical sensibilities (Braun & Clarke 2019; 2021). This study was guided by ontological relativism, meaning the researchers acknowledged the presence of multiple realities and that "truth" is contextually bound (Scotland, 2012; Sova, 2021). Stemming from a relativist ontology is an interpretivist epistemology. Interpretivists acknowledge that knowledge is socially constructed, and consider the researcher as a "tool", actively involved in the interpretation /construction of meaning (Scotland, 2012). It should also be noted that, in qualitative descriptive studies, the researcher is actively involved in the process, becoming part of the phenomenon being studied through their interactions with participants (Bradshaw et al., 2017).

Rigour was guided by Lincoln and Guba's (1985) principles of credibility, dependability, confirmability, and transferability. Credibility was established by developing rapport with participants before commencing the focus groups, as there was a prior relationship between the researchers and the participants (Bradshaw et al., 2017). To enhance confirmability and dependability, an audit trail was maintained at all times to keep track of decisions (Bradshaw et al., 2017; Culyer et al., 2018). Finally, a purposive sampling approach was used to enhance transferability (Bradshaw et al., 2017).

Findings

Two themes were identified from the data: Students' Preferences for their Learning Environments and Challenges Associated with Asynchronous Learning.

Theme 1. Students' Preferences for their Learning Environments

The first theme focuses on participants' overall learning preferences. Participants made it very clear that they preferred the in-person, classroom-based learning experience over online learning.

"I think the, like, live lectures in a room where it's far more... it's way better" (Focus Group 3, Participant 2 [3.2])

"I much prefer live" (1.1)

It was stated that engagement is easier to achieve in person through promotion of discussion, with a level of interactivity associated with this approach. It was suggested that such interactivity is

not fully possible to realise in virtual environments; without this interactivity, the quality of the learning experience can be negatively impacted.

"In a class environment it's more interactive, you know, it's more easy to be interactive [...] it's nice to go through it as a class, there's that kind of dynamic and stuff" (1.2)

"I like engaging in the class, engaging in conversation" (3.1)

However, participants acknowledged that, as a result of the pandemic, it was necessary for universities to conduct some lectures and tutorials online. Given these circumstances, a preference for synchronous learning over asynchronous learning was demonstrated. Participants felt that some of the interactivity associated with in-person learning could almost be replicated using virtual synchronous approaches.

"Yeah, I think we've had that all year with COVID and stuff. [...] To be fair, I think most people got on with it" (1.2)

"I suppose, when we are on Microsoft teams and stuff we're interacting" (1.3)

Indeed, participants voiced dissatisfaction for asynchronous learning. Interactivity was highlighted as central to student learning. Because asynchronous learning involves viewing pre-recorded material, that interactive element is compromised.

"I hate pre-recorded sessions. Yeah, bluntly, yeah. I find it hard to stare at a pre-recorded lecture" (3.1)

There was the suggestion that, in the absence of human interaction, learning became an isolating experience. Participants highlighted the importance of face-to-face engagement, expressing a need to engage with "an actual person" to enhance learning experiences.

"You'd be fairly wrecked at staring at your screen all day and you'd have to turn around and watch a recording that's not even an engagement with an actual person" (2.1)

Theme 2. Challenges Associated with Asynchronous Learning

The second theme focuses on the specific problems highlighted around asynchronous learning. It was suggested that watching pre-recorded content is not very engaging. Consequently, participants became disinterested in the course material.

"When it's a pre-recorded session it's just harder to get that, I don't know, interest, I don't know if it was interesting, I just feel I didn't get as much because it was harder to engage with it" (2.4)

When participants did engage with this asynchronous material, they noted that this was short-lived. They felt that their attention cannot be maintained, and a focus on the learning objectives is often lost.

"I feel it's always kinda difficult, like, all lectures that are asynchronous are kinda difficult to focus on" (2.2)

"It's very easy to lose focus on what you are reading and stuff" (3.4)

Participants recognised that they had a responsibility to devote time to engaging with asynchronous material; however, such responsibility was perceived as overwhelming. Frustration was expressed with the onus placed upon participants to coordinate their own learning schedules. Concern was voiced regarding motivation, with

participants struggling to develop the initiative to view pre-recorded lectures.

"It's, like, up to you and it's hard to motivate yourself. It's really hard to motivate yourself" (2.3)

"It's very hard to motivate yourself to sit down and look at something for an hour and ask yourself questions about it. That's just the year it has been" (1.2)

"It's hard, like, to sit down and motivate yourself" (1.4)

Once participants found the ability to motivate themselves to engage with asynchronous content, the time spent viewing this content was limited. Participants reported a tendency to "rush" through asynchronous sessions, indicating that, rather than perceiving such sessions as important learning experiences, the viewing of asynchronous content was more of a "tick the box" exercise, and therefore not pedagogically valued.

"I mightn't spend as much time if its pre-recorded, you know?" (1.1)

"I found I was rushing it a bit just to get it done" (1.3)

There was a suggestion that the reluctance to engage with asynchronous sessions resulted in a build-up of content to review, putting pressure on participants and their learning. In addition to requirements to view this content, students also spoke about work commitments, adding further pressure. Owing to this pressure, participants felt they had to expedite the learning process and view pre-recorded sessions at an increased pace.

"Especially when you're going into like work the next day, you are just trying to get through stuff quick" (1.3)

"It's just you'd nearly want to get it done 'cause it's relevant at the time and we are working then outside of it too, d'you know, you don't want to leave these things add up or whatever either" (2.4)

Retention of information communicated during asynchronous sessions was raised as an issue, as was the quality of the information. Participants felt that the learning achieved during face-to-face sessions was much more valuable than that achieved through watching pre-recorded content. It was also much more likely that they would remember information discussed in a live forum.

"I prefer more hands-on as opposed to the asynchronous coz you kind of remember more things as opposed to listening to a recording and stuff" (3.3)

"I think they are really hard to do yourself and you don't really get much from them" (3.4)

When asked about suggestions to improve asynchronous learning, participants did not have a lot to say. Indeed, it was strongly suggested that asynchronous approaches should be abandoned.

"I don't think [asynchronous sessions] should really be used" (3.4)

However, one participant suggested strategies to engage students. This participant advised that there has to be an "incentive" for students to keep viewing pre-recorded content, such as a series of questions at the end of a presentation to assess knowledge and understanding. Although it was acknowledged that completing such an activity would require further work on the student's part, it was suggested that it would also enhance engagement.

"Maybe, like, a questionnaire at the end, like, that we could complete it and have to send it on, like, ourselves. Like, I know if I was facing into it, I would find it painful but at least I would go and do it at the end of

the day. [...] There needs to be some incentive to actually get it done, so a questionnaire or something" (2.1)

Discussion

The aim of this paper was to explore undergraduate student nurses' views of online learning. Although students voiced some frustration regarding online learning, it should be acknowledged that nursing students, nurse educators, and clinical nursing staff demonstrated a commendable ability to adapt to new technologies in the wake of the pandemic (Goodwin, 2021; Meyer, 2021). Had such adaptations not been made, it is reasonable to suggest that patient care and student learning experiences may have been compromised. While it is important to acknowledge and address the difficulties that students have encountered with technology, we should also recognise their commitment to education and appreciate their strength and resilience.

One of the key challenges students reported about online learning was a lack of interactivity, linked with an asynchronous approach to education. The importance of interactive pedagogies is becoming increasingly recognised in the literature, with Oluwajana et al. (2019) commenting that the level of interactivity between students and educators can influence academic outcomes. Indeed, it has been highlighted that interactive pedagogies are important to consider for nursing students, as they help to actively engage student and maintain their interest in subjects (Ahlstrom & Holmberg, 2021). Despite some of the limitations placed upon nurse educators because of having to deliver content in online environments, it is paramount that the interactivity of the classroom is not lost when teaching virtually Cantey et al. (2021). reported that virtual learning could be enhanced through enriched interactive elements: by focusing on rapport and increasing the level of dialogue between educators and students, they were able to build a sense of community. Given students in the current study's distaste for asynchronous learning, and the evidence around using interactive approaches to enhance nursing students' learning, there is a need to promote the use of live/synchronous approaches over asynchronous ones.

It was also noted that maintaining engagement in asynchronous sessions was difficult, with students stating that they had a tendency to lose focus. One suggestion made to improve asynchronous session and to help maintain concentration levels was the use of a questionnaire / quiz at the end of the lecture Dikmen and Bahadır (2021). reported that, although students can perceive homework negatively, if the work set is functional, relevant to the content of the course, and used to support formal education rather than a stand-alone approach, they can be more engaged in the learning process. Indeed, Konrad et al. (2021) reported that nursing students who were tasked with putting content learned in class into practice at home (conducting a physical assessment on family members) resulted in a sense of pride, as they were able to share what they were learning in college with their loved ones. In addition to homework, nursing students' engagement in learning can be achieved by using a variety of techniques to augment traditional lecturing, such as case studies, video-based demonstrations, online/forum discussions, and PowerPoint slides which use a combination of pictures and animations (Bixler et al., 2021; Cantey et al., 2021). There are times when there may be no choice but to deliver content asynchronously. It is important that, when tasked with delivering pre-recorded material, nursing educators do not rely on solely didactic processes and incorporate a variety of tools and strategies to capture students' attention and maintain their interest in the course.

Participants reported conflicting schedules and external commitments sometimes made it difficult to keep abreast of asynchronous content. Although there is evidence that some students appreciate the option to re-watch lectures at their own pace (Usher et al., 2021),

students in the current study felt pressure to keep up with the volume of asynchronous content presented to them. Being more disciplined with such content relates to self-regulated learning, where students demonstrate autonomy, identify their learning goals, and attempt to control their motivation and behaviours (Pintrich, 1995). Several authors have also noted that owing to COVID-19, it was sometimes very challenging for students to engage in self-regulated learning experiences (Hensley et al., 2021; Hong et al., 2021; Peixoto et al., 2021; Usher et al., 2021). Remote learning resulted in students becoming distracted and disengaged, particularly when it was observed that educators were putting in minimal effort (Hensley et al., 2021). Nurse educators need to support students in developing self-regulatory processes. This can be accomplished by setting achievable goals for students and encouraging self-evaluation (Alvarado, 2021). Furthermore, it is important that educators provide detailed explanations throughout pre-recorded lectures. Where clarification is required, educators should make themselves available to students (Pelikan et al., 2021). These approaches help to improve students' levels of motivation and reduce procrastination, often resulting in students becoming more committed to their learning experiences (Peixoto et al., 2021; Pelikan et al., 2021).

Limitations

This study has limitations. It is recommended that pilot testing of interview questions is conducted to enhance the rigour of a study (Baker et al., 2021); we acknowledge that pilot testing did not take place. Although a purposeful sample was selected to enhance transferability, only one cohort of student nurses in one school of nursing was included; participants from other schools in other regions may have other, more varied, experiences (Aul et al., 2021). Findings are based on self-reports of participants, and this may also be viewed as a limitation (Goodwin et al., 2019). Furthermore, potential selection bias should be acknowledged, as participants may have had personal reasons for volunteering for the study; those who chose not to volunteer may have had different views. Although it is recommended that field notes are taken to enhance data analysis (Baker et al., 2021), due to focus groups taking place online and issues such as poor connection and participants moving their position on the screen, it was not possible to maintain accurate field notes; this can also be viewed as a limitation of the study. Another limitation is the process of conducting focus groups in a non-traditional manner. An important aspect of focus groups is the interaction between group members (Baillie, 2019). However, such interaction may have been hindered as a result of participants not sharing the same physical space.

Conclusion

The increased need for online learning was unavoidable in the wake of COVID-19. This sudden shift meant that nurse educators were not always prepared for changes to the curriculum, and pedagogies employed may not have yielded positive results for learners. The current study indicates that, although nursing students prefer in-person learning experiences, certain formats of online learning are acceptable, provided interactivity is promoted and that there is a focus on actively engaging students. To this end, asynchronous approaches which do not incorporate interactive elements are not learner-centric, and educators should use these with caution. As more opportunities arise to engage with online pedagogies for undergraduate nursing students, it is recommended that further research is conducted so that there is a robust evidence base to support educators in their choices. This is of particular salience given the potential for a return to online learning in the event of future waves of the COVID-19 pandemic or other catastrophes that may prevent in-person teaching.

Declaration of Competing Interest

The authors have no conflict of interest to declare.

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