Preregistration adult nursing students' experiences of online learning: a qualitative study

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Because of the rise of digital technology and the arrival of the internet in the 1990s (Gagnon et al, 2013), online learning (OL) has evolved and been successfully incorporated and expanded in many areas, including private, public, corporate and educational settings (Salyers et al, 2014). OL has gained global momentum over the past 10 years, especially within higher education (HE) (Taft et al, 2011).

A general definition of OL is learning that is supported using information and communication technology (Moule et al, 2011). Advocates of OL suggest its constructivist pedagogy and student centredness complement the way in which adults learn (Yoo and Huang, 2013). OL is flexible and promotes deeper levels of learning (Webb et al, 2017). Despite these benefits, several problems are associated with OL, including poor accessibility, a lack of computer literacy and social isolation (Jokinen and Mikkonen, 2013).

Undergraduate nurse education incorporates theory and knowledge, which are applied to real-life situations (Smith et al, 2009) and it is traditionally conducted in classroom settings (Rutt, 2017). Academic theory is applied and consolidated through learning on placement with supervisory support (Nursing and Midwifery Council (NMC), 2018a). UK preregistration nurse education is complicated further by regulatory body demands governing the proportion of theoretical and practical elements within the curriculum (NMC, 2018b). Both internationally and in the UK, graduating nurses need to be clinically competent, possess critical thinking and decision-making skills (Jokinen and Mikkonen 2013) and be able to reflect, integrating learnt theory into their clinical practice (Rigby et al, 2012).

Because nurse education is complex, having to include professional, regulatory, theoretical and clinical components, using OL in the curriculum can be challenging (Smith et al, 2009). Despite this, OL has the potential to equip students with the skills, knowledge and attributes required of the profession (Schnetter et al, 2014), enhancing and enabling transferable skills to be applied within their clinical practice. Within pre- and postregistration nurse education, OL has increasingly been incorporated over the last decade (McCutcheon et al, 2015); this educational strategy is supported by the latest NMC standards for preregistration nursing (NMC, 2018b), which have an increased focus on technology applied to teaching and

ABSTRACT

Background: Online learning (OL) is widely used in UK preregistration nursing programmes and the latest Nursing and Midwifery Council professional education standards state digital technology must be embedded in the curriculum. An exploration of preregistration adult nursing students' experiences of OL considers how technology supports learning theory and practice, and assists in designing and delivering effective OL in future programmes. Aim: This study aimed to explore preregistration adult nursing students' OL experiences. Method: Two focus groups with students were held and thematic analysis carried out. Findings: Three main themes emerged regarding OL: advantages, disadvantages and preferences. The main advantages included time, accessibility and convenience, being able to revisit learning and the variety of approaches. Disadvantages included inadequate communication, support and interaction. Students preferred an adequate balance of OL with traditional teaching, more communication, synchronous OL, preparation and support. Conclusion: OL is valuable to adult nursing students, providing convenience and flexibility. While it has advantages, the disadvantages and preferences require addressing to ensure future programmes are effective and meet nursing students' requirements.

Key words: Online learning ■ Preregistration nursing ■ Adult nursing ■ Virtual classroom ■ Nurse education ■ Social isolation ■ Experiences

learning to equip and prepare student nurses for clinical practice in the 21st century. The recently introduced NHS *Long Term Plan* (NHS, 2019) also emphasises improvement in the use of digital technology and data by NHS staff.

Despite the many attributes of OL, McCutcheon et al's (2015) systematic review found minimal evidence regarding its impact, particularly from the student's perspective. Student experience is a key performance indicator for UK universities (Department for Business Innovation and Skills, 2016) in terms of recruitment and retention, and Karaman et al (2014) suggest higher education institutions (HEIs) should consider how satisfied learners are with OL to evaluate if it is effective and meets students' requirements.

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Box 1. Focus group discussion schedule

Introduction

Introduce the topic under investigation, confirm consent, outline the procedure (which includes maintenance of confidentiality) and recording, and establish ground rules

Warm-up question

Ask group members to introduce themselves if they do not know each other

Introductory questions

Can you tell me about your experience of online learning during your nursing programme?

Key questions

- Can you tell me more about whether online learning has supported your learning?
- Can you tell me if online learning has supported your practice learning?
- Can you tell me about your experiences of accessing online learning?

Closing questions

All things considered question

Ask the group what they consider to be the most important issue that has been discussed in the focus group

Final question

Ask the group if there is anything else they would like to add or if there is anything they feel has been missed out or have had no opportunity to discuss

Box 2. Types of online learning experienced

- Virtual classroom (a collaborative online learning environment conducted synchronously)
- Elsevier Clinical Skills
- E-tivities online learning activities
- Flipped learning
- Google Docs
- Library resources and NELSON (Northampton Electronic Library Search Online) database
- Pebblepad (online workbooks)
- safeMedicate (online drug calculation software)
- NILE (Northampton Integrated Learning Environment)

Because of the increased use of OL in HE and nursing programmes and the lack of current literature on it, there is a need to consider preregistration nursing students' experiences of OL and if it has supported their learning and development.

Methods and methodology
Research aim

The study aimed to explore third-year preregistration adult nursing students' experiences of OL.

Qualitative methodology, specifically a descriptive phenomenological approach, was adopted for this study to explore and describe the OL experience of participants (Jones, 2015) as phenomenology is concerned with exploring the pure essence of the lived experience (Abalos et al, 2016).

Sampling and recruitment

Purposive sampling was adopted for this study to ensure participants had a similar amount of experience of OL and to create a homogenous group. The inclusion criteria were that

participants had to be preregistration adult nursing students in their final year of study and had participated in at least one type of OL.

Final-year preregistration adult nursing students who were repeating academic modules were excluded from the study as they would not have had the same exposure and experience as those who remained continuously on the programme.

A total of 12 participants of different ages and both sexes responded to advertising in the university campus via posters and an announcement on the students' virtual learning environment (Northampton Integrated Learning Environment (NILE), and were recruited to the study as they met the inclusion criteria. They were fully informed about the study's aim, purpose and process and informed consent was obtained via a participant information sheet.

Data collection

Although an interview could have been used, two focus groups were employed to address the research question and these were facilitated by the researcher.

The rationale was that this approach would be an effective strategy as this would allow the researcher to consider descriptions by participants who had a common experience of using OL as part of their course. The author was also interested in exploring the interaction between group members and how this may influence discussion (Mishra, 2016), which could not have been achieved had individual interviews been adopted.

According to Jones (2015), focus group methodology is not conducive with a phenomenological approach, which focuses on the individual experience. However, Bradbury-Jones et al (2009) consider focus groups can be conducted within phenomenology provided that individual experiences can be heard among group interaction, and this can bring beneficial additional dimensions.

The focus groups were conducted in an accessible, quiet and comfortable location groups at a mutually convenient time for participants. Based on people's availability, seven participants were allocated to one focus group and five to the second group. Ground rules were established before they started (Braun and Clarke, 2013).

A discussion schedule was employed (*Box 1*) to guide discussion, provide focus and maximise data collection; it was linked to the study's aim and research question (Redmond and Curtis, 2009). The focus group was audio recorded.

Data analysis

Participants' experiences from audio recordings were transcribed verbatim to ensure accuracy (Braun and Clarke, 2013). The researcher used thematic analysis to generate themes from the data collected, congruent with a descriptive phenomenological approach (Grbich, 2013).

Ethical considerations

To protect researchers and participants from harm (Flick, 2014) ethical principles should be addressed and applied explicitly to primary research (Silverman, 2013). An ethics application was submitted to and approved by the university's research ethics committee.

Findings

Three main themes were identified from the data collected: student experience of: the advantages of OL; the disadvantages; and preferences about OL.

Theme 1. Student experience of the advantages of OL

The variety of OL participants had experienced (*Box 2*) was highlighted as an advantage in supporting practical and academic learning. While no consensus was reached regarding an overall preference, the virtual classroom (a collaborative online learning environment conducted synchronously) was identified as valuable, with one participant commenting:

> **'An interactive virtual classroom, which I really loved—it was probably the best online learning that I've done.'**
>
> *Participant 12*

Agreement from others indicated that the virtual classroom conducted synchronously with lecturers promoted feelings of security and made people more confident about asking questions. Participants agreed that online clinical skills modules and workbooks helped students apply academic learning to practice. Identifying this link between theory and practice was beneficial, aiding consolidation of these skills, with one participant stating:

> **'It explains things in more detail, so you understand it fully, so when we have [a] placement you know the theory behind what you are doing.'**
>
> *Participant 2*

Participants acknowledged that time and convenience were other advantages of OL:

> **'I think it's good in the fact that if it's online learning you can work around your own schedules—you can fit it in when it's convenient with you.'**
>
> *Participant 7*

Being able to access OL from any location at any time was viewed as advantageous as it enabled the students to revisit and review learning. Participants said on occasions they retained only some information during a traditional lecture whereas accessing the virtual learning environment meant lecture information could be revisited, reinforcing learning.

This repetitive element of the online drug calculation software package was also considered favourable in aiding revision and developing skills. Returning repeatedly to OL was also found to be helpful for those with a learning difficulty:

> **'Cos I'm dyslexic as well, umm, having, you know, that accessibility whenever and if you wanna watch it, you know, repeat it as many times as you want.'**
>
> *Participant 6*

Participants stated another advantage was that OL personalised learning. Specifically, the safeMedicate online drug calculation software was deemed valuable as it allowed the students to complete learning at their own time and pace. Step-by-step learning approaches within the clinical skills modules were beneficial in suiting individual learning styles.

Theme 2. Student experience of the disadvantages of OL

While there were positive experiences, negative experiences were also noted, with several participants preferring face-to-face learning:

> **'It's just not for me at all. I would rather come in to uni and have that dedicated time.'**
>
> *Participant 7*

Some participants attributed their negative experience to a lack of communication and interaction with their peers when online. Others stated they valued peers' and lecturers' visual presence and felt the classroom was more beneficial to learning through the dialogue and built rapport occurring in that environment. One participant stated:

> **'I think you get a wider range of knowledge and sort of viewpoints from an actual classroom lecture and discussion.'**
>
> *Participant 9*

Age was cited by some mature participants as a barrier to OL experiences:

> **'I do feel at a bit of a disadvantage with being that little bit older, and it counts.'**
>
> *Participant 1*

This perception was given as a reason for preferring the classroom; however, younger participants also preferred face-to-face learning, suggesting age was not the only barrier.

Participants also mentioned that home and family commitments caused distractions, detrimentally affecting their ability to complete OL.

Motivation was highlighted as important and a lack of it was often a barrier to OL; self-discipline and organisational skills were considered central to OL. Motivation to complete OL depended on whether participants perceived it as valuable in complementing face-to-face learning or when it was mandatory, with one participant stating:

> **'I only ever did the E-tivities when I knew that we were going to discuss them in class. I know that's bad, but I think that kind of like, right, we've got to discuss this in class tomorrow, that's what the topics gonna be on, I'd better do it.'**
>
> *Participant 9*

Another disadvantage of OL was accessibility, although this issue has previously been considered a benefit. Problems with OL access were experienced by some participants and were often related to the quality and reliability of internet connections:

> **'If you have a bad internet connection at home, it's terrible.'**
>
> *Participant 4*

Participants found poor connection when using the virtual classroom adversely affected their participation. Computers were preferred to mobile devices in general as they allowed people to view OL platforms fully, but poor connections could limit their use.

The lack of social interaction with peers and lecturers was considered a disadvantage of OL, causing participants to experience and describe feelings of loneliness in the OL environment:

> **'I find that with the online learning, you can go a long time without actually seeing any of your other students, especially if you're on placement, so then you can start to feel quite alone with it because you're not coming in to the classroom and having that discussion.'**
>
> *Participant 11*

Several participants felt isolation from spending a long time learning online reduced their confidence. Others highlighted that classroom interaction was important to improve their communication skills—an area perceived to be lacking with OL. Furthermore, participants stated that a reduction in human contact was a negative factor of OL as they valued and considered this important when completing a university programme. The student-lecturer relationship was perceived as missing, and concerns were raised regarding the impact of this on students who were vulnerable or those experiencing problems who could go unrecognised in the OL environment.

Participants also felt that OL limited opportunities for shared learning, interaction, peer support and the development of relationships:

> **'I think you really miss out on making [and] even building relationships and, like, making memories if you're sat at home behind a computer.'**
>
> *Participant 9*

Several participants considered a lack of support as a disadvantage of OL compared to classroom learning, where support was available and accessible. Group members said they valued relationships with their lecturers and opportunities for clarification:

> **'I think sometimes that, when we are in lectures, I do appreciate having the interaction of the lecturer being asked questions.'**
>
> *Participant 2*

Theme 3. Student preference regarding OL

Participants identified several preferences for OL, concluding they wanted an adequate balance and mixture of OL and face-to-face sessions. They felt OL should not be a substitute for classroom learning but complement and support it.

> **'I also think that, as we emphasised earlier on, it would be useful if online learning was used as a supplement not as a replacement.'**
>
> *Participant 5*

Although the students mentioned feelings of loneliness, isolation and loss of social interaction with OL, conversely, the virtual classroom could also support interaction with peers and lecturers. Some participants said that hearing others but not necessarily seeing them promoted engagement:

> **'You also had the audio aspect of it as well, didn't you, which kept you engaged.'**
>
> *Participant 11*

Group members also said that if OL engagement was monitored, assessed or mandatory, this would motivate them to complete set activities:

> **'For me, I would think that, umm, if you had a time limit that you do at, say, like here we have to swipe in. If you had where you are monitored actually going online and, say, you've got from this time to this time to do this piece of work, you're like you have to do it, don't you?'**
>
> *Participant 10*

Lecturer feedback required addressing as this was felt to be lacking online. In terms of support required, some participants said lecturers made assumptions regarding previous OL experience and computer literacy:

> **'I think it would be good if the lecturers didn't maybe just assume that everybody had the same level of computer skills.'**
>
> *Participant 1*

Participants said more support was required with OL tools such as the virtual classroom, and suggested that teaching sessions beforehand to increase confidence, motivation and engagement would be beneficial.

Discussion

The variety of tools, convenience, accessibility and opportunities for individual learning and repetition were cited as advantages of OL. Specifically, the virtual classroom was viewed as interactive and boosted confidence with using OL (Killion et al, 2011), while online skills modules and workbooks supported the integration of theory into clinical practice, enriching and developing deeper learning (Hanson, 2016).

While participants highlighted certain OL tools as beneficial, a preference for an appropriate balance of face-to-face teaching and OL was expressed (Telford and Senior, 2017). Participants also revealed that motivation to engage was influenced by whether they were monitored to complete OL or if OL was compulsory; some students completed sessions only if this was required for subsequent face-to-face sessions.

This study's findings and the evidence indicate that OL needs to be meaningful, and the aims and objectives of learning and how these align with their programme should be made explicit to encourage participation (Hanson, 2016). A complementary balance of OL and traditional methods to maximise student learning and experience are required.

Flexibility and convenience were acknowledged as advantages of OL (Carter et al, 2016). However, while participants valued

OL's flexibility, some students felt distractions such as academic assessments and family commitments affected their ability to complete OL. Professional requirements governing nurse education (NMC, 2018b) require adult nursing students to combine academic study with practice elements. Students often work full time in clinical practice while managing personal commitments. Although there was some disparity among participants regarding OL's convenience, this study's findings suggest OL is an effective, flexible approach to teaching and learning, which should be integrated into adult nursing programmes.

Being able to revisit OL sessions was regarded as beneficial by participants (Barker et al, 2013) in providing opportunities to revise topics and generating self-paced and individualised learning (Barratt, 2010). The students valued this individualistic approach, considering that it encouraged more autonomy and responsibility for their learning (Smyth et al, 2012), a desirable quality for graduate nurses (Vittrup and Davey, 2010). Furthermore, nurses need to engage with learning, and be self-directed, lifelong learners (Rigby et al, 2012), ensuring their practice is current and evidence based (NMC, 2018c). OL has been well established as facilitating student-centred learning (Kala et al, 2010) and OL in adult nursing programmes enables autonomy and promotes self-direction. Moreover, the way in which OL has the capacity to suit a variety of learning styles (as participants mentioned), and has the potential to enable inclusivity and meet the needs of students with differing learning requirements (Higher Education Academy (HEA), 2013).

Although participants cited accessibility as a valuable aspect of OL (Akimanimpaye and Fakude, 2015; Chong et al, 2016), conversely, several found this was not the case, with poor internet quality and incompatible mobile devices hampering participation (Ulrich et al, 2014). Several therefore indicated that OL could be unreliable and difficult to access and use (Moule et al, 2010; Smyth et al, 2012). Consequently, this study's findings and the evidence suggests that OL access must be addressed by HE providers to ensure all adult nursing students can contribute and experience OL.

Participants highlighted age as well as a lack of communication, interaction and support as barriers to OL, which meant that several of them preferred the traditional classroom environment (Hanson, 2016). Some mature participants thought age and lack of experience hindered their engagement with OL (Moule et al, 2010). Despite the connection between age and experience, some younger participants who were confident with technology still preferred the classroom environment; they said the loss of social interaction with peers meant they preferred the classroom, which suggests that classroom learning supports social learning (Bandura, 1977). This is an interesting finding because younger students are considered to be IT literate, confident and experienced with OL (Earle and Myrick, 2009). There are disparities in findings about age being a barrier to OL as other studies suggest mature students engage and perform better than younger students (Ransdell, 2010). However, motivation could be an influencing factor here, rather than the teaching and learning strategy of OL (Sheard, 2009).

Loss of interaction with peers and feeling lonely were considered disadvantages of OL. Conversely, the virtual

Table 3. Recommendations
A balanced variety of online learning (OL) approaches that complement face-to-face learning should be adopted
OL tools that help students apply theory to clinical practice should be included
Higher education providers should address connectivity problems and consider how these affect engagement with OL
Students should be adequately prepared for OL
Synchronous OL tools should be provided, such as the virtual classroom

classroom may increase communication and contact with others because it allows synchronous interaction and collaboration with peers and lecturers (Banna et al, 2015). Although not all participants had experienced the virtual classroom, those who had acknowledged that it encouraged interaction between peers and lecturers, which they felt was missing with other OL approaches (Andrew et al, 2015). Therefore, this study's findings and the evidence indicate synchronous OL tools with lecturer input should be included in adult nursing programmes to reduce loneliness and improve social interaction.

Participants perceived an absence of interaction between themselves and lecturers using OL (Ireland et al, 2009). They thought opportunities to ask questions and clarify understanding online were lacking, and they were missing the face-to-face element and lecturers' expertise (Green and Schlairet, 2017). Shared learning and peer support, considered to be vital, were not always apparent with OL (Moule et al, 2010). The students said that while there were some opportunities for groupwork and peer support online, some group members had problems engaging with OL. These findings therefore indicate that synchronous OL such as the virtual classroom boosts relationships, support and communication and should be incorporated within adult nursing programmes.

The group members thought OL lecturer feedback was lacking and, if provided, could enhance interaction and learning. Provision of timely feedback could make OL completion more meaningful and enable students to envisage its true purpose in supporting and improving learning (Smyth et al, 2012).

Participants also acknowledged that clearer communication and support in undertaking OL could reduce confusion and lessen anxiety, suggesting that detailed instruction and guidance could build confidence in engaging with OL (Swift et al, 2016). Group members said that more preparation for OL activities such as the virtual classroom was imperative (O'Flaherty and Laws, 2014). This study's findings and the evidence therefore recommend that preregistration adult nursing students should be provided with adequate OL preparation, clear communication and support to improve confidence and experiences (Karaman et al, 2014).

Recommendations

In exploring preregistration adult nursing students' experiences of OL, this study and existing evidence identify several recommendations, which are set out in *Table 3*.

Limitations

Limitations of this study included the small number of participants so the findings may not be generalisable. Furthermore, as the inclusion criteria included that students must have participated in at least one type of OL, the findings are not specifically related to one single OL approach, so further research is needed.

The researcher's inexperience in facilitating focus groups and conducting data analysis can also be viewed as limitations of this study. While bias was not evident or intentional, several participants were known to the researcher, which may have affected their motivation to participate and could be considered as a limiting factor.

Conclusion

It is likely that the use of OL in HE will increase because it enhances learning and teaching. In healthcare education, governmental guidelines rather than other issues influence the use of OL to enrich learning and improve patient outcomes (Department of Health, 2011) and, within nursing, the latest professional standards for preregistration nurse education state that it is essential to incorporate technology in the curriculum (NMC, 2018b). Consequently, supporting preregistration nursing students to use technology within their education would assist and prepare them for future practice.

The quality of student experience is a priority in HE (HEA, 2014); this is evaluated via the Teaching and Excellence Framework (TEF) and the National Student Survey (NSS) as well as within nursing programmes in the UK because of governmental changes (Department of Health and Social Care, 2017). The TEF and NSS are key quality drivers that consider outcome measures of teaching quality including the use of digital technology to reflect the student voice.

CPD reflective questions

■ How can nurse educators reduce potential social isolation in online learning environments?

■ How can nurse educators ensure there is a balance of online learning with traditional approaches?

■ What strategies can nurse educators employ in the online learning environment to support adult nursing students?

Nursing students in the UK now fund their academic programmes and are keen to speak up about their quality of their educational experiences. HEIs need to be more responsive to student nurses, ensuring that education delivery—in this instance OL—is student centred, and continuously evaluated and improved. **BJN**

Conflict of interest: none

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