

Nursing students' engagement in online learning

ABSTRACT

Reliance on digital technology may have implications for our social and economic wellbeing, including factors such as health, environmental quality, social interaction, and educational levels. Although there may be concerns, it is important to acknowledge that digital technology also offers immediate, cost-effective, and accessible solutions that are transforming various services. The COVID-19 pandemic, through the disruption of educational systems worldwide, has accelerated the transformation of higher education, leading to changes in the way it is perceived. However, there is a lack of understanding regarding the relationship between digital poverty, digital literacy, and students' online experiences. This article aims to explore the engagement of nursing students in online learning post COVID.

Key words: Teaching ■ Nurse education ■ Online learning ■ Student engagement ■ Learning styles

The onset of COVID-19 caused a considerable disruption to educational systems globally (United Nations (UN), 2022), accelerating the transformation of higher education (HE) and a move away from how it has traditionally been perceived. Nurse education has undergone unprecedented levels of change, including a shift from practice placements to virtual simulated placements and moving teaching online (Tomietto et al, 2020). Educators and students alike had to quickly adapt to the new educational landscape, against the backdrop of the greatest global health crisis of the century (Naseer et al, 2023). Student engagement in online learning became a key focus of attention for educators, alongside difficulties in access to and understanding how to use digital technologies (Wang et al, 2022). The impact of COVID-19 on the discipline and profession of nursing should prompt an evaluation of best practices in engaging learners, and encourage nurse educators to endorse quality student outcomes through meaningful and engaging activities (Wolf, 2023) and flexible and adaptable learning approaches (Imran et al, 2023). Student engagement and retention are inextricably linked (Li and Xue, 2023; James et

al, 2024), and with traditional methods of teaching not deemed as effective post COVID (Imran et al, 2023), nurse educators must embrace new digital technologies to shape the workforce of the future (NHS England, 2023).

Student engagement

Student engagement is a term used to describe the degree of interest and enthusiasm that students show in the pursuit of learning, and the principle that learning improves when students are engaged (Axelson and Flick, 2011). It is also referred to when educators include students in quality assurance and decision making processes, for example, student advisory committees advising on the design and delivery of a module or feedback for a module assessment (Quality Assurance Agency, 2018). Ashwin and McVitty (2015) argued that student engagement cannot be subject to one meaning, as it derives multiple layers and as such policy makers should be cautious when categorising it as a benchmark for learning and teaching excellence. Furthermore, MacFarlane and Tomlinson (2017) suggested both rights and autonomy of students should be considered when assessing the level and impact of student engagement, and the policy narrative at an institutional level should be challenged. More recently, Headleand (2024) further assessed the term student engagement, labelling it 'nebulous and inconsistent' due to its multiple interpretations and subsequent implications.

In broad terms student engagement has complex, multifaceted definitions, often referred to in the UK in terms of governance and pedagogy (Buckley, 2014) and the USA as a transaction between student interest and how connected students are to their class and institution (Axelson and Flick, 2011). The literature suggests there are three distinct yet interrelated sub-categories that affect engagement: cognitive, affective, and behavioural (Cooper, 2014; Fredericks et al, 2016; Payne, 2017). Cognitive refers to the learning invested by the student; affective examines feelings of belonging felt by the student and the value they bring to the teacher and class; and behavioural refers to student participation, conduct and interest (Cooper, 2014; Renninger and Bachrach, 2015; Nguyen et al, 2016; Payne, 2017). Measuring student engagement via contextual factors alone is insufficient; socioeconomic

influences, alongside cognitive, affective, and behavioural is paramount when measuring academic successes, as these can influence and impact student engagement (Quin, 2017).

In terms of student satisfaction and engagement during the COVID-19 pandemic, there is conflicting evidence (Bowser et al, 2022). Both Lengetti et al (2021) and Wallace et al (2021) reported nursing students were satisfied with online learning in situations where educators were comfortable in using remote learning platforms. Whereas, Gaffney et al (2021) found that the transition for nursing students was difficult, despite the confidence and engaging activities presented by educators. Likewise, Leigh et al (2021) reported that nursing students perceived online clinical experiences as non-conducive to their learning. Moreover, in a focus group study of undergraduate nursing students' perspectives of online learning, Goodwin et al (2022) found that although participants preferred face-to-face learning, they suggested that, when implementing online sessions, synchronous was more favourable than asynchronous since it was live, and further focus should be on ongoing formative assessments to engage students. Despite this, for many neurodivergent students, asynchronous learning can be beneficial, if supplemented with synchronous learning (Dahlstrom-Hakki et al, 2020).

The impact of online learning

Online education is associated with adult learning and guided study. Ghasemi et al (2020) argued that online technology is vital in supporting the educational needs of nursing students and in promoting engagement. Similarly, Turner et al (2018) suggested the advancement in technology has transformed traditional education and teaching methods. Yet engaging nursing students in academic environments and clinical settings has long been a challenge, without adding digital technology into the mix. Lee et al (2018) suggested that the internet is key to creating educational strategies and nursing students, in comparison with other disciplines, are more motivated and therefore more engaged in activities (Ghasemi et al, 2020). More recently, Reid et al (2023), in a narrative review of the literature in health, education and nursing, suggested that digital literacy is an essential requirement for undergraduate nursing students, as not only does it feature in nurse education but it

is also the clinical setting, through telehealth, electronic health records, prescribing systems, and mobile health applications (Vasilica et al, 2023). However, the notion of digital natives, those that adapt well to technological advancements and would generally find online learning easier due to their age and exposure to digital platforms, for example mobile phones and computers, is a misconception. Furthermore, Reid et al (2023) postulated that assumptions based on age, should be ignored and that digital literacy skills must feature in undergraduate nursing curricula.

Digital technologies are reshaping the global economy, through how people communicate and access information. The role of digital technology is integral to HE and a significant feature of the student educational experience. 'Quality education' is one of the UN sustainable development goals for 2030, to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (UN, 2022). Haleem et al (2022) stipulated that digital technologies are essential in achieving that goal, through their application in education. Other authors have cited the pandemic as a catalyst for change and suggested that it has improved accessibility and inclusivity (Zhao, 2020; Dudar et al, 2021; Seale et al, 2021; Joshi, 2023). However, there is a visible digital divide that not only exists within the economically developing countries, but exists in richer nations, such as the UK. The House of Lords Communications and Digital Committee (2023a) published a report on digital exclusion that highlighted the lack of a strategy to tackle the problem, and it was clearly unimpressed by the official response to this report. Despite the UK Government's (2023) admission that digital exclusion exists, affecting millions of people in the UK, within its 15-page promise to ensure 'that no one is left behind in the digital age' there was still no clear direction on how it would seek to combat these inequalities (House of Lords Communications and Digital Committee, 2023b).

The reliance on digital technology can indeed have implications for social and economic wellbeing, including factors such as health, environmental quality, social interaction, and educational levels. Although there may be concerns, it is important to acknowledge that digital technology also offers immediate, cost-effective, and accessible solutions that are transforming various services. However, there is a lack of understanding regarding the relationship between digital poverty, digital literacy, and students' academic experience (Office for Students, 2020; 2022).

To sustain the education system during the pandemic, schools, colleges and universities were forced to move lessons online. Three years on it has increased digital literacy and has expanded the wider educational community, connecting students and educators world-wide. Education in a post-COVID world has seen the academic community embrace technological changes to the curricula, with some institutions, lecturers and students faring better than others.

Recently published literature offers an exploration of factors affecting student engagement in online learning. Martin et al (2023), in their mixed methods longitudinal study of preregistration nurses in the USA, found that online delivery of teaching content had a negative impact on student learning (24.6% of students reported a negative impact) and student engagement (35.9%), whereas face-to-face and hybrid learning reported higher levels of student engagement. This was part due to the students being pressed to engage in online learning that was inconsistent with their previous knowledge of educational learning platforms, despite some universities and colleges already offering distance learning courses before the pandemic. Moreover, distance learning courses are more widely offered following the pandemic, with students finding distance learning an attractive option, due to its flexibility and convenience, which warrants further consideration by HE institutions, in terms of additional income and student retention. Mariam et al (2023), in their study of business degree programmes at 22 leading business schools in Pakistan, suggested there has been a shift from student resistance to an acceptance of hybrid learning where two variables must exist: quality of online teaching and immersive learning experience. Whereas Parida et al (2023:8), in their study of academic perspectives of student engagement in online learning in Australian universities, found 'technological hurdles, administrative negligence, professional development initiatives and policy ambiguities' hindered student online engagement. On the other hand, they posited, if students incorporate the cognitive, affective, and behavioural streams of engagement in conjunction with 'well-structured courses' then they will be successful in their learning journey.

Future directions

Nursing education continues to evolve, from the Nightingale teaching schools, which lacked consistency, to pre-registration nursing programmes with set standards of professional conduct and accountability, as defined by the Nursing and Midwifery Council (2023). Pedagogical approaches employed by nurse educators have undergone a period of transition: on-the-job training; traditional lecture-driven education; active and participatory teaching and learning and simulation (Crookes et al 2013) and the pivotal but forced move to online delivery (Bao, 2020). Bail (2007) suggested the essence of nursing is that of caring, and caring is demonstrated by engagement, and is thus a vital component of nursing.

Although studies in student engagement have identified that engagement is essential to the learning process, the theory of constructivism supports the notion through the transfer of responsibility for learning from the educator to the student. Lindquist and Long (2011) argued that the use of technology as a cognitive tool in nursing education can enhance both clinical reasoning and reflective practice skills for students. In support of this, Baron (2017) asserted that a shift from didactic teaching to clinical reasoning skills will support the student in their future practice. Furthermore, Haleem et al (2022) suggested that using digital technology in the classroom is time-efficient and can help students to prepare for lifelong learning. However, success in online learning requires strong instruction from the educator (Hollister et al, 2022) and should encompass a hybrid approach of in-person, synchronous and asynchronous learning (Dahlstrom-Hakki et al, 2020). The use of learning technologies (K4) and acknowledgement of the wider context in which HE institutions operate (V4) is cited in the 'Professional Standards Framework for teaching and supporting learning in higher education', recognising the implications for professional practice (Advance HE, 2023: 5). Innovative and good practice in HE is recognised by the Staff and Educational Development Association (SEDA), which provides a support platform for educators working within and developing learning communities (<https://www.seda.ac.uk>). Combining these HE platforms for educators supports curriculum development and improves student outcomes, although it does not address the issue of unsuccessful transaction of knowledge of teaching and learning tools, from educator to student. Krohn (2020) argued that universities who had invested time and money in their digital learning experience pre-pandemic will be rewarded with positive and successful student engagement and learning.

Additionally, by investing in redesigning the curriculum in a digital age, students can expand their knowledge beyond the walls of an outdated lecture theatre. Current research on student engagement and use of digital technology is not wholly persuasive, as it does not determine individual circumstances, wider implications of cognitive, affective, and behavioural complexities and the socioeconomic determinants. There is a need for ongoing discussion regarding modules and programmes, and collaboration with students on curricula may improve the student engagement process. Universities are redesigning learning spaces, and those not investing purposefully in their digital learning experience will be apparent to students and educators, falling short of educational expectations, and this may influence the recruitment and retention of nursing students.

The shape of the post-pandemic pedagogical landscape is not clear, yet institutions will need to strategically support, enhance, and evaluate it. There is an overarching need to improve digital literacy from a faculty perspective; it must add value and the value should be visible. Teaching students to source information digitally and critically appraise that information is one step. A combination of scholarly research-informed evidence and empirical study of nursing students' engagement in using digital technologies will support efforts to find ways to improve engagement, retention, and successful graduate as outcomes. Universities must embrace future technologies such as augmented reality (AR), virtual reality (VR) and artificial intelligence (AI) to engage students in a world driven by technology and gaming, expanding on simulation-based learning (patient simulators, virtual environments and role playing). Nurse educators will need to quickly adapt to new digital technologies in an effort to offer experiential learning opportunities that align with the post-COVID landscape (Martin et al, 2023) and to improve student engagement and experience, educators must offer options based on individual needs (Ratten, 2023) and HE institutions must support educators in designing and delivering successful programmes.

The disruption to education caused by the global pandemic is glaring. Challenges and barriers to education remain, despite the efforts of the United Nations adding quality education to the Sustainable Development Goals (SDGs). The onus is on

local government to commit to moving forward and keeping up with global advances, and to address inequalities to prevent them from becoming worse. Furthermore, nurse educators and students have quickly adapted to new modes of learning despite the forced nature of the change, yet there remains a lack of shared understanding of the benefits and disadvantages of nursing students' engagement with digital technologies in online learning. Often in HEIs, Technology enhanced learning (TEL) teams will be set up to support a range of learning technologies for teaching, learning and assessment. However, these teams are often overstretched, or the uptake from educators is poor. Despite those difficulties, nurse educators must realise the potential of technology within an educational setting and embrace digital technologies to provide engaging content for students.

With an emphasis in online learning in HE and more innovative ways of using technology in education and the workplace, we need to consider how technology fits within an educational framework, and within a framework of engagement.

Although online learning has its benefits, in terms of flexibility and convenience, it is lacking in other aspects. Literature suggests a hybrid approach of face-to-face and online learning is feasible, yet there is a need for further research as to its effectiveness specifically in nurse education, alongside issues of digital poverty, digital literacy, and student engagement. In addition, HEIs should consider establishing distance learning courses, alongside the more traditional route offered to students, to incorporate student experiences of online learning in a post-COVID world.

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KEY POINTS

- Digital literacy is an essential requirement for nursing students, nurse education and clinical settings
- Higher education institutions (HEIs) need to accept rather than fear digital technologies including artificial intelligence (AI) to transform and evolve teaching methods and shape the nursing workforce of the future

- It is important to apply cognitive, affective, and behavioural models to measure student engagement, and continue to adapt teaching methods.
- HEIs should embrace digital technologies and offer online, distance learning where possible to attract students and support future investments in nurse education.
- HEIs ought to invest in ‘technology enhanced learning’ teams, in supporting their staff and students, and do this in a meaningful way

CPD reflective questions

- What factors might affect student engagement and academic success? Consider some of the benefits and barriers of in-person and online learning options.
- How might teachers be encouraged to embrace change? What support might be needed to offer different learning styles?
- How do digital technologies feature in your professional learning? Are there others that could be incorporated?

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