

An Interpretative Phenomenological Analysis of the Experience of Nursing and Midwifery Students and Lecturers with Teaching and Learning in Digital Spaces

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ABSTRACT

Introduction

While a significant body of knowledge has explored teaching and learning in digital spaces, limited attention has been given to the unique experiences of nursing and midwifery students and lecturers. Unlike other disciplines, nursing and midwifery education integrates substantial practical components alongside theoretical content that equally require hands-on demonstration. This underscores the unique demand and challenges associated with delivering nursing and midwifery education in digital spaces. Hence, this study explored the lived experiences of nursing and midwifery students and lecturers in digital learning spaces.

Methods

This research methodology employed Interpretative Phenomenological Analysis as a design and conceptual framework for understanding the lived experiences of nursing and midwifery students and lecturers about teaching and learning in digital spaces. Data collection involved semi-structured, in-depth interviews with ten lecturers and ten students. Similarly, one focus group discussion was conducted with each of the participant groups, encompassing five students and lecturers. This is to gain a deep understanding of participants' lived experiences. Ethical approval was obtained for both the pilot and main study from the BCU ethical committee. Participants were nursing and midwifery students and lecturers at Birmingham City University, UK, recruited between July 2023 and February 2024.

Results

The lived experiences of individual participants revealed intricate situations encumbering nursing and midwifery lecturers and students, including adapting to digital spaces and adapting nursing and midwifery curricula to digital spaces. Their experiences also reflected diverse perceptions, preferences, and advantages of digital learning spaces, which determined their overall satisfaction and perceived effectiveness. Comparing the two participant groups enabled the identification of convergences and divergences, offering insights into possible strategies to improve outcomes. Some themes distinct to the lecturers include the increased workload associated with digital teaching and the fear of redundancy within the university. For students, it is the selective engagement with learning content and the confusion around the use of the terms 'hybrid' and 'blended' learning modalities. The shared experience of both groups revolves around three overarching themes, including challenges, opportunities and sentiments, which are critical areas of consideration to improve digital pedagogy and the overall teaching and learning experience.

Conclusion

This study acknowledges that while the challenge of adapting to digital spaces will diminish over time due to the higher chance of developing digital competence over the years, the complexities of adapting nursing and midwifery courses to digital spaces will likely persist. Instead of viewing digital learning spaces as a necessary substitute, it should be seen as an educational approach distinct from the classroom method, requiring its own pedagogical approach and conceptual framing.

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CHAPTER 1

INTRODUCTION

1.1 Chapter Outline

This chapter introduces the thesis focused on using an Interpretative Phenomenological Analysis (IPA) to explore the lived experiences of nursing and midwifery (N&M) students and lecturers about teaching and learning (T&L) in digital spaces (DS) at the School of Nursing and Midwifery, Birmingham City University (BCU), to identify ways to improve outcomes for N&M students and lecturers. The chapter begins by presenting a contextual background to situate the study within its broader academic and practical frameworks. The rationale for the study, establishing its significance and relevance, is then discussed. Following this, the broad and specific objectives formulated through an in-depth review of the literature to identify existing knowledge and gaps are outlined. The chapter concludes with an outline of the phases of the doctoral research, providing a roadmap for the reader.

1.2 Background

1.2.1 Nursing and Midwifery Education

Globally, N&M are old and well-established professions with histories intersected at different points. N&M are two distinct professions underpinned by different philosophies (Sommer et al., 2020). N&M education serves as the foundation for a qualified and competent N&M workforce (Maitanmi et al., 2024). The first regional education standards in N&M were established by the World Health Organisation (WHO) in 1998 (WHO, 2015). These standards, supported by the prototype curricula for nursing at the technical and professional levels, have been used across the WHO Eastern Mediterranean Region as nursing education has grown and advanced. In 2009, WHO published the global standards for the initial education of

professional nurses and midwives (WHO, 2009). Global standards were then incorporated into the regional standards. The International Council of Nurses (ICN) maintains that a standard is the desirable and achievable level of performance against which actual practice is compared (Kahan & Goodstad, 1999; Mrayyan et al., 2023).

N&M education in several parts of the world is either solely regulated by the professional organisation of the country or, in addition, by other specific higher education regulatory boards (Hu et al., 2020; NMC, 2024; Odetola et al., 2015; Ugochukwu et al., 2013). In the UK, Nursing and Midwifery is regulated by the NMC (NMC, 2024). While they are both regulated by the same body called the Nursing and Midwifery Council (NMC), they have different education and training, a different scope of practice and a distinct philosophy of care (NMC, 2019). The entry point is undertaking a degree-level education in an approved university program. There are four distinct fields of nursing in the UK: adult, child, mental health, and learning disability, while midwifery stands alone as a profession (Royal College of Nursing, RCN, 2020). These programs typically span three to four years for undergraduate degrees and combine theoretical and practical learning to meet the NMC's standards of proficiency (NMC, 2018; NMC, 2024). Postgraduate options, such as master's and doctoral degrees, allow for specialisation in areas like advanced clinical practice, research, or education.

The N&M curriculum across the globe is made up of learning components such as anatomy, physiology, pharmacology, ethics, and communication skills. Most of these modules are regarded as theoretically complex, requiring substantial practical demonstration (Arundell et al., 2024; Shen et al., 2024). Students are also posted to clinical areas in various healthcare settings, such as hospitals, community, and care homes, to gain hands-on experience (NMC, 2018; Manning et al., 2017). The integration of theory and practice is indicative of the profession's emphasis on holistic education to prepare students for complex healthcare roles.

Predominantly delivered through classroom modalities, demonstration laboratories and clinical environments, this approach highlights the diversity of N&M education.

1.2.2 Digital Learning Spaces in Higher Education

Several terminologies have been used in similar ways to depict digital learning spaces throughout educational research, including online learning, digital education, distance learning, virtual learning and e-learning. For example, Singh and Thurman (2019), in a systematic review, discovered 46 distinct definitions. Distance education or learning (DL) occurs in locations different from the teaching environment with unique technology, design and management (Bolliger & Wasilik, 2009; Tatlıhoğlu, 2024). This definition puts more emphasis on the learning environment rather than technology. In much of the higher education literature, online learning (OL) refers to education through the internet, with more emphasis on digital technology (Curran & Murray, 2008; Moore et al., 2011; Patel et al., 2023). In practice, OL comprise remote access to synchronous, occurring in real-time or asynchronous, which is self-paced (Miller et al., 2017). While this helps identify the mode of delivery, one of the major concerns of researchers is that OL has been used in many ways interchangeably with other terms to the extent that comparison across these meanings becomes difficult. This concern is affirmed by Bygstad et al. (2022). Conrad (2002) argued that OL is a modern version of distance learning due to advances in technology. Conrad's (2002) assertion, though still relevant in the contemporary literature, is still being contested by other authors (Guri-Rosenblit, 2005; Mady, 2024).

According to Car et al. (2019), supported by Kononowicz et al. (2019), digital education is the act of T&L via digital technologies, including diversified teaching methods such as offline learning, online learning (OL), specific games, mobile learning or virtual reality (VR). Virtual learning is another term commonly used in place of digital learning spaces to mean the use of computer-based learning spaces to simulate real-life interactions and delivery of learning

content (Chou & Liu, 2005; Patel et al., 2023; Piccoli et al., 2001; Wilson, 1996). In addition, e-learning is often considered a broad term for describing learning facilitated by electronic technologies such as computers and the internet to avoid geographic and professional limitations (Avelino et al., 2017a; Goyatá et al., 2012).

Despite the frequent use of these terms interchangeably within the literature, there is little agreement on the precise boundaries that differentiate them. Each term captures a specific historical, pedagogical, or technological emphasis, which has contributed to a wealth of ideas, but with some conceptual ambiguity. These distinctions show that each term presents a slightly different focus. Consequently, due to the overlapping practices and conceptual instability in the higher education context, it is reasonable and methodologically sound for this thesis to adopt “digital learning spaces” as an umbrella term. This choice admits the commonality of this phenomenon, centred on ‘technology-mediated education’, while allowing conceptual space for online, distance, virtual, digital and e-learning modalities without imposing too strict or rigid demarcation. In this sense, this study can engage with a variety of blended and digital modalities in higher education, while maintaining conceptual clarity and consistency.

1.2.3 Digital Education Before and Amidst the COVID-19 Pandemic

Digital learning spaces are not novel; they have evolved over the last century, originating from the mail-learning method, which involved some correspondence courses (Verduin & Clark, 1991). Then, Illinois Wesleyan College began to offer degree programs in what is now called distance learning (Emmerson, 2004). Digital education gradually began to gain recognition in the 1960s when computer-based training programs were introduced (Bersin, 2004). The rise of personal computers in the 1980s allowed educational institutions to deliver learning materials through storage devices like CD-ROM and later online in the 1990s through the World Wide Web (Harasim, 2000). With the broadband internet and advanced technology in the 2000s,

learning management systems like Blackboard and WebCT were developed to allow educational institutions to deliver online structured courses. (Bonk & Graham, 2012).

On March 11, 2020, the WHO declared the novel coronavirus (COVID-19) a pandemic (Cucinotta & Vanelli, 2020). This pandemic led individual countries to enforce several measures, such as national restrictions and social or physical distancing, to mitigate the spread and impact of the virus (Okondu et al., 2023). Virtual learning platforms became the most feasible option for educational institutions to maintain communication as well as educational activities. In developed countries, virtual learning is considered a very effective alternative to traditional learning, while in developing countries, digital learning remains a challenge because of the limited scope of internet services and related technologies (Zheng et al., 2020). Evidence has shown that digital T&L presents opportunities and challenges that traverse both developing and developed nations (Coad et al., 2023; Zhu et al., 2023).

In the UK, Higher Education Institutions (HEIs) adopted DLS to maintain educational activities amidst the COVID-19 pandemic restrictions. This presents significant benefits and challenges. For instance, the Joint Information Systems Committee (JISC) published several reports at various periods of the pandemic to reveal current issues within the UK universities. In all cases, DLS was reported as effective in sustaining educational priorities despite the challenges identified by students and educators who use it (JISC, 2020; JISC, 2021; JISC, 2022; JISC, 2023; Newman et al., 2019).

1.2.4 Open University Model of Digital Learning

According to Trait (2018), the terms open universities or distance learning universities are broad descriptors encompassing various purposes, practices and paths of development in different countries, with approximately 60 single-mode distance teaching universities globally. The Open University was established in the 1960s with distance learning at its core as a novel opportunity for individuals who, for various reasons, could not attend a campus-based

university (Gilbert & Baxter, 2025). At a time when the world was immersed in an analogue system of operation, the Open University gave legitimacy to distance learning (Guri-Rosenblit, 2019). Some studies have documented the education of nurses and midwives within the Open University scheme with variation in entry levels. While some of the programs serve as a top-up for diploma nurses to earn the BSc degrees, others admit individuals with clinical experiences, such as health care assistants already working in the care settings (Davidson et al., 2021; Dipo et al., 2024)

Over the last three decades, campus institutions have absorbed many of the innovative characteristics pioneered by open universities, which, according to Liu et al. (2025), have gradually weakened the distinctive status of open institutions in many national jurisdictions. However, the widespread emergence and adoption of digital learning technologies post-COVID-19 have further challenged the fundamental assumptions of many open universities' industrial models, as well as their logistical operations (Zuhairi et al., 2020).

Despite this setback, the Open University in the UK remains a key figure and a pioneering model whose influence cannot be overlooked in the field of digital learning spaces today. Its innovative design and pedagogical structure have set enduring standards for contemporary digital and blended learning modalities. Gilbert & Baxter (2025) clearly affirmed the pioneering role of the Open University, particularly in maintaining teaching and learning activities in both entirely virtual environments and blended modalities. This demonstrates adaptability and relevance that continue to shape the wider discourse on digital education.

1.2.5 Synchronous and Asynchronous Digital Education

Digital learning programs can either be asynchronous, as widely used in the Massive Open Online Courses (MOOCs) (Bendezu-Quispe et al., 2020; Coad et al., 2023) or synchronous. Synchronous teaching and learning occur in real-time within digital environments, facilitating

direct interactions between the students and the lecturers. In contrast, asynchronous learning does not occur in real-time but instead is self-paced, allowing learners to access learning content at their convenience, time and place (Hung et al., 2024; Zeng & Luo, 2024). A major debate in the literature concerns the comparative effectiveness of these modalities in enhancing students' learning outcomes. For instance, a systematic review by Zeng and Luo (2024), synthesised findings from 12 studies and concluded that asynchronous learning is better than synchronous learning in terms of its impact on student learning. Similarly, Alfares (2024) supported this perspective, arguing that asynchronous learning has a greater impact because it enables students to revisit learning content repeatedly until they master it. However, the critical drawback highlighted was the autonomous nature of asynchronous learning, which necessitates a high degree of self-motivation, posing challenges for some learners. It is, therefore, pertinent for further studies to understand from the perspective of these learners how they feel or cope with engaging content on asynchronous digital platforms.

Recent digital learning programs now incorporate synchronous and asynchronous modalities to enhance pedagogical effectiveness. For example, at BCU, the author's institution and target population for this study, synchronous learning is facilitated through Microsoft Teams (MS Teams), enabling real-time interaction, while the asynchronous component is delivered via Moodle Learning Management System (Moodle LMS), providing flexible, self-paced learning opportunities. These OL modalities enable students to learn at their own pace, using advanced information-communication technologies in synchronous or asynchronous modes (Yang et al., 2014). The application of these technologies has increased rapidly, especially in the context of higher education (O'Flaherty & Phillips, 2015). According to Zhu and Liu (2020), the emergence of digital learning has transformed traditional, teacher-centred, lecture-based activities into more student-centred approaches, incorporating collaborative group projects, interactive discussions, and hands-on learning activities, while diminishing reliance on conventional lectures. This highlights the evolving potential of digital learning spaces (DLS)

and the need for scholarly inquiries aimed at optimising these benefits. Specific research to understand this intricate interplay in digital spaces is essential to fully harness their capabilities and ensure effective integration into contemporary educational frameworks.

1.2.6 Transition to Online and Blended Learning Modality

The transition to OL has revealed mixed findings, with authors reporting several converging and contrasting findings. For instance, the study by Mathrani et al. (2022) confirmed the existence of gaps at all levels, including access, capacity, and results, as well as across genders, when students transitioned to online education during the COVID-19 restrictions. While some authors reported success in terms of achieving learning outcomes and student performance, others reported low pass rates and expressed doubts about achieving learning outcomes (Bramer, 2020; Opeyemi et al., 2019; Sajid et al., 2016; Wallace et al., 2021). In addition, high levels of stress and anxiety due to the transition from traditional classroom learning to OL among UK university students were also reported (Pullan et al., 2022).

Kundu and Bej (2020) argued that the adoption of OL was only a temporary solution to respond to the COVID-19 pandemic since there was no alternative to face-to-face learning. The adoption of DLS was not initially conceived as a deliberate and sustainable transformation of educational delivery, as evidenced by the frequent use of terms such as "experimentation" and "trial" in the literature (García-Morales et al., 2021; Halem et al., 2022). This raises a critical concern regarding the extent to which digital spaces (DS) have been systematically explored to assess their full potential and relevance, particularly in the context of N&M education. The lack of clarity on this issue underscores the need for further investigation into the experiences of students and lecturers, who are the main users of the platforms, in order to understand the long-term viability of digital education in these professional disciplines. Such an inquiry is necessary to understand how digital learning can be optimised to enhance T&L experiences as well as ensure its effectiveness as a pedagogical strategy.

Several studies have highlighted the disruption during the COVID-19 pandemic as a “new normal” in many educational institutions and disciplines after COVID-19, and the blended learning (BL) approach has gained significant popularity in this context (Cortez, 2020; de Brito Lima et al., 2021). BL, also used instead of hybrid learning or mixed-mode education, is an instructional approach that combines the use of classroom and online learning methodologies with the more conventional model of instruction in a classroom setting (Vasyura et al., 2020). The use of BL as a method of instruction is rapidly expanding in Higher Education Institutions (HEIs), becoming increasingly prevalent in colleges and universities (Chen, 2020). This is because BL integrates the strengths of both classroom and OL, thereby enhancing the overall effectiveness of educational delivery (Brereton et al., 2022). The adoption of BL may be viewed as a strategic alternative designed to maintain some level of in-person engagement while leveraging digital platforms, rather than a complete transition away from classroom-based. However, the major concern lies in the limited clarity and understanding of DLS, which constitutes a fundamental component of BL.

Despite the growing body of literature on T&L in DS, there is a dearth of studies focusing on the unique experiences of N&M students and lecturers whose curriculum combines theoretical knowledge with extensive practical demonstration. This gap underscores the need for further exploration to optimise DLS and its integration within BL frameworks. This study contributes to addressing these critical knowledge gaps by using IPA as a research design and conceptual framework to explore the lived experiences of these groups, providing insights into the challenges and opportunities digital spaces present in preparing future nurses and midwives and offering actionable recommendations to enhance teaching and learning outcomes in this specialised educational context.

1.3 Rationale for this Study

The rapid adoption of DLS into N&M education has transformed pedagogical approaches across disciplines, necessitating a better understanding of the unique experiences of lecturers and students in DLS. While existing studies have explored various dimensions of DS, such as the adoption and advantages, there remains a significant gap in understanding the lived experiences of N&M lecturers and students who navigate these spaces. Through IPA, we might be able to address these gaps by illuminating the complexities of DLS by focusing on the lived experiences of N&M students and lecturers.

My interest in digital T&L can be traced back to several years ago when I was privileged to attend nursing practice-related webinars, at a time when DLS were not widely used. I then began to question why these online platforms cannot be used to teach nurses and midwives in our universities. This question seemed to be rhetorical at that point because most institutions delivered in-person lectures with no specific reasons to consider online approaches. The COVID-19 pandemic was a critical period for me in my inquiry. At that time, I was part of the researchers at the Institute of Nursing Research, Nigeria, facilitating sessions on research processes at the preliminary academy of the Journal Club. In my role there, I helped design a curriculum for training nurses and potential research nurses. Our Training sessions were designed to be held in person, but the COVID-19 pandemic necessitated a rethink of the delivery method. Activities were hindered due to the COVID-19 restrictions, but to re-engage people, I led a team to organise a few days of virtual training on research practice to observe its potential impact on the participants. The webinar was deemed highly successful, transforming the perception of research, often seen as tedious and challenging by most nurses and nursing students, into an engaging and stimulating subject. Feedback from participants indicated a high level of satisfaction with the webinar content and delivery. Following a rigorous ethical approval process, valuable responses were elicited from the participants,

culminating in the publication of the findings in a reputable journal (a reference to the publication: Adesuyi et al., 2023). These findings and experiences led me to believe in the possibility of educational activities in virtual environments while acknowledging the need to understand how these virtual platforms can be used to deliver N&M courses.

I started my research journey as a PhD student and teaching assistant at the School of Nursing and Midwifery, BCU, in May 2021, where I assumed a dual role of being a student and educator. I commenced this journey right amidst the various COVID-19 pandemic restrictions, where educational activities were entirely online. I navigated through this period of transition both as a student and as an educator. Today, I have responsibilities for assisting in teaching and learning in the adult nursing department to ensure that learners have a better learning experience. Even though the university now adopts a blended approach to T&L, which comprises a virtual and face-to-face element, I was further motivated by the need to critically explore how these transitions impact both students and lecturers and to understand how DLS can be used to successfully deliver nursing courses. Evidence has shown divergent results around the use of digital technologies for educational activities (Devlin & Samarawickrema, 2022). Despite the growing body of knowledge on DLS, there is still a need to understand how N&M students and lecturers perceive and experience DLS.

As an educator, I have observed notable disparities in how students and lecturers perceive DLS. For instance, while some individuals prefer to teach or learn in the classroom, others expressed a preference for online modalities. These diverse inclinations significantly influence their level of engagement with DLS, shaping both learning outcomes and the overall effectiveness of OL. Addressing these gaps through an IPA approach provided rich qualitative insights into the lived experiences of students and lecturers who shape and are shaped by DLS. In undertaking this study, I aimed to understand the experiences of N&M lecturers and students, with a focus on finding ways to improve their digital T&L experience. T&L are complex phenomena (Taylor,

2021), fundamental to the education of nurses and midwives, maintaining the workforce, and sustaining high standards and competence among nurses (Manning et al., 2017). N&M practice requires registered nurses to have complex clinical skills to care for patients, necessitating a curriculum that integrates theory and practical sessions with more practical demonstrations. The major concern was how a discipline that requires a measure of social, professional and empathetic relationships with people can be taught in a virtual environment.

Although studies about digital education have been discussed in the literature for decades before the COVID-19 pandemic, only a few have focused on N&M education. The COVID-19 pandemic has led to an increased focus on digital learning technology, yet most academic discussions have quickly shifted to a blended approach to T&L without extensively understanding digital learning, as highlighted in Patel (2022). While BL may be considered the future of digital learning technology, a key component of this approach is digital T&L (Hamer & Smith, 2021), which is not well explored within the context of N&M education.

This study is unique in that it provided a unique outlook, building upon scholarly contributions in the field, ranging from the rapid adoption of digital spaces during the pandemic and the gradual transition to classroom or blended provision as the pandemic eases. Recently, 3000 students from Manchester University signed a petition to stop them from learning online under the guise of BL, following the easing of the COVID-19 pandemic national restrictions (Jenkins, 2021). Their demand was clear: they wanted lectures to return to the conventional classroom, specifically expressing dissatisfaction with a blended type of learning that favours digital learning. I therefore considered this project an opportunity to understand the intricate interplay of factors or components within a digital teaching and learning environment and contribute original knowledge to the field.

Furthermore, my background as a registered nurse and midwife with over ten years of clinical experience, in addition to my role as a student and educator, positions me uniquely within this

study, providing me with a distinct perspective on how OL translates into clinical competency, especially in a profession where practical demonstration and clinical-based learning are essential. This allowed me to engage with both lecturers and students from an insider perspective, fostering trust and encouraging deeper and more meaningful narration of their experiences. Nonetheless, I acknowledged the importance of maintaining reflexivity, ensuring that my interpretations remain grounded in participants' experiences rather than my own preconceived ideas.

The IPA approach was well-suited for this study because it ensured the in-depth investigation of individual experiences and meaning-making processes. Through this design, I was able to capture the nuanced realities of DLS, offering insights that can inform curriculum development, policy and interventions to improve the effectiveness of DLS. I also personally relish the challenge of studying at a doctoral level, which has further improved my research and teaching skills as a developing academic and researcher upon completion. By undertaking this study, I intended to contribute to the broader discourse on DLS in N&M education, offering insights that are practically applicable and theoretically significant. This study aspired to inform future educational strategies, ensuring that DLS are not only effective but also well-suited for delivering N&M courses. The findings have implications for N&M students, lecturers, and policymakers working towards enhancing their digital learning experiences.

1.4 Research Aim and Objectives

To determine the aims, objectives and questions for this study, I subjected the development to continuous modification as I immersed myself in the literature to understand the field and identify gaps in knowledge. Reviewing the extant literature guided me in articulating a direction for this study, particularly around framing my research aim, objectives and questions. While most contemporary research has focused on exploring the experiences of N&M students in digital learning spaces, the experiences of N&M are under-researched. In addition, there is

little or no evidence of an empirical study that explores and presents a balanced narrative of the experiences of both N&M lecturers and students who are the key stakeholders in digital spaces. Given this significant knowledge gap, this research aimed to explore the lived experiences of N&M students and lecturers as they teach and learn in DS, with a focus on identifying ways to support learning outcomes.

The specific objectives are:

1. To establish the current landscape of digital T&L in the UK context for N&M education.
2. To explore the experiences of N&M lecturers and students within digital T&L spaces.
3. To examine the dynamics of interactions among students, lecturers, and course content in digital spaces and analyse their influence on the T&L process in N&M education.
4. To identify the key factors that enhance or hinder the effectiveness of digital T&L spaces in N&M education, providing insights into best practices and potential areas for improvement.

1.5 Research Questions

What is the context of DLS in the UK N&M education?

This question was to help determine the context of DS for T&L in N&M education in the UK. It links with the first objective: 1. To establish the current landscape of Digital T&L in the UK context for N&M education. This question is answered by an extensive scoping review of relevant literature.

What are the experiences of N&M lecturers and students with digital learning spaces?

Each N&M student and lecturer has lived through the experience of T&L in DS and holds a distinct perspective on these experiences. Consequently, each engagement with DLS is different and, when recalled, carries significant meaning for the individual. Although lecturers

and students are fundamental participants in an educational environment, their roles in DLS are interdependent yet distinct, shaping their unique experiences. By exploring these unique experiences and how they intercept or remain distinct, a deeper understanding can be gained regarding the challenges they face in DLS, their perspectives on T&L interactions, and the factors that enable and inhibit effectiveness. Challenges associated with DLS, such as the ones relating to technology and pedagogy, have been highlighted in the literature; however, given the uniqueness of N&M education, it was anticipated that more complex issues would emerge concerning the experiences of lecturers and students, issues that remain unheard when examined through a positivist lens. Through IPA of the experiences of N&M students and lecturers, I was able to explore the complexities surrounding their use and adoption of DLS, particularly during and after the COVID-19 pandemic. This inquiry offered nuanced insights into their lived experiences, informing strategies to ensure the effectiveness of DS in N&M education.

This research question links to objectives 2, 3 and 4: Objective 2 - To explore the experiences of N&M lecturers and students within digital T&L spaces. Objective 3 - To examine the dynamics of interactions among students, lecturers, and course content in digital spaces and analyse their influence on the T&L process in N&M education. Objective 4 - To identify the key factors that enhance or hinder the effectiveness of digital T&L spaces in N&M education, providing insights into best practices and potential areas for improvement.

1.6 Phases of the Doctoral Research

This qualitative study used IPA, rooted in a constructivist or relativist phenomenological ontology and a hermeneutically interpretivist epistemology. The research design was informed by IPA's underlying philosophical underpinnings. Utilising an inductive and exploratory approach, the study aligned with methodological strategies associated with these philosophical perspectives. Through IPA, the research investigated the lived experiences of N&M lecturers

and students at the School of Nursing and Midwifery, BCU, drawing on both the shared and divergent experiences of students and lecturers.

To achieve the set objectives, three methodological steps were followed:

Phase 1 - Scoping Review: A scoping literature review was undertaken to summarise existing knowledge in the field and identify gaps that informed the refinement of the research objectives, thereby ensuring original contribution to knowledge. The review revealed a dearth of literature on T&L in DS in nursing and midwifery education in the UK, with no existing studies specifically focused on the target institution. This gap underscores the need for further research to enhance understanding of digital T&L experiences within this educational context.

Phase 2 - Pilot Study: A pilot study was conducted to determine the feasibility of the research methods and anticipate possible challenges that may ensue in the main study. The primary objective of this preliminary phase was to refine the research design and identify potential challenges, ensuring a smooth transition from ethical approval to data collection and analysis in the main study. The pilot study involved in-depth interviews with two lecturers and a Focus Group Discussion (FGD) involving four students. This process revealed key logistic challenges, including difficulties in recruiting lecturers for an FGD due to scheduling constraints and reluctance among students to participate in in-depth interviews, as many preferred to maintain their existing group commitments. Additionally, insights from the pilot study informed the move to refine the interview questions, ensuring clarity, cultural appropriateness and effectiveness in eliciting meaningful responses.

Phase 3 – Main Study: Semi-structured, in-depth interviews were conducted with 10 N&M lecturers and 10 students. This was complemented by two FGDs, one involving five lecturers and another involving five students. To ensure participants had substantial experience with digital T&L, student participants were required to be in at least their second year of study, while

lecturers needed a minimum of 3 years of teaching experience at the BCU. Their lived experience of T&L in digital spaces at BCU was analysed, highlighting both shared and divergent perspectives. Although smaller sample sizes were recommended for IPA studies, especially for novice researchers (Smith et al., 2009), the decision to interview 15 students and 15 lecturers via in-depth interviews and FGD yielded rich data for the full development of the themes that emerged. Additionally, a reflexive journal was kept as advised by Smith and Nizza (2021) to ensure rigour and validity since the researcher is considered an active part of the research in IPA studies.

CHAPTER 2

BACKGROUND REVIEW OF THE DEVELOPMENT OF DIGITAL LEARNING SPACES IN EDUCATION

2.1 Chapter Outline

This chapter presents a background literature review that includes sources outside the UK HEI context and beyond N&M education to capture broader perspectives essential for a comprehensive analysis of the existing body of knowledge. This wider scope was expected to be instrumental in enabling a more rigorous analysis of the findings of this inquiry and ensuring that the research remains aligned with contemporary global advancements in the field.

In Chapter One, I articulated the rationale for embarking on this study. It included a comprehensive exposition of an array of both professional and personal motivations driving the research, notably elucidating the heightened impetus engendered by the prevailing context of the COVID-19 pandemic, thereby accentuating the imperative nature of this scholarly inquiry. This literature review chapter elucidates upon the foundational preliminary literature review that provided the theoretical underpinning and scholarly context for the ensuing research investigation. It is imperative to integrate pertinent literature reviews, both empirical and theoretical, to enrich the contextual foundation of this study. Dunne (2011) argued that literature reviews serve as a foundational component within scholarly inquiry, regardless of the chosen research methodology. Its primary functions include facilitating the formulation of research questions, substantiating the rationale for the study, and furnishing a comprehensive contextual framework for the investigation. I commenced with an exposition detailing my approach to accessing pertinent literature and proceeded to present the themes that emerged from the reviewed literature.

2.2 Background Review within a Global Context

This background literature review involved a comprehensive analysis of pertinent literature to analyse the themes relating to T&L in DS within a global context. In this review, emphasis was initially directed towards understanding what the literature has to offer in explicating the trajectory involved in the adoption of DL in N&M education, as well as how DL has evolved over the years. Then, an exploration of the conceptualisation of the "learning spaces" as delineated within the extant literature, along with an investigation into how it has been contextualised within HEIs. Similarly, an analogous examination is conducted concerning the conceptualisation and contextualisation of "digital spaces" within HEIs, describing their connotations and implications as expounded within scholarly discourse.

Subsequently, I proceeded to examine the literature concerning the perceived advantages of T&L in DS from a broader perspective. Following this investigation, a comprehensive analysis ensues regarding the challenges encountered by both students and lecturers within the digital learning spaces. These challenges were systematically categorised under three distinct sub-themes, including Technological Challenges, Individual Challenges, and Pedagogical Challenges, as delineated within the extant literature. Furthermore, a deep dive into empirical inquiries investigating the experience of students and lecturers with T&L in DS to further map out the field and identify key gaps that strengthen the rationale for my study. Finally, I presented the gaps in knowledge arising from the analysis of the literature, which is deemed crucial to further developing my research objectives.

2.2.1 Inclusion and Exclusion Criteria

The SPIDER framework has been used to illustrate the review question and articulate the inclusion and exclusion criteria of the selected studies. According to Cooke et al. (2012), SPIDER, an acronym for Sample, Phenomenon of Interest, Design, Evaluation and Research

type, is a standardised strategy for searching research to address mixed-method qualitative questions. Studies were included in the review when they met the criteria, as included in the SPIDER framework for review questions, Table 2.1.

Table 2.1 SPIDER Framework for Review Questions

Sample	Studies that focus on N&M students and lecturers or HEI-based teaching and learning contexts. Broader higher-education demographics that provide conceptual or theoretical insights relevant to DLS.
Phenomenon of Interest	Studies that investigated digital learning, online learning, virtual learning, e-learning, or wider technology-enhanced learning spaces within HEIs, including their design, conceptualisation and pedagogical use.
Design	Empirical studies (qualitative, quantitative, or mixed methods). Conceptual, theoretical, and review papers that offers understanding on the evolution and use of digital learning spaces in N&M education.
Evaluation	Research exploring N&M students and lecturer interactions, pedagogical and digital-teaching practices, challenges, benefits and experience of digital education.
Research type	Peer-reviewed journal articles, conference papers, doctoral theses, unpublished papers and other grey literatures that contributes to the phenomenon of interest.

2.2.2 Review Question

This background review set out with the following questions:

1. In what ways are digital learning environments conceptualised, contextualised, and implemented in nursing and midwifery education as well as in the broader higher education context, and how have these interpretations transformed over time?
2. What are the gaps in knowledge within the theoretical and empirical literature on DLS in N&M education that require further exploration?

2.2.3 Literature Search

Relevant literature was accessed through the university library search tool, situated within the 'icity' network domain. This online resource is accessible to all affiliates of Birmingham City University, including students and faculty members, and serves as a comprehensive repository of information and educational materials sourced from diverse providers. It facilitated exploration across a spectrum of prominent databases, including ASSIA, CINAHL, EBSCO, Gale Academic OneFile, Medline, PubMed, BNI, SCOPUS, ScienceDirect, IEEE Xplore Digital Library, OVID, and AMED.

In undertaking my initial review of the literature concerning DLS, I employed broad inclusion criteria, driven by the intention to augment my comprehension of how the DS is generally used in N&M education and gain a broad overall sense of how the field has developed. Chigbu et al. (2023) highlighted the significance of canvassing a diverse range of scholarly texts to lay the foundation for a study, thereby facilitating a progressive refinement towards areas exhibiting gaps in knowledge. Thus, recognising the pivotal role of delineating the scope and diversity of prior research work. I, therefore, deemed it essential to ascertain the breadth and type of antecedent studies, thereby furnishing a robust contextual backdrop for my research inquiry and accentuating its scholarly import.

After exploring the databases, it became evident that the terminology associated with digital learning spaces was diverse, with keywords such as 'digital space,' 'online learning' or 'teaching,' 'remote learning' or 'teaching,' 'virtual learning' or 'teaching,' and 'distance learning' or 'teaching,' being used interchangeably. Consequently, these titles were employed as primary keywords in conjunction with descriptors such as 'pre-registration nursing and midwifery' and 'nursing and midwifery lecturers' during the execution of my search strategy. Furthermore, I pursued supplementary sources by scrutinising citations within seminal literature and accessing pertinent online platforms for grey literature, including but not limited

to the UK Nursing and Midwifery Council, Royal College of Nursing (RCN), Department of Health and Social Work (DHSW), Health Education England, and Joint Information Systems Committee (JISC). Seminal literatures were defined as frequently cited studies that have shaped the field of digital learning spaces. To ensure a comprehensive understanding of the field and integrate recent advancements, the literature search was not restricted by publication year and remained ongoing until the thesis was near completion. This approach enabled the inclusion of pertinent recent contributions and a broad perspective on the subject matter. I presented the result of the review in themes without any further details on the review methodology. Mukherjee (2025). maintained that, unlike systematic reviews, authors of traditional literature reviews do not commit to a formal and rigorous methodology due to its exploratory nature, requiring more flexibility.

2.3 Evolution and Adoption of Digital Learning

Teaching and learning in DS in N&M education is not a new idea. In fact, its origins can be traced back over one century. According to Bitzer et al. (1969) and supported by OLC (2023), OL became more pronounced in the 1960s when computer-based training programmes were introduced. In 1963, the Programmed Logic Automatic Teaching Operations (PLATO) model emerged as the inaugural computer-based nursing education model in the United States, characterised by its self-directed nature, granting learners autonomy in determining the pace and trajectory of their learning (Bersin, 2004; Bitzer et al., 1969; Boninger et al., 2020). This model served as a simulated laboratory, establishing a self-directed learning environment with a limited number of lessons, enabling learners to independently determine the pace and trajectory of their learning. PLATO was first experimented with, at the University of Illinois, where it was developed, and they found that students in the experimental group spent less time (between one-third and one-half the required time in the classroom) learning the same subjects that the control group learnt face-to-face in the classroom (Bitzer & Boudreaux, 1969). They also discovered that all students performed well at the post-test after each subject and at the

end of the 22 lessons taught. However, students in the control group who had their lectures delivered through the conventional classroom mode did not perform better than the experimental group at the final examination. These findings underscore the potential efficacy of virtual learning environments.

Freire (1970, 34) gave a remarkable opinion about digital learning technologies about 50 years ago, based on his scholarly work titled “Pedagogy of the Oppressed”, which gradually forms part of today’s understanding of online pedagogies. Rightly coined in his statement “Through dialogue, the teacher-of-the-students and the students-of-the-teacher cease to exist, and a new term emerges teacher-student with students-teachers”, it proposes the possibility of breaking down traditional hierarchical barriers between the teacher and students in a T&L environment. Browne and Millar (2019) extended Freire’s (1970) claim in their study titled ‘Increasing Student Voice and Empowerment through Technology’, drawing mainly on the work of Freire and several other researchers’ thoughts, which eventually contributed to the millennium understanding of digital pedagogy. Browne and Millar (2019) maintained that technology enhances student engagement in classroom participation and dialogue, facilitating a more feasible realisation of a democratic classroom where every learner has a voice.

During the mid-1970s, the Control Data Corporation (CDC) acquired a license for the PLATO system from the University of Illinois at Urbana-Champaign (UIUC) and subsequently initiated its commercialisation (Lyman, 1972). By the mid-1980s, the proliferation of PLATO systems globally exceeded 100, with the majority being deployed at educational institutions (Lee, 2006). The introduction of personal computers (PCs) in the 1980s marked a transformative phase leading to the end of the original PLATO versions (Jones, 2015). The cost-effectiveness of networking PCs, coupled with the emergence of NovaNET as a PC-based education system interfacing with PLATO through PCs, prompted a shift away from PLATO systems (Lee,

2006). The CDC, rooted in its mainframe legacy, found itself unprepared for the burgeoning prominence of PCs, necessitating a strategic retreat (Jones, 2015).

Computer-Assisted Instruction (CAI) is another digital platform that has undergone testing in HEIs globally, assessing their efficacy in facilitating T&L in the early 1980s (Usman, 2020; Yucha & Reigeluth, 1983). The use of PCs rose in prominence during the 1980s, which allowed institutions to deliver learning content via CD-ROMs and early internet systems. This era marked a transition from instructor-led teaching to self-paced, computer-based learning (Harasim, 2000; Molnar & Boninger, 2020). For instance, online learning became more accessible with the introduction of the World Wide Web (WWW) in the 1990s (Cuban, 2021; Daniel, 2012). Learning Management Systems (LMS) such as Blackboard and WebCT were introduced, enabling institutions to deliver structured courses online (Bonk & Graham, 2012). In the 2000s, broadband internet and advancements in digital technology allowed for richer multimedia content, fostering interactive and collaborative learning environments. Researchers argue that in the 1980s and 1990s, T&L in DS across education sectors assumed a highly connected and static nature closely identical to traditional, formal learning structures, practices, and underlying pedagogies (Boninger et al., 2020; Cuban, 2021; Molnar & Boninger, 2020).

Towards the end of the 20th century, the advancement of computer technology, particularly the emergence of information and communication technology (ICT), significantly impacted education, leading to the gradual introduction of distance learning frameworks, including those exclusively based on virtual learning environments (VLE) (da Costa & Luz, 2015). Massive Open Online Courses (MOOCs) emerged between the years 2008 and 2010, providing free or low-cost courses from leading universities to learners worldwide (Daniel, 2012). There has been a global surge in MOOCs, which are regarded as a transformative innovation in education, characterised by their aim to democratise knowledge access by providing courses that are accessible to individuals worldwide, especially if they have access to relevant technology,

internet access and digital literacy irrespective of their geographical location or time constraints, thus facilitating a global reach for these courses (Bendezu-Quispe et al., 2020).

MOOCs have proliferated across diverse domains of human knowledge, including the field of health (Liyanagunawardena & Williams, 2014). Completion of a MOOC course, whether paid or unpaid (depending on the specific course), may lead to the issuing of a certificate of course completion, serving as a credential for verifying acquired knowledge or learning (Liyanagunawardena & Williams, 2014). Even though OL is an important learning strategy that provides students with flexible learning opportunities to determine a convenient time and place for studying, Bond et al. (2020) revealed that OL has implications for all aspects of students' learning experience. Evidence has shown that the main benefits of OL include remote delivery of learning materials, comfort, accessibility, and easy management (Mukhtar et al., 2020; Opeyemi et al., 2019; Sajid et al., 2016).

2.4 The Pandemic as a Turning Point in Digital Teaching and Learning

Despite the potential benefits of several DL platforms, the exigencies of the COVID-19 pandemic compelled educational institutions to rely heavily on DS for T&L from early 2020 to late 2021. The declaration of COVID-19 as a global pandemic by the World Health Organisation (WHO) on March 11, 2020, led to widespread disruptions across various sectors, including education. Governments worldwide swiftly implemented measures such as national restrictions, border closures, hygiene practices, mask-wearing, and social distancing, resulting in the complete closure of HEIs in 185 countries in April 2020, affecting over 1 billion learners globally (Marinoni et al., 2020). This unprecedented impact necessitated HEIs to involve educators, many of whom lacked technological expertise, in the exploration of online teaching using Information and Communication Technology (ICT) (García-Morales et al., 2021). HEIs were thrown into a period of 'looking inward' as rightly coined by Adeoye et al. (2020), which was characterised by the rapid development of online platforms to temper the pandemic effect

and maintain educational priorities. The impact of the pandemic compelled most institutions to recognise the significance of virtual and distance learning, which led to trying out various means of remote teaching (García-Morales et al., 2021). Nursing programs had to be taught both synchronously and asynchronously through web conferencing and learning management systems during the COVID-19 pandemic. Practical exposures were rapidly replaced with virtual and web-based programs in digital spaces (Wallace et al., 2021). During and after the COVID-19 pandemic, diverse platforms, such as Moodle, Zoom, Microsoft Teams, Blackboard, and Google Meet, have remained crucial for the delivery of online lectures and educational strategies (Islam, 2021; Etando et al., 2021).

During the COVID-19 pandemic in the UK, the government-imposed measures such as restricting in-person or face-to-face contact, enforcing social distancing regulations, and national restrictions to curb virus transmission (Almarzooq et al., 2020; Soni, 2020). While these were measures to limit the spread of the COVID-19 virus, the resultant effect on the whole economy, including the educational sector, cannot be underestimated, especially because T&L had been mostly delivered through the in-person classroom mode. Consequently, HEIs were compelled to rapidly modify their lecture delivery methods, transitioning to online modes to ensure the continuity of educational activities.

The standard framework for N&M education in the UK, according to the Nursing and Midwifery Council (NMC, 2018), was built on five important pillars. They include learning culture, educational governance and quality, student empowerment, educators and assessors, curricula, and assessment. Out of these pillars, the one that stands out during the COVID-19 crisis is ‘learning culture’, which emphasises that any teaching and learning model developed for any nursing and midwifery program must ensure that public safety, particularly in the learning environment, is the first principal factor to consider (NMC, 2018). So, HEIs navigated the challenges by turning to DS, strategically employing virtual learning platforms to sustain

and facilitate T&L activities during these exigent circumstances (Marinoni et al., 2020). Nevertheless, this transition was not devoid of challenges, a sentiment shared by numerous authors (Almarzooq, et al., 2020; Soni, 2020). During this period, scholars have documented notably divergent research findings.

For instance, Wallace et al. (2021) interviewed 11 pre-licensure nursing students in a qualitative study in the US during the COVID-19 pandemic. They reported various factors, including the technological proficiency of nurse educators and student nurses, disruptions in secondary learning settings, as well as student engagement not only with the course content but also with lecturers and peers as elements that collectively limit the efficacy of virtual learning platforms within the educational landscape. The resultant effect of this on the students and the outcomes of learning were diverse, ranging from the feeling of isolation, inability to have questions answered, poor understanding of the course and poor grades. On the contrary, Iglesias-Pradas et al. (2021) conducted a study at a university in Madrid, and their findings suggest that students who engaged in remote learning during the COVID-19 pandemic got better grades when compared to their counterparts taught in traditional classroom settings across 43 subjects.

Despite being conducted in different geographical contexts, the investigations by Wallace et al. (2021) and Iglesias-Pradas et al. (2021) provided valuable insights into the variations observed in research findings on digital learning. This implies that students' experiences with learning platforms are inherently individualised, contingent upon the characteristics of both the individuals themselves and the specific digital learning platforms utilised. Consequently, this observation underscores the need for an additional, comprehensive investigation into these dynamics.

Krishnamurthy (2020) predicted an era of drastic technological modifications with a digitalisation surge into global higher education. Post-COVID-19, delivery of T&L in the UK HEIs have reverted to a format that predominantly involves either a complete classroom-based

delivery mode or a blended approach integrating both in-person and online modalities (Imran et al., 2023; McCullogh et al., 2022; Sharma & Shree, 2023). This divergence might be due to the diverse viewpoints held by both students and lecturers regarding the use of DS for educational activities. For example, the Joint Information Systems Committee (JISC) reported that just above half of the lecturers across the UK HEIs, who were part of their research, advocates for a blend of on-site and online teaching, nearly two-fifths express a preference solely for traditional classroom-based teaching whereas less than 10% favour an exclusive reliance on online teaching approach (Killen & Didymus, 2022). Similarly, JISC's (2022) report elucidated that just below half of the student cohorts across the UK HEIs who participated in the study preferred to learn on-site, while a little above one-tenth indicated a desire for an exclusively online learning approach. Concurrently, just below half articulated an inclination toward a blended pedagogical approach.

One of the things highlighted by MacNeill and Beetham (2023) as the lessons learnt during COVID-19 was that digital technologies have become deeply ingrained in the landscape of learning and teaching, owing to intentional investments and policies implemented by HEIs. The emergent challenges, including but not limited to environmental and economic crises, alongside the increasing fascination with generative Artificial Intelligence (AI), have further compounded the intricacies inherent in curriculum design, thus amplifying the complexity of this multifaceted domain.

Educators have expressed concerns regarding the shift to digital learning amidst the COVID-19 pandemic, noting concerns about heightened workload persisting even after the pandemic subsides. Ünal and Dulay (2022) argued that the transition to remote work has eroded the delineation between work and personal life, potentially undermining the balance between work and life. This shift has required teachers to operate from home and adapt to the tools and technologies used in distance learning, thereby extending work activities beyond conventional

working hours. The case might be similar for students. According to MacNeill and Beetham (2023), the key issues that stood out for learners using digital spaces during and after the COVID-19 pandemic revolved around space, place, time, and diverse modalities of engagement. The imperative lies in securing an optimal mix of these components to facilitate meaningful and effective participation. Consequently, as efforts are being made to adapt nursing and midwifery courses to these technologies, there arises a critical need to rethink these constituent elements within the framework of learning and the evolution of curricular structures.

2.5 Learning Spaces (LS)

The possible relationship between the physical LS of the university and its academic usefulness has become a topic of increasing research and professional interest in the last few decades (Temple, 2018). Patel (2022) started an argument by asking, “What is the purpose of a university space?” This is a simple but critical question because the answer that first comes to mind is “learning”, and if learning is the major purpose of HEIs, one would have expected a strong body of knowledge on the relationships that exist between LS and learning. However, Taylor (2021) was critical of the existence of such a body of existing literature, a viewpoint bolstered by Gravett et al. (2022), who claimed a dearth of literature focusing on LS, emphasising a marked disparity between resources dedicated to teaching spaces and those allocated to student LS. For instance, most modern university campuses have dedicated spaces such as corridors and cafes that are specifically designed to allow interactions in smaller groups, mainly among students and lecturers, thus facilitating the conditions for learning to occur.

These observation highlights the assertion of Gravett et al. (2022) regarding the scarcity of literature dedicated to LS, underscoring a discernible imbalance in the allocation of resources between teaching and student learning environments. This imbalance draws attention to the

need for a more equitable consideration and conceptualisation of these spaces, prompting a critical examination of the prevailing discourse on educational spaces and the implications of this perceived disparity for both T&L outcomes. This issue is particularly salient to the present doctoral study, which examines DLS as a fundamental component of contemporary educational environments. By exploring how lecturers perceive and engage with teaching in these spaces, as well as how students experience and navigate digital learning, this study addressed the existing literature gap and advanced scholarly understanding of DLS.

The origins of these assertions can be traced to Temple's (2008) contention that research on LS within HEIs remains underexplored, a perspective grounded in the findings from the study conducted by Temple and Fillippakou (2007). Temple and Fillippakou (2007), in an extensive review of research, conceptual and theoretical perspectives on learning spaces, discovered a gap in understanding the relationship between LS and learning activities. They suggested that continuous maintenance of LS is as important as its design to ensure the effectiveness of T&L.

Temple (2008:28) proposed a conceptual paradigm for viewing a university as "the campus, the university in the city, a community space, individual buildings, and spaces for educational activities (library inclusive), and other spaces." Temple (2008) further highlighted grey areas that need to be understood, including the role of spaces in community building, the social attributes of the university environments and the interactions that occur during T&L. Although Temple (2008) believed that university spaces have the potential to support learning, the work of Ellis and Goodyear (2016) presented a similar conclusion in a more recent study. In their literature review on LS within higher education, they discovered a dearth of comprehensive investigation and theoretical development. They further delineated three overarching domains of inquiry within this scholarly domain: the interplay between pedagogy and curricula and their correlation with the physical learning environment, the intricacies of LS design, and the

advancement of software tools dedicated to the facilitation of virtual learning environments for student instruction.

Like Temple's (2008) perspective, Ellis and Goodyear (2016) expressed reservations about the propensity for broad generalisations and the inadequacies in the conceptualisation of LS within the existing scholarly discourse. More recently, Leijon et al. (2022) concluded that the study of learning spaces within HEIs is characterised by a paucity of research, limited theoretical development, and a dearth of robust evidence on the correlation between space and student learning. These claims of paucity in the literature focused on LS and how it relates to student learning raise the question of how learning space is conceptualised. Ojennus and Watts (2017) argued that the heterogeneity of the student population, characterised by varying learning preferences, study requirements, and expectations, coupled with the increased emphasis on pedagogical paradigms shifting from conventional lecturer-centred approach to more adaptable, student-centred approaches, has necessitated a profound rethink of the design, use, and positioning of teaching and learning spaces.

There is a growing body of evidence that has shown that LS can be interpreted in a variety of ways, with the work of some authors offering valuable insights into this concept. Leijon et al. (2022) described this diverse perspective as a befuddling array of terminology in the literature used to identify the formal rooms where learning takes place. LS is used to describe rooms where learning takes place; it is further understood to include the physical, social, and pedagogical environment where learning is meant to take place (Acton, 2018; Alstete & Nicholas, 2018; Carnell, 2017; Chiu et al., 2017). In subsequent sections of this chapter, a thorough analysis and exploration of these conceptualisations of learning will be undertaken. Each dimension will be scrutinised and expounded to explore its distinct implications within the context of contemporary higher education.

Most people consider place and space as a much more abstract concept, including discursive, cognitive, existential, and material spaces (Ellis & Goodyear, 2016). In the HEIs context, discursive spaces are recognised as critical environments where knowledge construction occurs through social interaction, discourse, and communicative exchanges (Maciag, 2018). These spaces encompass both physical and virtual platforms, including classrooms, seminar rooms, online forums, and scholarly publications, serving as arenas for the negotiation and dissemination of ideas, perspectives, and academic discourses (Reynolds & Sokolow, 2022). Cognitive spaces relate to the mental frameworks, cognitive processes, and learning strategies that individuals employ in educational settings (Coyle et al., 2020; Bransford et al., 2000). These spaces encapsulate the mental territories where learners organise, assimilate, and construct knowledge, encompassing memory, attention, reasoning, and problem-solving abilities (Dewey, 1933; Lombardi et al., 2021). Existential spaces acknowledge the subjective, affective, and personal dimensions intertwined with the educational experience (Hall & Turner, 2021; Maslow, 1968). These spaces encompass the emotional and existential aspects of learning, considering the influence of identity, motivation, emotions, and sense of belonging on academic engagement and student well-being (Hall & Turner, 2021). Material spaces refer to the physical environments that facilitate T&L, encompassing classrooms, libraries, laboratories, and technological infrastructures (Lippman, 2010; Velissaratou, 2017). These spaces not only provide resources and tools but also shape educational experiences, affecting student engagement, collaboration, and the pedagogical approaches adopted by educators (Barrett et al., 2019; Penuel et al., 2012). Understanding and integrating these multidimensional perspectives of place and space in higher education settings offers a nuanced approach to educational practices and institutional design. Such integration aligns with contemporary pedagogical theories and empirical evidence, fostering inclusive and holistic learning environments that acknowledge the interplay between social, cognitive, emotional, and physical dimensions of education.

There are questions about whether an LS is the same as a learning place and how authors sometimes predominantly use learning space as a substitute for other terms like learning environment and learning landscape. Few authors have explained these differences based on materiality and relative approaches (Alstete & Nicholas, 2018; Brooks, 2012). While materiality in this context refers to the tangible aspects and physical components of educational environments, including physical spaces, resources, and infrastructures on the learning process, relative approaches express the diverse perspectives or methods used to understand and analyse educational disparities, acknowledging contextual variations and differing viewpoints in educational research and practice (Alstete & Nicholas, 2018). Some authors have described the learning environment and learning landscape as representing a more extensive design outlook, serving to connect the classroom to a broader campus context (Brooks, 2011; Brooks, 2012; Bryers et al., 2018).

Furthermore, lecture halls, library spaces and laboratories have been considered learning spaces which have long been gathering places for scholars in search of knowledge and enlightenment (O'Donnell & Anderson, 2022). The modern redesign of university environments has recently seen corridors and comparable places adapted to facilitate improvised learning opportunities (Coulson et al., 2015). University canteens have also been redesigned as 'learning cafes', where students can access the course website and their emails and download readings between lectures (Boys, 2011). Free access to the internet provided by most university campuses in the UK must have contributed to the success of these redesigns. Gaebel et al. (2021) claimed that even if there is a successful shift towards blended and hybrid modes of learning, campus spaces would still be considered indispensable for teaching and learning. According to Friesen and Norm (2012), blended learning (BL) is a pedagogical approach that integrates traditional face-to-face classroom instruction and self-paced OL. This mode of learning strategically combines both dimensions to create a cohesive educational experience that leverages the benefits of each modality (Efthymiou, 2023). On the other hand,

hybrid learning represents an educational methodology wherein individuals engage in learning activities through a combination of in-person and online participation (Rao, 2019). Instructors and facilitators employ technology, such as video conferencing, to simultaneously deliver instruction to remote learners and those physically present, fostering an inclusive learning environment that bridges geographical barriers.

This necessitates universities to re-evaluate the potential configurations of campus spaces to ensure the preservation of higher education as a physically immersive and communal experience (Eringfeld, 2021). Leijon (2016a, 2016b) elucidated the interplay between how students and lecturers perceive space and their subsequent interactions within it, which concurrently involves the utilisation of the layout and resources to establish a learning environment. In essence, this signifies a mutual interdependence among space, individuals, and their interactions, with activities being jointly influenced by the space and the individuals engaged within the space (Acton, 2018). Lamb et al. (2022) investigated the value of engaging in a socio-material sensibility, which they argue prevents us from conceptually reducing learning spaces to their physical dimensions and contents. Conversely, we can acknowledge learning spaces as contingent upon an intricate and dynamic assembly of both human and non-human participants. In other words, a learning space is shaped by a complex and ever-changing combination of both people and material objects.

2.6 Digital Learning Spaces (DLS)

Since the emergence of the internet, individuals have become familiar with DS, engaging with virtual entities through devices like personal computers, mobile phones, and gaming platforms (Bygstad et al., 2022). A DLS, however, exhibits a more purposive orientation. In the past decade, the heightened emphasis on physical spaces within universities underscores that, despite the extensive use of physical spaces, it is the tangible campus structures and purpose-designed educational spaces that primarily govern the practical implementation and efficacy of

higher education institutions (Cox, 2011; Matthews et al., 2011). Bygstad et al. (2022) asserted that DLS is a complex phenomenon that remains inadequately understood both empirically and theoretically. Several authors have conceptualised DLS through the technical, pedagogical, and organisational lens (Ellis & Goodyear, 2016; Gafurov et al., 2020; Jackson, 2019). It is therefore important to highlight how DS have been conceptualised in the literature.

From a technical point of view, Bomsdorf (2005) presented DLS as a geographically unbounded milieu that provides integrated capabilities for communication and learning through digital devices. Hanseth and Lyytinen (2010) claimed that these capabilities are the accumulation of complex technical digital infrastructures. These infrastructures were meant to support interaction, course organisation, synchronous meetings, teaching, and collaborative learning (Collazos et al., 2021; Lowenthal et al., 2020; Martin & Tapp, 2019; Wilcox et al., 2016). For optimal functionality, these solutions necessitate technical integrations, typically executed through Application Programming Interfaces (APIs), which safeguard and facilitate these interactions (Ghazawneh & Henfridsson, 2013).

In terms of organisation, Bygstad et al. (2022) presented an argument that although universities have historically engaged with various aspects of society, the campus is occasionally construed as a self-contained entity, at times characterised as an isolated enclave, frequently situated on the periphery of urban centres. They concluded that DLS goes beyond the physical and institutional confines of the university. Jackson (2019) claimed that DLS introduces fresh opportunities, including enhanced collaboration with corporate entities, governmental institutions, and other community stakeholders.

Pedagogically, McLeod and Graber (2018) asserted that DLS does not comprise a mere collection of tools but rather forms an amalgamated setting for profound personalised learning and problem-based instruction. It constitutes a subset within the broader comprehension of the learning environment, encompassing students' engagement across physical, hybrid, and DS,

which frequently exhibit interdependencies (Ellis & Goodyear, 2016). Researchers have agreed that DLS facilitates collaborative learning through the provision of tools for intricate peer interactions and enhances situational awareness by visually representing participants and their actions (Collazos et al., 2021; Soller, 2001). It can further allow reflection, analysis, and the use of data that is crucial for introducing new innovative learning methods (Aagaard & Lund, 2019; Henderson et al., 2017; Viberg et al., 2018).

The prevailing presumption is that a DLS, as expounded by Goodyear et al. (2021), transcends its technical attributes and is fundamentally a milieu wherein learning activities are intricately embedded within the physical, social, and epistemic contexts, actively shaped by the participation of both students and educators. Lamb et al. (2022) furthered the discourse towards exploring the dynamic interplay between digital technologies and university learning spaces. They conclude that a productive exploration of spaces can be achieved through an examination of the interplay between physical and digital learning environments, emphasising pedagogical and instructional design considerations, and embracing a more philosophical and critical engagement with prevailing concepts within these domains. Bygstad et al. (2022) advised that DLS should not be seen as something completely new and different that can be bought or copied, but as solutions building on the existing structures and practices.

2.7 Advantages of Teaching and Learning in Digital Spaces

The emergence and integration of DS within educational frameworks have unveiled a plethora of advantages, reshaping the landscape of T&L paradigms. According to Siemens and Long (2017), DS offer an expansive sphere for educational activities, transcending geographical barriers and temporal constraints. Such spaces provide an avenue for collaborative engagements and knowledge dissemination beyond the confines of traditional classroom settings (Castañeda & Selwyn, 2018). This aligned with the claims of Sharma & Shree (2023) that T&L in DS have several advantages, not limited to remote learning, comfort, and

accessibility. The possibilities of digital environments enable personalised and adaptive learning experiences (Dabbagh & Kitsantas, 2012), fostering learner autonomy and engagement (Garrison, 2017).

In their comprehensive literature review, Abid et al. (2022) adeptly synthesised a multitude of advantages inherent in the pedagogical practice of teaching and learning within digital spaces. DS have been instrumental in augmenting the effectiveness of T&L using sophisticated technological tools, enabling enhanced instructional planning, streamlined and pragmatic learning experiences, expedited assessment processes, enriched resource accessibility, and the cultivation of novel skill sets (Carmichael & Jordan, 2012; Jevsikova et al., 2021; Schelly et al., 2015; Stone et al., 2002).

Traditional modes of teaching, characterised by using blackboards, have been transformed, giving way to the use of multimedia platforms such as PowerPoint presentations, online coursework, and video-based instructional materials (Papadakis & Kalogiannakis, 2022; Sherman et al., 2021). DS have played a crucial role in the establishment and evolution of online libraries, effectively eliminating the constraints imposed by physical space and fostering a global nexus for interaction among students, lecturers, and researchers. These virtual libraries have engendered platforms such as online forums, enabling experts to convene, deliberating on specific subjects, critically assessing curricular frameworks, teaching methodologies, and modes of assessment within an expansive, interconnected space (Beldarrain, 2006; Evans & Nation, 2013; Marks & Thomas, 2021; Nkomo et al., 2021). DS have significantly bolstered distance learning education by offering unfettered access to a comprehensive array of learning materials while affording convenient avenues for interaction with the lecturers (Arkorful & Abaidoo, 2015; Camilleri & Camilleri, 2021; Sandars & Schroter, 2007). By using learning tools and technology, including social learning platforms, educators can expeditiously

construct and administer learning cohorts, thus enhancing the facilitation and management of learning groups within these virtual environments (Tlili et al., 2021; Zhang, 2007).

Evidence has shown that DS have been able to break down all educational impediments, enabling seamless real-time interaction between lecturers and students, thereby fostering learning modalities that transcend the constraints of time and space (Mosely et al., 2021; Petrides, 2002; Tortorella et al., 2021). According to Zabiyeve et al. (2021), T&L are becoming more flexible and accessible with the increased popularity of online degrees and mobile learning, which indicates a shift from conventional constraints, elimination of physical barriers and unprecedented educational opportunities. This opportunity allows employees to pursue further education, aligning professional responsibilities with educational aspirations. Recent research findings from experimental studies reveal that digital spaces have significantly enhanced student performance through a systematic approach to teaching and resource implementation (Javaid et al., 2020; Watty et al., 2016). It allows for the identification of individual learning needs by integrating technology within LS, which enables comprehensive monitoring of student progress (Horváth, 2016). According to Abid et al. (2022), DS create an inclusive LS, affording all students, irrespective of diverse ability levels, an equitable opportunity to engage within a unified educational sphere. The integration of virtual classrooms, video interfaces, augmented reality applications, robotics, and various technological tools not only injects excitement into the learning process but also cultivates inclusive environments conducive to collaboration and inquisitiveness (Abilmazhinova et al., 2021). Simultaneously, these technological resources enable educators to gather comprehensive data on student performance, thereby facilitating informed pedagogical decisions (Brem et al., 2021).

2.8 Experience of Students and Lecturers with Teaching and Learning in Digital Spaces

The transition to DLS has shaped the experiences of both students and lecturers in contemporary education. Issues such as the efficiency and academic integrity of DLS cannot be ignored. While efficiency refers to achieving optimal productivity with negligible wasted effort, academic integrity deals with an honest and fair approach to academic work (Dwivedi et al., 2023). In other words, efficiency ensues when lecturers and HEIs strive to deliver quality learning and achieve educational goals in the most effective and streamlined manner possible, ensuring that resources such as time, materials and efforts are used prudently to enhance student learning outcomes. Holden et al. (2021), in a comprehensive review, reported that existing research presents varied results on the efficiency and prevalence of academic misconduct in digital settings. Holden et al. (2021) recommended that further investigations should explore assessment types, academic integrity, and student demographics (e.g., age and motives for enrolment), to enhance both prevention and detection measures for cheating behaviours during online summative assessments.

As highlighted by Castañeda and Selwyn (2018), this transition to digital T&L poses multifaceted hurdles that transverse technological, pedagogical, and socio-cultural domains. These challenges significantly influence the experiences of both students and lecturers and, in turn, the effectiveness of DLS in delivering nursing and midwifery courses. Andersson and Grönlund (2009) reported one of the most comprehensive syntheses of evidence about the obstacles to the adoption and use of DLS. Andersson and Grönlund (2009) analysed 60 scholarly articles relevant to the barriers to e-learning, categorising these barriers into four overarching conceptual domains: technological challenges, course-related difficulties, individual factors, and contextual issues. Similarly, Ali et al. (2018) reviewed 259 peer-reviewed publications on barriers to the use of e-learning between 1990 and 2016. They reported 68 specific barriers under four conceptual themes: Technology (T), Individual (I),

Pedagogy (P), and Enabling Conditions (EC). These areas of concern were used to develop the “TIPEC” framework, a conceptual structure that reveals significant factors hindering the implementation and delivery of e-learning.

Furthermore, Ali et al. (2018) demonstrated that most of the scholarly articles tend to focus on a limited spectrum of barriers. This suggests that while insights from various authors offer valuable perspectives on the challenges faced when T&L in DS, their analysis of these barriers remains contextualised within the scope of their research settings. Hence a need for this study, which not only examines the phenomenon but also considers other players such as N&M students, lecturers, the characteristics of the N&M modules, and the digital platforms used within the research settings.

Amid the COVID-19 pandemic, Barrot et al. (2021) reported a lack of clarity regarding the role of existing virtual learning environments in the overall learning experience, highlighting ongoing challenges in educational preparedness for unforeseen circumstances. Wallace et al. (2020) disclosed in their study that students express satisfaction with online learning platforms due to their ability to engage with course content, establish study groups, and practice nursing skills using available course resources autonomously and confidently. JISC also carried out a national survey among university students in the UK in 2019 and reported that approximately three-quarters of the participants indicated that DLS increased autonomy and affirmed the ease with which learning could be integrated into their lives (Newman et al., 2019).

According to JISC (2021), the predominant mode of learning among the vast majority of students in UK HEIs during the COVID-19 pandemic was online, predominantly from their homes due to the nationwide restrictions. It is noteworthy that a substantial majority of these students rated the quality of online digital learning within their courses as either best imaginable, excellent, or good. Similarly, Bramer (2020) found that nursing and midwifery

students expressed a preference for using computers over mobile devices for online learning, citing the former's ability to leverage all features and optimise platform visibility.

Most authors before the national restriction reported a significant level of satisfaction with digital learning among students, stating various reasons. However, their reports revealed a discernible deficiency in clarifying the role of existing virtual learning environments within the broader learning experience. These underscore enduring challenges in educational readiness for unforeseen circumstances such as the COVID-19 pandemic, emphasising the need for strategic interventions in digital education planning. The COVID-19 pandemic was a pressing issue, but the report of the numerous investigations did not attempt to analyse its possible impact on lecturers and learners and how they make meaning of their learning experience during this period. It would be methodologically unsound to presume that the responses they elucidated in their study unequivocally pertain to either a pre- or post-COVID-19 context.

2.9 Gaps in Knowledge

Although DLS have broadened access to learning, making it available at previously inaccessible times and spaces, the fundamental nature of learning remains unchanged. The literature is not clear on the duration of the impact of the pandemic on HEIs and educational delivery. Nevertheless, it is anticipated that digital learning technology will assume an augmented role in the future (Krishnamurthy, 2020), considering the substantial benefits it can confer upon both educators and learners when deployed effectively. Possible gaps identified from this general review, which may be addressed in this study, will be further discussed.

Firstly, while expressing a preference for face-to-face T&L, students consistently indicate a notable degree of satisfaction with the quality of digital T&L they have encountered. There is a need to investigate further, especially within the context of nursing and midwifery, to understand their experience in DS and what can be done to improve its usability. Secondly, the

existing literature indicates that no particular delivery mechanism has demonstrated conclusive evidence of being successful in enhancing student outcomes. This highlights the complexity of digital learning modalities and the absence of a universally effective approach. Consequently, further research is required to explore the intricate interplay between pedagogical strategies, technological tools, and learners' experiences to better understand the conditions under which digital learning can be most effective.

Thirdly, the literature highlights the importance of the support that N&M students get to learn in DS. There exists a gap in knowledge regarding the requisite support mechanisms for students engaged in independent learning, necessitating further investigation and targeted intervention strategies. In addition, an existing gap in knowledge revolves around the relative importance of teaching quality in comparison to the modes of lesson delivery, necessitating an investigation to elucidate the optimal balance and factors influencing effective pedagogy within digital spaces. Furthermore, there is a gap in the current understanding regarding the significance of peer interaction in educational contexts and the significance of the lecturer's presence in DS, prompting the need for a comprehensive investigation to elucidate its multifaceted impact and how it can inform effective pedagogical practices.

2.10 Chapter Summary

This chapter critically examined the existing literature to explore T&L in DS to understand how this phenomenon is conceptualised and to identify gaps in knowledge. Major aspects discussed include the evolution of learning and digital spaces, the historical development of digital spaces, the transformative influence of the COVID-19 pandemic, and empirical findings on the experience of learners and educators. The chapter concludes with an analysis of the gaps identified, drawing insights from this literature review.

The next chapter presents an extensive account of the methodology and methods that informed this scientific inquiry.

CHAPTER 3

SCOPING LITERATURE REVIEW OF UK STUDIES

3.1 Chapter Outline

This phase of my doctoral research involved an extensive scoping review of pertinent literature to analyse and synthesise existing evidence within the UK N&M context and to identify gaps in knowledge that can be addressed in the main study. This scoping review methodology was used to search for peer-reviewed literature published between 2012 and 2023 to capture recent literature. The selected timeframe was strategically determined to allow for the examination of key developments in the field and to ensure the inclusion of recent articles pertinent to the study's aim. Furthermore, the COVID-19 pandemic was a critical turning point for digital education globally, and an increase in research publications on this subject was anticipated, justifying the scope. The gaps from this exercise informed the direction of inquiry for this research. Abstract from the scoping review was presented to an international audience at the Royal College of Nursing Education Conference & Exhibition 2023 (please see reference: Adesuyi et al., 2023).

3.2 Scoping Review Methodology

A scoping literature review was adopted due to its richness in methodology and wide application in the expanding field of health and nursing research, characterised by a large output of evidence (Munn et al., 2018). Scoping reviews are used to synthesise research evidence by exploring a particular field of study to identify themes, gaps, sources of evidence and the extent of research over a period (Arksey & O'Malley, 2005). This review was guided by Arksey and O'Malley's (2005) framework for conducting scoping reviews, as explained in Kahale et al. (2021). Arksey and O'Malley (2005) postulated a five-step process, which

includes: 1) establishing the review question; 2) identifying relevant studies; 3) selecting appropriate studies; 4) mapping the data; 5) arranging, summarising, and communicating outcomes.

3.2.1 Establishing the Review Question

The main question that informed this review was: what are the major concerns associated with the use of DS for T&L in N&M education in the UK? The intention is to understand how the use of DS in N&M in the UK has grown as a field and to identify gaps in knowledge. Google Scholar was used to perform an initial search to understand and articulate a strategy for the search (Haddaway, 2015). A librarian at Birmingham City University (BCU) supported in identifying appropriate databases to use for searching the topic and helped to appraise the search strategy. The eligibility criteria and keywords used to search the various databases are presented using the review question model SPIDER, as shown in Table 3.1.

Table 3.1 The Eligibility Criteria for the Study (SPIDER Model)

Criteria	Details and Rationale			
Sample (S)	Nursing and midwifery lecturers, Nursing and Midwifery Students, nursing and midwifery clinical educators/mentors, registered nurses undertaking training/modules.			
Phenomena of Interest (PI)	The various approaches to digital teaching and learning within the UK Higher education institutions (HEIs) and elements influencing its delivery within nursing/midwifery education. This also included the changes or transitions to the methods of investigations and the underpinning methodologies developed, and how the use of digital spaces in delivering teaching has grown as a field.			
Design (D)	Surveys, Questionnaire, Interviews, Focus Group Discussions (FGD)			
Evaluation (E)	Issues or concerns associated with the use of DS for T&L in N&M education in the UK			
Research Type (R)	This included all empirical, methodological, conceptual, and theoretical papers that addressed the phenomena of interest. Quantitative, qualitative, and mixed methods approach to capture all the studies that enrich the evidence for the results were included			
Language	All literature written in English because the study is interested in studies carried out within UK HEIs.			
Context	All UK studies to gather evidence for digital learning (DL) in the UK.			
Scoping	Articles published between 2012 - 2023			
Keywords used for searching the databases	OR	Teaching and learning (and related terms)	UK Nursing/midwifery education (and related terms)	Digital space (and related terms)
		Pedagogy, “teaching and learning”, “e-learning”, “UK online education”, teaching, “student learning experiences, “technology-enhanced learning”, teaching experiences, “Collaborative learning”	“Higher education” “HEIs “Nursing teaching-methods”, “Nursing Education Research”, Student Nurses online Nursing School”, “teaching nursing and midwifery” nursing education, UK Educational environment”, “nursing and midwifery education”, “midwifery education,” learning nursing and midwifery”	“Virtual learning” “virtual learning platforms”, “digital education frameworks”, “digital spaces”, “frameworks for learning in digital spaces”, “information computer technology”. “Learning management systems”, “Interactive systems” “Electronic learning”, “Blended-Learning “Educational technology”, “Distance learning”, “Distance education” “teaching and learning Software”
		AND		

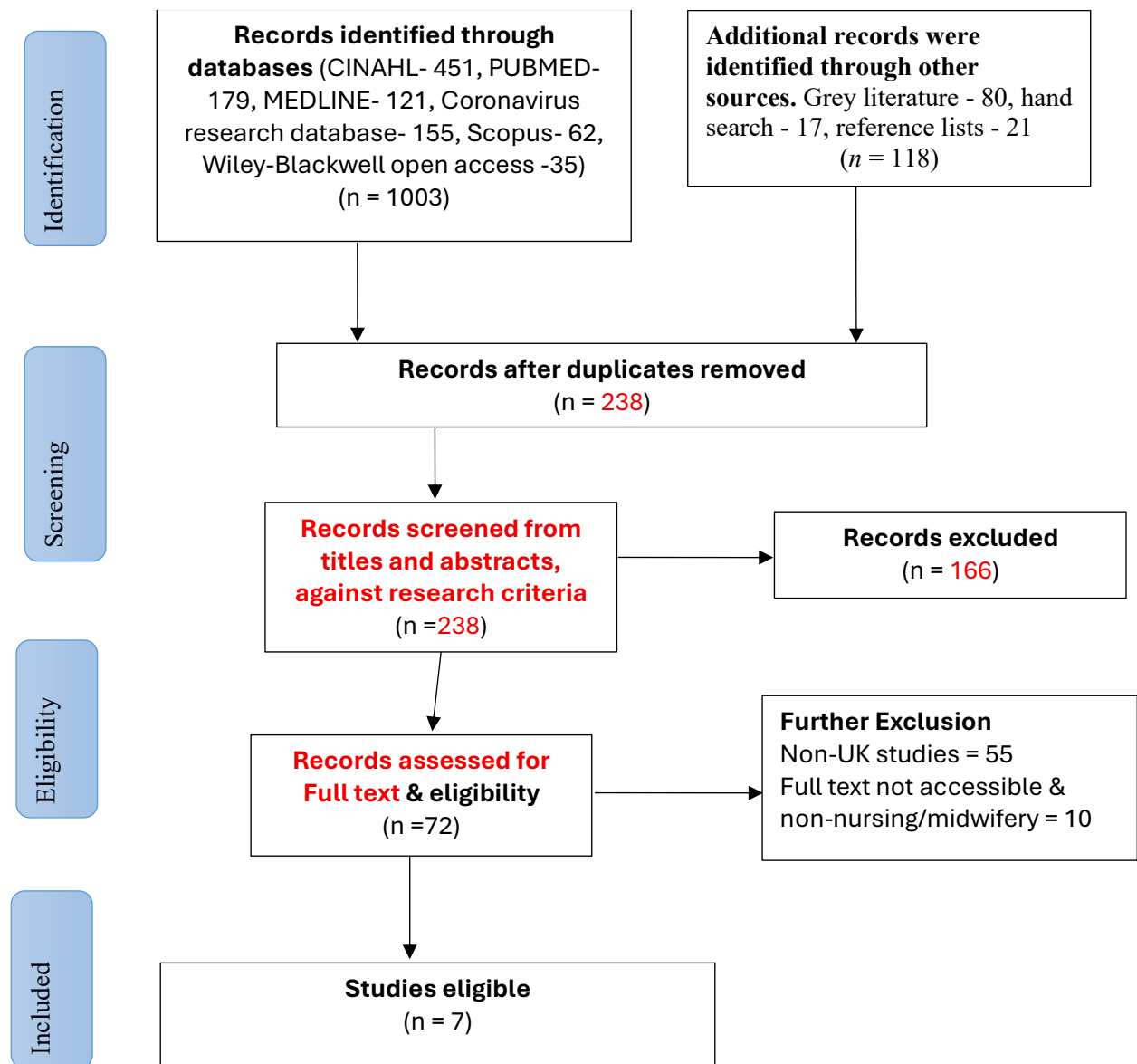
3.2.2 Identifying Relevant Studies

The literature search for papers published between January 2012 and December 2023 generated 1003 records and 118 additional records from other sources, which were stored in the Mendeley library. The databases used to identify relevant literature for the review, as shown in Figure 3.1, include (CINAHL= 451), (PUBMED =179), (MEDLINE =121), (Coronavirus research database = 155), (Scopus =62), (Wiley-Blackwell open access = 35), (Grey literature =80), (hand search =17), and (reference lists =21).

3.2.3 Selecting Appropriate Studies

Following the screening exercise, 883 duplicate records were identified and removed from the Mendeley library. This was subjected to a two-phase screening exercise, as Pham et al. (2014) advised. 166 studies were further excluded after the first screening with titles and abstracts. Further screening using the full text excluded 55 non-UK studies and 10 other records because the full texts were not accessible or did not conform to the eligibility criteria, particularly in relation to N&M education. In most cases, the inability to access the articles was due to subscription journals that the University did not have access to. Seven articles were finally selected for the review. Details of the screening process are shown in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) flow diagram (Figure 3.1).

Figure 3.1 PRISMA-ScR Flow Chart for the Final Articles Included in the Review (2012 - 2023)



3.2.4 Mapping the Data

PRISMA-ScR flow diagram is the standard recommendation for reporting a scoping review process (Aromataris & Riitano, 2014; Johanna Briggs Institute, JBI, 2014; Kahale et al., 2021). The primary data extracted were presented in Table 2.2 in line with the JBI data extraction framework (Aromataris & Riitano, 2014). Analysis of the extracted qualitative data was guided

by Thomas and Harden's (2008) method for thematic synthesis of qualitative research in systematic reviews. Quantitative analyses were descriptive; no meta-analysis was performed on the quantitative data. No critical appraisal or risk of bias assessment was performed on the selected literature, as some researchers (e.g., Arksey and O'Malley, 2005; Dijkers, 2015; Tricco et al., 2016) have argued that critical appraisal of literature and risk of bias assessment is not necessary for a scoping review. Since the focus of a scoping review is to explore what is already known in a field, attempting a critical appraisal could lead to the exclusion of important literature (Khalil et al., 2016; Peters et al., 2015).

Table 3.2 Data Extraction Table for the Selected Articles (2012 - 2023)

Selected Paper	Author, Year and Topic	Study Aim(s)	Study Design/ Method	Data Collection Method	Research Results/Findings
S1	Beer (2019)/ Designing a rubric to measure elements of transformative learning in online learning: A case study of a future-learn MOOC.	To evaluate MOOCs, how it can be applied to any online learning experience.	Mixed method	Quantitative and qualitative data were collected from online observation. Rubric design was used for evaluation.	Identified that the learners on this course are demonstrating elements of transformative learning at the lower levels of Mezirow's seven stages of critical reflection.
S2	Bramer (2020)/ Preregistration adult nursing students' experiences of online learning: A qualitative study	To explore preregistration adult nursing students' online learning experiences.	Qualitative	Data were collected purposively in 2 focus groups comprised of 12 nursing students.	Online learning 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.
S3	Scamell and Hanley (2017)/ Innovation in preregistration midwifery education: Web based interactive storytelling learning	To explore how low-cost, low-fidelity online storytelling, design using Moodle, can be used to enhance students' understanding of compassion and empathy in practice.	Mixed method intervention al study	Qualitative and quantitative data were collected through audit of the student's online activities.	The initial results indicate that it is both the low cost and positive student evaluations of web based interactive storytelling, which make this approach to preregistration midwifery education which suggests that this approach has significant potential for learning and teaching in midwifery education in diverse settings around the world.
S4	Gould et al., (2014)/ Tutors' opinions of suitability of online learning programmes in continuing professional development for midwives	To evaluate the suitability of an online learning resource for suitability in continuing professional development for midwives.	Mixed method	Quantitative data were collected by online questionnaire and qualitative data collected by interview.	Tutors did not consider that the online learning materials would be suitable for a wider audience with-out significant adaptation. They thought that uptake would increase need for tutorial input.
S5	Hart et al. (2019)/ Using blackboard collaborate, a digital web conference tool, to support nursing student's placement learning: A pilot study exploring its impact	To assess the impact of collaborate blackboard on nursing students	Qualitative pilot study	Focus group	The digital platform under study was found to be time efficient and easy to use technology. Despite technical glitches, i.e. occasional time delay and audio echo, participants concluded Collaborate was an efficient medium when placement needs were routine. Face-to-face was preferable when more intensive support was required.
S6	Petit dit Dariel et al. (2013)/Exploring the underlying factors influencing e-learning adoption in nurse education	To explore the factors influencing nurse academics' adoption of e-learning in their teaching practice.	Qualitative exploratory descriptive design	Data were collected purposively from 38 nursing and midwifery lecturers using Q set statements and post-sort interviews	He identified four main factors influencing the adoption of e-learning in nursing and midwifery education. They were summarised as: eLearning advocates, pragmatists, humanist and sceptics.
S7	Pullan et al. (2022)/ Undergraduate nursing students' experiences of online education: A cross-sectional survey.	To investigate undergraduate nursing students' experience of online education during the COVID-19 pandemic.	Quantitative cross-sectional survey	Data was collected via online survey from 54 students from all three levels (year 1-3)	They found a significant difference between individuals who have had little to no exposure to nursing education before COVID and those who had solely had face-to-face instruction in the past in terms of their perceptions of involvement, experience, and satisfaction.

Table 3.2 shows the articles selected based on the review topic, objectives, and inclusion criteria, as recommended for a scoping review, and indicated on the PRISMA flow chart (Iannizzi et al., 2021; Peters et al., 2015).

3.2.5 Arranging, Summarising, And Communicating Outcomes

Among the seven selected studies, three used a mixed-methods research design (n=3). One employed a quantitative approach (n=1), and the three adopted qualitative methodologies (n=3). Notably, only two studies were conducted with lecturers as the key participants, while the majority focused on students. A narrative synthesis was carried out on the data in line with the review question. For the quantitative studies, descriptive and inferential statistics were presented in a narrative style. Qualitative data were coded line by line, which generated descriptive themes and culminated in the final analytical themes. Three broad themes were identified and discussed in the following paragraphs.

3.2.5.1 *Lecturer's Perspective on DLS*

Two studies (Gould, 2019; Petit dit Dariel et al., 2013) have explored lecturers' perspectives on digital learning spaces (DLS) in N&M education. The limited number of studies in this field in the UK is suggestive of a notable gap in the literature regarding lecturers' experiences and perceptions of teaching in DLS. Even though students are central to T&L processes, lecturers play a major role in shaping educational experiences. Their perspectives are therefore crucial for improving pedagogical effectiveness and optimising DLS.

Gould (2014) reported that 90% of the lecturer participants found it easy to navigate through the online course contents, which aligns with the report from a UK national survey conducted by JISC (2020). However, a few others in Gould (2014) identified difficulty in accessing computers and the usability of DLS as challenging. Although this finding highlight that most

lecturers adapted well to DLS, they also reveal the variability in the experience of N&M lecturers, suggesting that T&L experiences in DLS are inherently individualised.

While Gould's (2014) study, conducted before the COVID-19 pandemic, emphasised the majority of lecturers reporting ease in navigating online course contents, Mukhtar et al. (2020), during the COVID-19 pandemic expressed reservations regarding lecturers' proficiency in navigating online modalities, indicating potential shifts and challenges in the academic landscape prompted by the global health crisis. Notably, Gould (2014) did not explicitly justify the choice of convenience sampling, potentially introducing bias. The subsequent qualitative phase of Gould (2014) did not yield findings divergent from the quantitative part. Despite employing a mixed methods design, the study's sample size of 60 for the cross-sectional survey phase and 10 for qualitative interviews raises concerns regarding statistical power and generalisability, as emphasised by Beck and Polit (2018). Although qualitative research does not inherently rely on large sample sizes, achieving data saturation remains crucial, as highlighted by Hennink et al. (2017).

Petit dit Dariel et al. (2013) identified four distinct categories of adopters of DLS, including DLS advocates, pragmatists, humanists, and sceptics. Petit dit Dariel et al. (2013) emphasised that DLS advocates saw potential in e-learning to improve nurse education and prepare future nurses for their evolving role; "Humanists" avoided e-learning because they valued human interaction; "Sceptics" doubted that technology could improve learning outcomes; and "Pragmatics" only used e-learning to supplement what they covered in class.

These classifications provide a nuanced understanding of the varying levels of enthusiasm, pedagogical alignment, and reservations regarding e-learning integration within the discipline. The classification of adopters, although insightful, risks oversimplifying the complexities and potentially fluid nature of individual adoption processes. Several factors likely influence lecturers' teaching experience in DLS; it is important to investigate these factors and how they

can be considered when constructing DLS. Beetham and White (2013) suggested that comfort and technological knowledge need to be considered when designing an online programme, and lecturers need to act as role models, especially in the areas of accepting new technology that could enhance students' learning experiences. A matter of concern is how N&M lecturers can serve as role models for students in technology use, given that most educators only started using digital spaces for educational activities after the COVID-19 pandemic and required some time to master them.

Only two articles in this review explored the perspective of N&M lecturers with T&L in DS. This is a knowledge gap that must be filled. Both studies emphasised the potential for pedagogical modifications to enhance the effectiveness of T&L activities in DLS, a perspective further reinforced by Beer (2019). This highlights the need for a critical reassessment of digital learning pedagogies. Given the rapid evolution of DLS and pedagogical frameworks, the findings from the two studies, though relevant at the time, may require re-evaluation within the contemporary N&M education contexts. Further research is required to understand patterns of adopting DLS over time, particularly within the COVID-19 context and to explore the various factors that facilitate or hinder sustained engagement with e-learning.

3.2.5.2 *Benefits of Digital Learning Spaces*

Five studies (Beer 2019; Bramer 2020; Hart et al., 2019; Pullan et al., 2022; Scamell and Hanley 2017) described the benefits of DLS in N&M education from the student's perspective. Bramer (2020) found that OL platforms provided students with opportunities to learn new skills such as risk assessment, effective communication and plotting a care pathway for self-harm patients, while also fostering reflective practice. Pullan et al. (2022) reported findings consistent with those of Bramer (2020), further highlighting the role of digital spaces in sustaining educational activities, facilitating communications between students and lecturers and enabling easy access to learning content. Although Bramer's (2020) findings offer valuable

insights into the benefits of DLS, they do not provide details on how reflective practice is enhanced and how these benefits compare to classroom learning. In addition, the study lacks clarity on how data saturation was achieved, given the limited sample size of 12 nursing students. According to Rahimi and Khatooni (2024), data saturation is essential in qualitative research designs to ensure credibility and quality in the research process. Furthermore, since the study was conducted during the early stages of the COVID-19 pandemic, it may not fully capture the long-term impact of OL or account for crucial issues that emerged as digital education evolved in response to the crisis.

While Pullan et al.'s (2022) study provided a more contemporary perspective on nursing students' engagement with online education than Bramer (2020), the cross-sectional approach to the inquiry limits its ability to capture in-depth issues, and what Creswell (2013, 48) claimed to be "silent voices" that offer nuanced and contextually rich insights into the phenomenon under investigation. Furthermore, the reliance on a relatively small sample size raises concerns about the generalisability of the findings, particularly given the diverse and evolving challenges faced by students in DLS.

Scamell and Hanley (2017) identified storytelling as an effective pedagogical approach in DLS, highlighting its capacity to deliver clinical skill modules, patient care, and assignments, which aligns with the findings of Daley et al. (2019). Nonetheless, the extent to which this teaching approach facilitates learning across diverse N&M courses and student cohorts remains underexplored. The findings from two studies (a systematic review and a quasi-experiment, respectively) conducted by Manisto et al. (2020) and Manisto et al. (2019) highlighted the potential of collaborative learning in DLS to include problem-solving skills, satisfaction, motivation for learning, improved interaction, and collaboration. Beer (2019) further argued that DLS integrating textual and audiovisual elements was effective in initiating transformative learning. Coleman (2021) and the Joint Information Systems Committee, JISC (2021)

supported this claim. Similarly, Leigh et al. (2020) reported that even after using Zoom video conferencing tools to deliver lectures, learning became more effective with the incorporation of other digital systems such as chat rooms, quiz platforms and Moodle for student engagement and questioning.

Beyond pedagogical impact, time efficiency has been widely recognised as a major advantage of DLS in addition to cost-effectiveness and ease of use (Beer, 2019; Bramer, 2020; Hart et al., 2019; Scamell & Hanley, 2017). Although Hart et al. (2019) reaffirmed the perception of DLS as time-efficient and user-friendly, the preliminary nature of their study and the small sample size limit the strength and generalisability of their conclusions. Similarly, Pullan et al. (2022) reported a significant effect of student year group on engagement in online education, with engagement levels declining as students progressed through their studies (year 3 < year 2 < year 1) [$F(2, 51) = 5.16, p = .009, \eta^2 = .17$]. This pattern raises critical concerns regarding the sustainability of student engagement in DLS over time and the potential need for tailored pedagogical strategies that account for shifting motivational factors as students advance in their programs.

None of the articles in this review explored how online learning and its features can ensure student engagement. Further research is required to explore this. While these studies provide valuable contributions to the discourse on DLS in N&M education, they primarily focus on pedagogical models and engagement metrics rather than the lived experiences of students and lecturers navigating online teaching and learning. Given the increasing reliance on DLS, particularly post-COVID-19, there is a pressing need for research that explores not just the effectiveness of digital pedagogies but also the nuanced experiences, challenges, and adaptive strategies employed by both students and educators in this evolving landscape. My study aims to address this gap by critically examining the lived experiences of N&M students and lecturers, offering deeper insights into how DLS shape T&L within the discipline.

3.2.5.3 *Challenges of Digital Learning Spaces*

Five studies (Beer 2019; Bramer 2020; Hart et al., 2019; Pullan et al., 2022; Scamell & Hanley 2017) highlighted the challenges of DLS in N&M education based on students' perspectives. Bramer (2020) identified poor Wi-Fi connection as the most significant barrier to DLS among nursing students, followed by challenges such as limited access to DLS, high mobile data costs, specialist software needs, the absence of private study space, and lack of suitable digital devices. This aligns with Daly et al. (2019) and JISC (2021), which also highlighted infrastructural limitations as a common issue in DLS. Such technological constraints underscore a fundamental drawback of DLS. Wallace et al. (2020) emphasised that nursing students believe that staff are inadequately prepared for online teaching, further complicating the effectiveness of digital pedagogies. This suggests the need for a dual focus in DLS research, addressing both student and lecturer experiences to enhance online teaching and learning.

A preference for blended learning, combining online with face-to-face classroom modalities, has been consistently reported in the selected review articles (Beer, 2019; Bramer, 2020; Hart et al., 2019; Pullan et al., 2022; Scamell & Hanley, 2017). Hedges (2017) reinforced this perspective, noting that while OL currently delivers good results, it cannot entirely replace traditional face-to-face delivery, especially when there is a need for students to have a voice in learning or actively engage. Similarly, no significant association was found in Mee's (2014) findings when the learning outcomes of nursing students in distance learning and face-to-face courses were compared. Semwal et al. (2019) further argued that digital education is as effective as traditional teaching methods. However, these studies did not explore the nuanced ways in which blended learning can be optimised to preserve the strengths of both modalities while mitigating their respective limitations. Given the evolving landscape of nursing and midwifery education, further research is needed to establish how OL can be combined with classroom learning in a way that preserves the unique benefits of each mode of learning.

The findings from all these studies still leave the critical question of whether there are any courses or modules that N&M students would prefer to take online rather than face-to-face. It also necessitates an exploration of potential strategies to minimise social isolation in DLS. While existing studies provide important insights into the challenges associated with DLS, they do not fully capture the lived experiences of N&M students and lecturers engaged with online education. This thesis aims to address this gap by critically examining the complexities of T&L in DS, with a particular focus on the social, technological, and pedagogical dimensions that shape these experiences.

3.2.6 Scoping Review Conclusion

This scoping review suggested that nursing students experience more confidence in DLS when provided with adequate support. However, while the reviewed literature acknowledges the importance of supporting students in DLS, there remains a lack of clarity regarding the specific types of support required by both N&M students and lecturers. Understanding the nature and extent of this support is crucial to optimising digital pedagogies and requires further investigation. Although students value the autonomy afforded by DLS, they expressed dissatisfaction with the negative impacts of self-paced digital learning (DL). This paradox underscores a fundamental tension and the structured guidance necessary to ensure meaningful engagement. Existing studies did not adequately explore how to balance self-directed learning with institutional requirements to create an optimal learning experience. Further research is needed to examine strategies that support students while maintaining a structured learning progression.

Of the selected articles, only two were published during the COVID-19 pandemic, suggesting that most of the studies were conducted either pre-COVID-19 pandemic or at the onset. As a result, these studies may not fully capture the significant transformations that DLS have undergone in response to the pandemic's long-term impact on higher education. This is a

significant gap in the literature, underscoring the need for more recent research that critically examines the evolving nature of DLS and the pedagogical shifts that have emerged in a post-pandemic educational context. Moreover, while a preference for blended learning is well documented, none of the studies reviewed investigate whether students perceive certain modules or subjects as more suitable for online delivery as opposed to face-to-face modalities. This gap in the literature raises critical questions about whether specific courses contribute to the social concerns in DLS and what pedagogical strategies could mitigate these effects. Addressing these concerns is essential to developing DLS that not only enhances accessibility and flexibility but also fosters social connectivity and engagement. This doctoral research aimed to fill this gap by exploring the lived experiences of N&M students and lecturers, providing deeper insight into the nuanced challenges and opportunities of online teaching and learning.

CHAPTER 4

METHODOLOGY

4.1 Chapter Outline

This chapter explained the methodology and methods that were used to answer the research questions. This research aimed to explore the experience of nursing and midwifery (N&M) students and lecturers with teaching and learning (T&L) in digital spaces (DS). The previous chapter presented an extensive review of relevant literature to identify gaps in knowledge that guided the formulation of these objectives. T&L is complex, and the experiences of student nurses and educators can be subjective, necessitating an inquiry that takes into account varying perspectives. Evidence from the review of the literature revealed a paucity of studies focused on understanding the experience of N&M students and lecturers. To ensure the efficiency and effectiveness of T&L in DS, it is crucial for more scholars to conduct research in this field.

Research questions and objectives for this study were formed from the analysis of the gaps from the scoping literature review to contribute to understanding the experiences of N&M students and lecturers with a focus on identifying ways in which it can be used to improve learning outcomes for N&M students. The specific objectives were: 1) to establish the current landscape of Digital T&L in the UK context for N&M education, 2) to explore the experiences of N&M lecturers and students within digital T&L spaces, 3) to examine the dynamics of interactions among students, lecturers, and course content in digital spaces and analyse their influence on the T&L process in N&M education, and 4) to identify the key factors that enhance or hinder the effectiveness of digital T&L spaces in N&M education, providing insights into best practices and potential areas for improvement. The research questions for this study included 1) What is the context of digital learning spaces (DLS) in the UK N&M education? 2) What are the experiences of N&M lecturers and students with DLS?

To answer these questions, an appropriate research design was articulated to understand the experience of N&M students and lecturers with T&L in DS. This qualitative inquiry is situated within a constructivist and interpretative paradigm, guided by interpretive phenomenology (Saleem et al., 2021). According to the Critical Appraisal Skills Programme (CASP, 2018), qualitative methodologies are appropriate for interpreting subjective experiences and are appropriate when there is a dearth of knowledge about a phenomenon. Lobo (2005) asserted that qualitative research is the basic knowledge for the successive development of nursing interventions tailored to a phenomenon. Similarly, Creswell (2013) claimed that a qualitative research design is appropriate for exploring social issues, especially when the goal is to study a group or population, identify variables that cannot be easily measured, or hear silenced voices.

My study design as a developing researcher was not clear and established at the outset of the project but rather grew gradually as I carefully analysed my research objectives and how I might realistically attain them. This chapter also describes the rationale for the choices made to obtain trustworthy evidence.

4.2 Interpretative Paradigm

Schutz, as cited in Bryman (2008), signposted an evolving philosophical perspective when he began to argue that the world of nature, as elucidated by natural scientists, is much more than atoms, molecules, and electrons. This argument contends with the widely spread idea of empiricism. For instance, Natural science maintains that natural phenomena can be described, understood, and predicted based on empirical data obtained through observation and experimentation (Barr, 2006).

I had to take a philosophical stance that would guide every aspect of my research. Bearing this in mind and reviewing the literature, I identified diversity in the philosophical beliefs of

researchers and how they perceive reality regarding the suitability of research methodologies. According to Bryman (2008), an epistemology that can reflect and capitalise on this diversity is required. With this in mind, I observed the qualitative and quantitative research traditions, paying close attention to their philosophical contrasts. I found that most authors frequently portray both methods in starkly opposing terms. Silverman (2004: 1) described this tussle as living in "armed camps" and "fighting internal battles." Morse and Field (1996: 2) also referred to it as a "rift" between advocates of the two ideals. I am more inclined to agree with Burgess et al. (2006), who asserted that such a battle is a waste of effort. Considering this idea, I found it critical to analyse the relative importance of each strategy, as I now describe.

Based on the information from Table 4.1, a qualitative study, as in this thesis, differs from a quantitative approach located within a positivist tradition, which lays more emphasis on the scientific method and a detached position of the researcher, including the use of statistical measures but does not consider the social and individual factors that influence their experience (Bonache & Festing, 2020). In other words, a positivist considers reality objective and can be measured with tools and principles borrowed from the scientific world. According to Park et al. (2020), quantitative researchers employ research methods such as structured questionnaires and elaborate sampling techniques. There is less room for doubt or debate in this paradigm in terms of the way some of the research methods are applied but differ in the type of data generated (Burgess et al., 2006). I concluded that a positivist paradigm was not appropriate for my study because I intend to understand the interpretation of nursing and midwifery students' and lecturers' experiences with teaching and learning in digital spaces.

Table 4.1 Philosophical Assumptions

Paradigm	Ontology <i>[What is reality?]</i>	Epistemology <i>[How can I know reality?]</i>	Axiology <i>[Value placed on the knowledge]</i>	Theoretical Perspective <i>[Approach to knowing]</i>	Methodology <i>[How you go about finding out]</i>
Positivism	Reality or truth is single	Reality can be measured	[Value neutral] No value to the knowledge.	Positivism Post-positivism	<ul style="list-style-type: none"> •Experimental research •Survey research
Constructivist/Interpretive	No single truth or reality. Reality is created by individuals or group	Reality needs to be interpreted. It discovers the underlying meaning of events.	[Value laden] The researcher attaches value to the knowledge	Interpretivism <ul style="list-style-type: none"> •Phenomenology •Symbolic interactionism •Hermeneutics •Interpretative Phenomenological Analysis •Critical Inquiry •Feminism 	<ul style="list-style-type: none"> •Ethnography •Grounded Theory •Phenomenological research •Heuristic inquiry •Action Research •Discourse Analysis •Interpretative Phenomenological Analysis •Feminist Standpoint research

Source: Adapted from Collis and Hussey (2008) and Khosrowhahi (2011)

Sandelowski (2014: 4) maintained that “strength and weakness are not attributes of research approaches but rather of judgments researchers make about them”. Looking back at the onset of my doctoral research, it appeared more like a steep learning curve. I commenced the journey with the intention of documenting the truth, discerning reality, and generating hitherto unseen understanding. Reflecting a little deeper on my study and evidence synthesised from the literature, I realised that if I strictly adhered to the methods of data collection that diminish the scope for individual judgement and subjective bias, I was not even assured of achieving what Eisner (1992) referred to as "ontological objectivity". According to Eisner (1992), understanding and perception are components of a system that permits us to understand and distinguish certain things but not others, and this system plays a key role in determining what we see and understand. This was reinforced by Knudsen et al. (2021) in their description of perception as it relates to objectivity. Eisner (1992) further argued that there is a reluctance to abandon the concept of objectivity since doing so would make us feel off-target and without significance. This has been a subject of hot debate in academia. Phillips (1989) contended that extreme relativism places us in an unjustifiable situation and that renouncing objectivity would imply recognising that any point of view is equally valid.

After evaluating several perspectives, I realised that a qualitative approach rooted in the interpretive tradition aligns more with the aim and objectives of my study. This philosophical paradigm, also known as naturalism or constructivism, considers reality an elusive concept constructed by the research participants rather than a fixed entity (Tarling and Crofts, 2002). According to Lincoln et al. (2011), constructivism or interpretivism presents ontological relativism and subjective epistemology, where the direction of inquiry is to obtain comprehension through the interpretation of subject perceptions. Researchers who choose this paradigm perceive truth or realities as many, a mind construct and co-constructed by the

researcher and the participants (Killam, 2013). Similarly, Wright and Losekoot (2012) agreed that constructivists see reality as complex, subjective and constructed since it was built on the assumption that truth is multifaceted. This means that reality or truth is subjective, dynamic, and related in terms of context and can have multiple mental constructions (Lincoln & Guba, 2013). Teaching and learning experiences can be seen as individualistic, suggesting that the perception of reality in this study is multifaceted and can only be constructed from the participant's point of view. The constructivists consider beliefs to be the genuine account of many realities, and the veracity of these narratives depends on how these realities are encountered (Bradshaw et al., 2017), see Table 4.1.

To achieve my research purpose of exploring the experiences of N&M students and lecturers, I found that an interpretive qualitative research approach through an interpretative phenomenological analysis is more appropriate. According to Polit and Beck (2017), qualitative research is becoming more significant in the development of propitious nursing and midwifery interventions and efforts to evaluate their efficacy. These interventions are not just limited to medical or clinical applications but include broader domains that influence health, education, and well-being. Evidence suggests a growing level of recognition accorded to individual perspectives in developing effective interventions, which can only be elicited in a qualitative approach (O'Cathain et al., 2019). In an academic context, qualitative research provides the opportunity to discover additional strategies, patterns, themes, or contexts that the researcher may not have thought of but may be vital to the process of adapting digital spaces to effective teaching and learning (Enas et al., 2021).

This paradigm allows me to admit that reality is a far more elusive idea, mentally constructed by researchers and their participants. In attempting to understand the experience of N&M students and lecturers in DS, I realised the need to rely on their subjective perceptions so that

my conclusion would be a result of our interaction. Then, the experience of N&M students and lecturers can be explored in depth when the researcher is considered an important part of the research, therefore demonstrating the possibility of a co-construction of knowledge between the researcher and the research participants. Assuming this position and accepting that all knowledge is flawed ensures the research is conducted with integrity.

4.3 Interpretative Phenomenological Analysis

In a similar way to what I have discussed in my research journey in section 2.1, the path to my choice of research design was not straightforward. I considered several research designs after assuming a philosophical position and found that many of these established designs are unsuitable for my study. Higgins (2018) asserted that academic imagination, engaging ideas, and the productive questions that it intends to address demand more than standardised research procedures. This imagination aims to highlight the developing and unpredictable aspects, as argued by Chesworth (2018), who opposed the cautionary advice in children-related research that emphasised the need to shift from methodological execution to embracing uncertainty, ethical responsiveness, and welcoming possible realities.

At a juncture in my journey, I considered using a Grounded theory (GT) design because it has the potential to achieve my research purpose, but I rejected it after carrying out a pilot study for the following reasons. Firstly, as an inductive approach to research, GT is considered suitable for investigating fields where there is a dearth of literature, as well as the major processes related to a change in social groups and understanding phenomena within a social context (Handberg et al., 2015). This design appealed to me because my scoping review revealed a significant dearth of literature, which is a significant gap. My doctoral research commenced with a phase of systematically searching the literature using a scoping review methodology. The purpose was to explore what is already known in the field and to identify

gaps in knowledge, which, according to Glaser and Strauss (1967), was against the guiding principles for undertaking GT research. Their position regarding prior knowledge of the field underscores the need for GT researchers to approach the field without any predetermined assumptions or prior theoretical frameworks, consequently discouraging the need for an extensive literature review. Conversely, the contributions of Charmaz (2000, cited in Denzin and Lincoln, 2011) to GT methodology challenged the earlier requirement of having no prior knowledge of the field. She highlighted the potential benefits of a prior interaction with the literature in shaping insightful analysis. Her position opens valuable possibilities for researchers to bring in their knowledge and expertise in the field under study. Despite acknowledging the importance of Charmaz's (2000) assertion, I did not commit to this research approach. The debate over whether initial knowledge of the field strengthens or undermines theoretical emergence remains an ongoing debate among grounded theorists and this conceptual disagreement was one of my reasons for considering GT unfit for my study.

Secondly, research questions were articulated from the gaps in knowledge identified from the scoping review phase of my study, which was also against the guiding principle of GT studies. Strauss and Corbin (1998) maintained that research questions should not be formed ahead of the study, a stance that contends with the suitability of a GT methodology within the context of this research. Lastly, the purpose of my study was not to postulate a theory that describes people's experiences but rather to understand and interpret the experience of N&M students and lecturers with T&L in DS. Deviation from these guiding principles may potentially weaken my study methodology and produce unreliable results. After my pilot study, I reflected on the research process, including my decisions, the methodology and methods and realised that following the tenets of a GT would limit my study in terms of the quality of data collected relating to the experiences of N&M students and lecturers. Hence, my decision to consider other qualitative research approaches.

Some authors have noted the existence of unclear boundaries between methodologies such as phenomenology and Grounded Theory (GT), despite being distinct qualitative approaches, thus making it challenging for researchers to choose the appropriate methodology (Green, 2014; Singh & Estefan, 2018; Starks & Brown Trinidad, 2007). While methodologies like Phenomenology have proven effective in exploring the lived experience of individuals (Smith, 2018), it is not suitable for this study because it does not consider social factors that surface within digital spaces. Ethnography is another approach involving the immersion of the researcher in a social setting for a lengthy period, regularly observing the behaviour of the research participant is most suitable in exploring subjects that have to do with language and culture (Bryman, 2008). Similarly, Jensen et al. (2022) described a new emerging methodology called “digital ethnography” as an approach that incorporates other methods of data collection beyond the conventional ethnography to explore digital learning. However, this approach is still novel, and its full potential is unknown. Participant observation is the most important means of data collection in this approach and, at times, supplemented with interviews (Hjorth et al., 2017).

Narrative approach is another methodology used to examine consequential stories of individuals in their own words and world (Ntinda 2018). It is based on the premise that people understand and give meaning to their lives through the stories they tell (Andrews et al., 2013; McMullen & Braithwaite, 2013). However, this was not suitable for my study as it focused not only on the stories within their experiences but also on the meaning constructed by individuals within the context under study. I considered IPA above these approaches because I intended to gain insight into the lived experiences of N&M students and lecturers in DLS. I believed that the experiences of N&M students and lecturers would be better explored in an approach grounded in the data provided by the N&M students and lecturers themselves. Moreover, the experience of N&M students and lecturers in DLS encompasses not only cognitive aspects but

also emotional and behavioural components, which are developed through everyday interactions within the learning space.

IPA began as a strategy for conducting experiential research in the 1990s in the field of psychology and has since become prominent in the health and social sciences as a tool to comprehend and interpret complex phenomena in people's experiences (Smith, 1996; Tuffour, 2017). The goal of IPA is to discover what a lived experience means to a person through an in-depth reflective inquiry process (Smith et al., 2009). According to Husserl (2001: 168), IPA employs a phenomenological thought process to return "to the things themselves" by exploring and interpreting the meanings individuals give to their experience. However, IPA recognises that people are all influenced by the worlds they live in and the experiences they have. As a result, IPA is considered an interpretative process between the researcher and the participants, heavily influenced by Heidegger's interpretive phenomenology, descriptive hermeneutics, and idiography (Smith, 1996; Tuffour, 2017). In other words, it involves studying people's subjective experiences by analysing and interpreting their view of the world.

Table 4.2 Philosophical Foundations of Interpretative Phenomenological Analysis (IPA)

1	Descriptive	
	Purpose	Involves description of individual experience without interpreting the meaning
	Experts involved & Contributions	Husserl - To value an individual's experience, the researcher must isolate every pre-conceived idea
	Applications to IPA	<ul style="list-style-type: none"> - Embarks on continuous reflection on the phenomenon itself, rather than attempting to fit it into pre-set standards. - Involves bracketing, a process in which each prior case is set aside before the researcher reads and analyses the following transcript.
2	Interpretive	
	Purpose	Presents the lived experience of individuals and what they meant to them.
	Experts involved & Contributions	<ul style="list-style-type: none"> - Heidegger: researchers are part of the research. - Merleau-Ponty: Our being in the world influences the way we interpret - Sartre: The state of becoming is continuous.
	Applications to IPA	<ul style="list-style-type: none"> - The researcher's perspective is considered when interpreting an individual's meaning-making. - The researcher may empathise and observe but must view phenomena from their own point of view or way of being in the world; they cannot totally share the experiences of others. - The narrative originates from interpretation.
3	Hermeneutic	
	Purpose	Used to interpret the text of individual accounts.
	Experts involved & Contributions	<p>Schleiermacher: Grammatical and psychological interpretation are required for comprehension.</p> <p>Heidegger: acknowledges the place of the researchers in bringing prior thoughts and experiences to the study.</p> <p>Gadamer: Making sense of phenomena is a synthesis of participant and researcher viewpoints.</p>
	Applications to IPA	<ul style="list-style-type: none"> - Participants' accounts can be valued through extensive and relevant analysis, revealing insights into their lived world. - Making sense of the participants narratives necessitates close interaction with the data but interpretation is only possible in the light of our own experiences necessitating a cyclic approach to 'bracketing.' - The researcher cannot be isolated from the participants, interacting with their world in a way transforms the researcher.
4	Idiography	
	Purpose	Recognises and highlights the perspectives of people in context
	Experts involved & Contributions	
	Applications to IPA	<ul style="list-style-type: none"> - Systematic analysis of each case.

The table 4.2 shows the influence of major philosophies on IPA (Peat et al., 2019).

The various philosophical tenets that form the framework for IPA are described in Table 4.2. These major contributions revealed how IPA approaches inquiry relating to individual lived experiences. For instance, the researchers set aside premonitions through continuous reflection before commencing the interview, not with the mind of absolutely excluding it from the study but acknowledging its presence and how it may influence the study. This highlights the place of the interaction between the researcher and the research participants when systematically analysing the people's experience in the light of the world they live in. These interactions not only influence the interpretation but also transform the researcher and present individual experiences as vitally important. In this study, the phenomenological experiences of N&M students and lecturers were elucidated in the Focus Group Discussion (FGD) and semi-structured in-depth interviews. These phenomenological claims of their lived experience reveal how they construct reality and how they experience digital T&L. The hermeneutic interpretation of these claims, as captured in the transcription, was carefully constructed with particular attention to both the participants' articulated voices and their non-verbal reactions. This aligned with Yardley's (2000) principle of commitment and rigour, which serve as key criteria for assessing the quality and credibility of qualitative research.

Phenomenology is based on the philosophical tradition created by Edmund Husserl in the early twentieth century, which was later elaborated on by his followers in German universities and then spread throughout the world (Zahavi, 2003). Smith (2018) asserted that phenomenological studies have proven to be effective in exploring the lived experience of individuals. A phenomenological approach to qualitative inquiries tends to explain the nature of things, the essence, and the veracity of the phenomena (Fuster, 2019; Husserl, 1998). Phenomenology, as described by Coates et al. (2019) and Karademir et al. (2020), enables purposeful observations to provide insight into people's perceptions of experience through rigorous theme analysis. The truth of an experience is subjective and can be understood only through embodied perception,

with the lived body as embodied consciousness (Finlay, 2011; Husserl, 1931). For instance, N&M education, where “care” is being taught as its core discipline, reflects the intricacies of the T&L process in the field (Manning et al., 2017). Furthermore, due to individual differences in the way the world is perceived, intervening factors and unstable environmental situations, it is safe to hypothesise that it would be nearly impossible for each N&M student and lecturer to have the same experience in DS.

Phenomenology is not concerned with generating a theory, unlike other methodologies like GT. According to Finlay (2011), phenomenologists do not strive to comprehend individuals by "inquiring about a subjective inner realm." Rather, understanding arises from inquiring 'how the person's world is lived and experienced,' and reality is comprehended through embodied experience. Peat et al. (2019) asserted that IPA is specifically beneficial for understanding understudied topics or perspectives and, unlike other phenomenological research methodologies, it provides instructions on how to approach a phenomenon of interest, including sampling, data gathering, and analysis. In addition to the paucity of literature on T&L in DS in N&M education discovered in the scoping review of literature, Devlin and Samarawickrema (2022) claimed that more areas of uncertainty have been added to the effectiveness of T&L in Higher Education Institutions (HEIs) due to the global pandemic, hence, the need for an IPA in this field. In IPA, even though the place of the researcher is fundamental to the research process, the research participant is still considered the experiential expert whose experience cannot be simply revealed (Smith et al., 2009). Therefore, it is anticipated that N&M lecturers' and students' experience with T&L in DS cannot be easily explored by just asking them a list of questions, but rather through in-depth interaction. Preferably, a rich engagement and interpretation process involving both the researcher and the respondents. This involvement is known as a twofold hermeneutic method of analysis, in which

the researcher attempts to understand the participants as they give meaning to their world (Smith & Osborn, 2007).

IPA is both used as a research design and a conceptual framework for interpreting the lived experiences of individuals or groups (Smith et al., 2009; Smith & Nizza, 2021). It is interesting how the researcher's existing assumptions interact with fresh experiential situations. Heidegger (1962) argued that, rather than dismissing our preconceived notions before dealing with participants and other aspects of the research, researchers should recognise how they continuously present themselves during the study process. As a result, IPA researchers must be aware of their own views, perceptions, and experiences to reinforce their interpretations rather than become an impediment to making meaning of the participants' experiences (Smith et al., 2009). Peat et al. (2019) suggested that this can be accomplished through the practice of reflexivity. Having a background in nursing and a dual position at the university as a doctoral student and an educator, it is important to be aware of my preconceived ideas as I approach this study to prevent what Smith et al. (2009) described as a possible hindrance to interpreting the participants' experience. Saunders et al. (2016), supported by Denicolo et al. (2018), maintained that completing a reflective journal can help clarify the researcher's personal thoughts, enabling a full learning cycle to occur. Denicolo et al. (2018) argued that reflexivity must be developed throughout a doctoral study since the critical examination of one's thinking and learning determines the axiological position. A reflexive note was kept throughout the research process to examine the researcher's feelings, reactions, motives and how they may influence each aspect of the study (see Appendix G for samples).

While phenomenological studies are concerned with individual experiences, several evidence show that the social aspect of the phenomenon is also vital to the experience (Emiliussen et al., 2021; Groenewald, 2004). Although it may be argued that the experience of N&M students and

lecturers is individualistic, neglecting the social context of DS as a T&L environment could mean losing out on vital information that could better our understanding of this process. Jensen et al. (2022) maintained that T&L in DS are no less socially and politically incorporated than on-campus face-to-face education.

I, therefore, considered IPA a suitable design and conceptual framework for understanding the experiences of N&M students and lecturers with DLS. The data collection methods and mode of presenting the data slightly differ from the specifications for IPA, but bearing in mind the need to maintain rigour, I have provided rationales for every decision and step taken in the study in subsequent sections in this chapter. Tenny et al. (2022) and Tesch (1990), after studying several types of qualitative research designs, argued that research methods or approaches must not always be done the same way as documented. I agree with the assertion of Burgess et al. (2006) that the development of one's research voice or thought pattern without the limitation of tradition is key to discovering the meaningfulness of a study.

4.4 Pilot Study

A pilot study was conducted in the initial phase of this study to understand the field and assess the feasibility of the chosen research design and data collection methods. A pilot study is often referred to as a small-scale study designed to engage and familiarise the researcher with the research data, identify challenges associated with participant recruitment, determine the acceptability of the instrument or protocol, and comprehend the study's method and methodology (Janghorban et al., 2013; Polite and Beck, 2006). Kim (2010) maintained that if pilot studies are done, they can allow the researcher to refine the sampling technique and identify effective methods of recruiting respondents. Similarly, Wijk and Harrison (2013) argued that using a pilot study in qualitative research can ensure that ethical and practical issues that jeopardise the main study are clearly identified and managed.

I undertook this pilot study to assess the applicability, feasibility, and practicality of the research design I initially considered. The second reason was to evaluate the effectiveness of the triangulated data collection strategies, which included a semi-structured in-depth interview, focus group interviews, and observation.

4.4.1 Pilot Study Methods

With the help of department heads and module leads, general invitation emails were sent to nursing and midwifery lecturers and students, providing sufficient information about the study, enough for them to make informed consent. Craig (2014) claimed that online recruitment is a very quick and easy means of recruitment, but researchers must be wary of bothering potential participants with too much information that may include technical terms. Two lecturer interviews were scheduled within a few days, and the third interview was in the following week. Three students responded and were willing to join the focus group discussion. Both the lecturer and student respondents prefer to have the interview on a digital platform, preferably MS Teams (as the platform approved by the university).

Respondents were informed that they could suggest any of their colleagues who meet the criteria to partake in the study. This is called the snowball sampling technique, which Polit-O'Hara and Beck (2006) described as a non-probability sampling technique in which the researcher asks the first few samples, who are usually chosen through convenience sampling, if they know anyone with similar views or situations who would like to participate in the study. Snowball sampling technique is consistent with the guidelines for conducting a Grounded Theory study (Charmaz and Belgrave 2012). According to Naderifar et al. (2017), snowball sampling is effective in accessing participants, who may be difficult to find. Two more students were recruited through the snowball sampling technique. Informed consent was taken before data collection. Data was collected through in-depth interviews, FGD and observation. Two teaching and learning sessions on MS Teams for year 3 students were observed for the

dynamics of teaching and learning. Interviews were recorded on secure BCU cloud storage, and observations were recorded in a field note.

4.4.2 Pilot Study Methodology

Interview guides were developed in line with the study's objectives and literature review. This was validated by the supervisors, who are experts in the field. Data collection and analysis were informed by GT methodology as stipulated by Charmaz and Belgrave (2012). Coding and summarisation of emerging data were done during and immediately after each interview. This is called memo-ing, and it is peculiar to GT methodology. According to Charmaz and Thornberg (2021), memos may include discussions of the codes of grounded theorists, analytic and methodological concerns, and data fragment comparisons. Reading the memo from previous interviews made it possible to collect more data on a new emerging area, while still open to what the current interview contributes. Analysis method consistent with GT as proposed by Corbin and Strauss (1990); Charmaz (2008), and Charmaz (2006) includes: 1) Open Coding: Transcripts from interviews were broken into individual excerpts. This was followed by comparing my reflection/memo at the end of each interview with the codes. 2) Axial Coding: Here, codes were compared with each other and grouped in categories. Theoretical sampling was used to collect more data where there was limited data to support emerging categories. 3) Selective Coding: This was where all the codes and categories were connected under one core category.

4.4.3 Lessons Learnt from the Pilot Study

The pilot study prompted me to rethink my research design, shifting from a GT design to an IPA, as explained earlier in this chapter. I realised there was no need to subject my research methods to the scrutiny of GT methodology, especially because I had violated one of its fundamental assumptions, which emphasised having no prior knowledge of the field before

embarking on the study. At this phase, I had conducted a literature review and already had an idea of the field. Furthermore, I had no intention of proposing a theory that would describe the experiences of nursing and midwifery lecturers and students, but rather of understanding individual lived experience. In addition, this pilot study provided valuable experience in preparing a well-structured participant recruitment and data collection. For example, combining online recruitment methods with the conventional means of physically meeting with participants has proven to be effective in getting participants for the study. This is consistent with Bower et al. (2014) and Craig (2014).

4.4.4 Moving Forward

Drawing from the insights gained in this pilot study, I proceeded to reassess my methodological approach and refine my interview guide to align with the revised methodology. This also included ensuring clarity of the interview guides for effective data collection, consistent with my interview experience. Kim (2010) emphasised that a pilot study provides the researcher with the opportunity to refine the data collection methods and other logistics of the research. The modified interview guide was presented to the research supervisors for validation against use in the main study. I planned and executed a presentation, summarising my pilot study during a staff meeting at the BCU adult nursing department, aiming to inform them about the study's importance and prepare them to participate voluntarily in the main study. I also developed a recruitment strategy that involved addressing pre-registration N&M students in various lecture rooms to explain the key issues emerging from my pilot study, the purpose of my main study, the potential outcomes, and to plan suitable times with those who agreed to participate. I had to eliminate the observation component of my data collection because it did not contribute any new information to my study. All these lessons informed the design of the methodology and methods of the main study.

4.5 Sample Size and Sampling Technique

N&M lecturers and students at Birmingham City University (BCU) were recruited for the study using a purposive and convenience sampling technique. These are non-probability sampling techniques often thought to mean the same thing (Bornstein et al., 2017). While convenience sampling recruits research participants based on proximity or availability to the researcher, purposive sampling selects participants based on well-defined criteria and the researcher's expertise and knowledge (Obilor, 2023). For this study, the target population are N&M students and lecturers at BCU, and a convenience sampling technique ensures that every available N&M student or lecturer has an equal chance of being recruited. However, because the study's intent was to explore their lived experience in DLS, it was deemed important to investigate the period during which digital platforms were mainly used to deliver nursing subjects, particularly during the COVID-19 pandemic. Consequently, lecturers and students who engaged in T&L during this period are more likely to provide information that is most relevant to this study's aim. Therefore, lecturers who have had at least 3 years of experience lecturing at the School of Nursing and Midwifery and students who are at least in their second year of study were purposively selected.

Polite and Beck (2014) claimed that within qualitative research, the approach is to examine the diversity of human experiences, and as a result, they may purposefully seek people with different demographics or other differences who have experienced a comparable experience. Given the highly diverse population of N&M staff and students at BCU, participants were purposively selected across diverse ethnicities. The major purpose of sampling is to ensure that the sample is representative of the target population (Nzeri, 2010). According to Obilor (2023), convenience sampling may be appropriate when the population of interest is small and accessible, but purposive sampling is more suitable when the study focuses on specific and

sensitive attributes, abilities, behaviours, or features. According to Patton (1990), purposively selected samples are used in qualitative investigations, which seek a variety of "information-rich" sources and place a greater emphasis on the quality and richness of data rather than the quantity of participants. Hence, the decision was made to use both a convenience and purposive sampling technique.

IPA use relatively small samples of people, usually 10 or fewer. Smith et al. (2009) maintain that the number of participants in IPA investigations is often limited (mostly less than 10) to allow for a deep micro-level analysis of the narratives of the participants. In IPA research, a small and homogeneous sample is chosen purposefully because they have experienced the phenomenon (Peat et al., 2018). Large qualitative samples may waste research funds and effort, and result in unused data, whereas small samples may not completely capture phenomena, limit the validity of conclusions, and waste resources that develop interventions on those findings (Hennink et al., 2017). Polit and Beck (2014) asserted that two rules determine the selection of participants for a phenomenological investigation: (1) all participants must have witnessed the phenomenon, and (2) be able to explain what it was like to live through it. Each participant provides a detailed reflective description of their experience(s) and represents their own point of view (Smith et al. 2009). For this study, data collection continued until data saturation was attained. Hennink et al. (2017) argued that achieving data saturation in a qualitative study can serve as a pointer to knowing when an interview should be completed.

According to Bowen (2008), data saturation has its roots in GT research and is called theoretical saturation, which focuses on sample adequacy rather than sample quantity. There is growing concern about qualitative researchers claiming saturation without offering any reason or explanation for how it was determined or the basis for achieving it (Kerr et al., 2010; Malterud et al., 2015; Morse, 2015). Hennink et al. (2017) argued that data saturation can only be said

to have been reached at the point of ‘code’ and ‘meaning’ saturation. ‘Code’ saturation is frequently used during data collection to measure saturation, asserting that all issues relevant to the study topic have been found and no new concerns have arisen, while ‘meaning’ saturation highlights the necessity to collect more data beyond identifying codes and not to just question if you "heard it all," but whether you "understand it all" (Hennink et al., 2017; Namey et al., 2016; Morse, 2015). Code saturation was ensured in this study by ascertaining that data collection continued until no new information emerged and all emerging themes could be sufficiently understood. Smith and Nizza (2021) did not specifically state if data collection should be completed before analysis but suggested starting analysis with the transcript with more details to generate foundational codes, while still bearing in mind the principle of epoche. Smith et al. (2009) highlighted the necessity of flexibility when applying IPA due to its iterative nature, which necessitates an openness to altering the research focus at the early phase of analysis, potentially leading to more insightful findings. While data saturation is not a rigid rule for IPA studies, Smith and Nizza (2021) emphasised the need to focus on the richness and depth of insights or interpretations from participants’ lived experiences. Evidence has shown that not only does the presence or frequency of an issue contribute to saturation, but so does the richness of data from it (Emmel, 2015; Morse, 1995)

4.6 Data Collection

Semi-structured interviews and Focus Group Discussions (FGD) were the methods of data collection selected for this study. My research questions were pivotal in my mind as I attempted to select these data collection methods, the participants, access for data collection and justifications for my choice. Before deciding how to collect data, my methodological choice was not as paramount as answering the questions proposed by Bell (2010): what do I intend to know and why? In-depth interviews and FGD seemed appropriate for collecting information

regarding the experience of N&M lecturers and students with T&L in DS. I anticipated that with a semi-structured in-depth interview, N&M students' and lecturers lived experiences could be explored in detail, while the FGD could explore social issues relating to their experience. Thus, examining both their shared experience and individual lived experience. By doing this, one might attain what Leech and Onwuebugzie (2007) called data triangulation, in which deficiencies in the data can be compensated for by the strengths of other data, thus increasing the validity and reliability of the findings.

Data were collected between July 2023 and February 2024 through in-depth interviews and FGD to complement each other and provide a robust interpretation of their experience. This idea has proven to be relevant and significant to the data collection phase of this study. For instance, during one of the in-depth interviews, a lecturer divulged their sentiments regarding digital spaces, articulating reservations that might have been inhibited in an FGD. This narrative, as recounted by the participant, offers a profound glimpse into the perspectives held by some nursing and midwifery lecturers concerning the integration of digital technology into education.

According to Peat et al. (2019), IPA has been carried out utilising a variety of qualitative data collection methods that ensure participants can provide a rich account of their personal and lived experience, such as written accounts, paper, online diaries, interviews, and focus groups. They argue that interviews in IPA aim to allow participants to express experiences particularly important to them, leading the interview beyond the interview guide. Field notes were used to keep track of emerging issues during each data collection and later compared with transcribed interviews to capture the researcher's interpretation of emerging issues during data collection (Yusoff et al., 2022).

4.6.1 Semi-structured In-depth Interview

Lecturers with at least three years of experience teaching at the School of Nursing and Midwifery and students in their second and third year of study were recruited purposively because it was anticipated that they had had substantial experience. This was adopted because a semi-structured in-depth interview is considered the choice data collection method in IPA (Peat et al., 2019; Smith et al., 2009). According to Patton (2002), in-depth interviews involve asking respondents open-ended questions and follow-up probes designed to obtain an in-depth understanding of participants' experiences, feelings, perceptions, opinions, and knowledge. Henriksen (2022) claimed that a semi-structured interview is more flexible in terms of asking questions, not predetermined. However, the interviewer must have prepared a set of questions that function as triggers that urge the participants to speak about aspects of their life or experience (Henriksen, 2022). While the researcher's role is to guide the interview to focus on the phenomenon of interest, the participants determine the direction. Saunders et al. (2016) asserted that interviews are purposeful discussions requiring a measure of rapport between the researcher and the participants. In the process of asking further questions from participants' initial responses, researchers can collect rich and relevant data (Willig, 2008). Through an in-depth interview method, I was able to explore the individual lived experiences of N&M students and lecturers. The interview guide was initially pre-tested during the pilot study, modified in line with the study's objective and methodology and subjected to validation from the two supervisors who are experts in the field. The interview guide is presented in Appendix C.

Twenty semi-structured, in-depth interviews were conducted during the data collection phase of this study, comprising ten N&M lecturers and ten students. IPA was used to analyse the data to identify unique experiences and shared themes between the lecturer and student participants.

The two groups of participants, with ten in each, may be considered a relatively large sample size for an IPA study, where even the existence of one lived experience can be justified as that participant's phenomenological truth. Since IPA studies were not intended for broad generalisation, as is often the case with quantitative research designs, Smith et al. (2013) emphasised the importance of prioritising the idiographic understandings of each participant over the discovery of certain truths.

4.6.2 Focus Group Discussion (FGD)

FGD was conducted for lecturers with at least three years of experience teaching at the School of Nursing and Midwifery, as well as students in their second and third year of study at BCU who decided to participate in the study. This choice was made due to the potential for rich data collection of individual experiences that could be easily recalled and built upon through discussions with other peers. A FGD is a semi-structured group interview involving the interaction and exchange of opinions among members on certain experiences in an informal discussion focused on a particular issue (Creswell & Creswell, 2017; Kreuger & Casey, 2000). According to Cohen-Miller et al. (2022), an FGD has the potential to gather multiple perspectives on a subject in a common space and, if moderated, could ensure that participants have a voice, sharing and building on each other's ideas. Gailing and Naumann (2018) argued that FGDs are interactive, participatory, and transformative, thus an appropriate tool for examining problems or phenomena.

For this inquiry, two FGDs were conducted, one with five N&M lecturers and another with five students, to explore shared experiences of digital education and gain insight into the social dynamics influencing T&L in DS. This aligns with Emiliussen et al. (2021), who emphasised the importance of social indices in shaping the experience of participants in IPA. The FGDs were conducted separately for lecturers and students to maintain the uniqueness of each group

and the dynamics that encourage open dialogue. Although there is ongoing debate about the appropriate number of participants required for an FGD, existing literature suggests that a group size between four and twelve can be considered adequate for an FGD (Krueger 1994; Spencer et al. 2003; Stewart and Shamdasani 2015).

I considered including 5 participants in each FGD for reasons explained by Spencer et al. (2003) and supported by Nyumba et al. (2018) that larger participants in an FGD may limit individual participation, whereas smaller participants give less chance for diverse opinions. Nyumba et al. (2018) further advised that a few participants are suitable if they are knowledgeable and passionate about the phenomenon. The purposive sampling techniques employed in this study ensured the inclusion of participants with relevant knowledge, thus facilitating an in-depth exploration of both individual and shared experiences. This approach aligns with the tenets of IPA, where the sample size is not as important as the depth of inquiry into issues.

Analysis of the transcripts was guided by IPA, and the emergent themes were compared with those derived from the in-depth interviews from each participant group to enhance data triangulation. This approach is consistent with Nyumba et al. (2018), who maintained that one cannot exhaustively discuss a topic by conducting a single FGD. The lecturer's FGD themes were compared with those from the lecturer's in-depth interviews, while the themes from the students' FGD were similarly compared with those from the students' in-depth interviews to preserve the unique perspectives of each group of participants. A more detailed account of the data analysis process is presented in subsequent section in this chapter.

4.6.3 Recording and Transcription

According to Smith et al. (2009), verbatim records and transcription of interviews are needed for IPA. While transcription is widely recognised as a time-consuming process, most qualitative

researchers contract it to professional transcription services (Potter & Hepburn, 2012). However, Potter and Hepburn (2012:559) contended against this approach, arguing that it leads to “impoverished transcripts,” particularly when transcribers are mainly experts in typing rather than qualitative analysis. Acknowledging this limitation, I realised that professional transcribers may only focus on the spoken words, overlooking the nuanced meaning conveyed through non-verbal cues. IPA researchers have advised that relevant prosodic features such as significant hesitations or pauses, false starts and laughter could contribute to the interpretative process and enhance the contextual meaning (Smith et al., 2021). Therefore, I conducted and transcribed all twenty in-depth interviews and the two FGDs.

Each recorded interview and focus group discussion was numbered serially for easy recall and identification. After completion, information on the voice recorder and field notes was coded, sorted, organised, entered, and stored in a safe place before analysis. Before analysis, a verbatim transcription of all voice recordings was undertaken. I identified each participant with a pseudonymous identifier, minimising every risk of data breach and confidentiality of the participants, so that themes for trends or patterns in various sociodemographic characteristics could be identified. Each transcription was carefully reviewed to eliminate errors and ensure appropriate modifications before analysis.

While the transcription process was time-consuming, it allowed me to maintain the confidentiality and anonymity of the participants while deeply immersing myself in the data, a process which Smith et al. (2021) asserted to be the first stage of IPA. During transcription, I noted responses that stood out, my preliminary interpretations of key interactions and the potential significance of specific words and expressions within the participants’ narratives. These reflections were supplemented by reflexive notes recorded before the interviews (See Appendix I) and quick summaries captured in the field notes immediately after each session

(See Appendix H). Completed transcriptions with initial noting or annotations were shared with selected participants to ensure rigour, a validation strategy that Ferguson et al. (2009) and Smith et al. (2021) called member checking. However, Grinver and Thomas (2012) highlighted the practical limitations of member-checking in all settings, which may depend on the research design and participant engagement. A sample of the transcript with initial annotations is included in (Appendix G), while some responses from participants are included in (Appendix F).

4.7 Recruitment and Participants (Inclusion/Exclusion) Criteria

Student Participants: They include second and third-year pre-registration N&M students at BCU. This ensured that the student participants had had substantial experience learning in the DS for at least one academic year. N&M students with no digital learning experience at BCU were excluded from the study.

Lecturer Participants: They include N&M lecturers who have been actively teaching any cohorts of N&M students at BCU in the last three years. This ensured that lecturer participants had substantial experience teaching in DS. N&M lecturers with no digital T&L experience at BCU were excluded from the study.

4.7.1 Recruitment Process

According to Manohar et al. (2018), the recruitment and retention of study participants are critical to the overall success of a research study, and this process entails identifying potential research participants and providing them with information to determine their interest in participating in a proposed research study. Invitations to participate in the study were passed through the various heads of units/departments at the BCU School of Nursing and Midwifery. Opportunities to speak to groups of students in classes and lecturers in the offices or staff

meetings were solicited. This was to inform them about the study and to recruit people who were willing to participate in it. The invitation included a detailed description of the research, enough for the participants to make informed consent. Lecturers and students who agreed to participate in the study were asked to choose a suitable date and time within the data collection period and their mode of interview (online or face-to-face). Reminders and messages were sent to individuals who agreed to participate in the study. Craig (2014) believed that online recruitments are a very quick and easy means of recruitment, but researchers must be wary of bothering potential participants with too much information that may include technical terms. Recruitment and data collection occurred between July 2023 and February 2024. The characteristics of the student participants recruited for the in-depth interviews are presented in Table 4.3, while those of the student participants for FGD are detailed in Table 4.4. Similarly, Table 4.5 provides an overview of the Lecturer participants for the in-depth interview and Table 4.6 outlines the characteristics of the lecturers who participated in the FGD.

Table 4.3 Student Participant Characteristics for the In-depth Interviews

Name	Variables	Frequency (10)
Year of Study	Year 2	5
	Year 3	5
	Total	10
Speciality	Adult Nursing	5
	Midwifery	4
	Mental Health Nursing	1
Year of Commencing Study at the university	2020	2
	2021	3
	2022	5
Ethnicity	White British	3
	Black	2
	Asian	4
	European	1
Gender	Male	3
	Females	7
Age (Years)	20 – 39	8
	40 – 64	2

Table 4.4 Student Participant Characteristics for FGD

Name	Variables	Frequency (5)
Year of Commencing Study at the university	2020	1
	2021	2
	2022	2
Speciality	Adult Nursing	2
	Midwifery	2
	Children's Nursing	1
Ethnicity	Black	3
	White British	1
	Asian	1
Gender	Male	1
	Female	4
Age (Years)	Below 20	1
	20 – 39	4

Table 4.5 Lecturer Participants for the In-depth Interview

Name	Variables	Frequency (10)
Year of Teaching at the Target university	3 – 8	7
	14 - 18	1
	19 and above	2
Speciality	Adult Nursing	4
	Midwifery	4
	Mental Health Nursing	1
	Learning Disability	1
Ethnicity	White British	6
	Black	2
	Asian	2
Gender	Male	2
	Female	8
Age (Years)	20 – 39	5
	40 – 64	5

Table 4.6 *Lecturer Participants for the FGD*

Name	Variables	Frequency (5)
Year of Teaching at the Target university	3 years	2
	4 years	2
	6 Years	1
Speciality	Adult Nursing	2
	Midwifery	2
	Learning Disability	1
Ethnicity	White British	2
	Black	2
	Asian	1
	Total	5
Gender	Male	1
	Female	4
Age (Years)	20 – 39	1
	40 – 64	4

4.8 Ethical Considerations

I acknowledge the significance of conducting my research within an ethical framework. According to Huysamen and Sanders (2021), all researchers have an ethical responsibility to ensure that their research practices are respectful, without harm, and that their work contributes to improving the lives of their participants, rather than solely to academic advancement and knowledge contribution. I ensured clarity in describing every aspect of the research process, especially the methods for data collection, when making the ethical application. Ethical approval for this research was obtained from the BCU Faculty Ethics Committee for both the pilot and main studies. Approval number for the pilot study is 10700 /sub3 /R(A) /2022 /Sep /HELS FAEC, while that of the main study is 11662 /sub3 /R(A) /2023 /Jun /HELS FAEC. To ensure that I was following best practice, I complied with the BCU ethical guidelines throughout the study. BCU's policy on holding and discarding data was also strictly adhered to, in addition to the UK General Data Protection Regulation (GDPR).

As a registered nurse and midwife, I adhered to the standard code of conduct, performance and ethics for nurses and midwives (NMC, 2008b). I provided N&M student and lecturer participants with written information about the study so that they could have sufficient information to give informed consent. The information sheet also reflected my commitment to standard ethical practice and to act appropriately in any case that my action indicates poor practice, although the case of poor practice did not arise, I considered it good practice to be explicit about this (see Appendix D).

In collecting data, confidentiality was ensured throughout the process. Participants were not required to supply sensitive personal data that could be used to identify them, except for their initials, which were required to sign the consent form (See Appendix E). Online interviews were conducted and recorded on BCU MS Teams, while face-to-face FGDs were conducted at the BCU Campus (Seacole building) and recorded with the BCU encrypted portable device. During data transcription, coding and analysis, each participant was labelled with a pseudonymous identifier, minimising every risk of data breach and confidentiality of the participants. Lecturer participants were differentiated from student participants with the alphabet L- for lecturers and S- for students, for analysis purposes. Interviews in each category were differentiated with continuous numbers. For instance, the first interview in the lecturer category was labelled as L01 and later given a pseudonym, while the first interview in the student category was labelled as S01 before getting a pseudonym. The pseudonyms created during transcription, coding and analysis were maintained during interpretation. This ensured confidentiality. All data were stored on BCU OneDrive. Transcripts and codes were stored in a folder different from where the consent form is stored to avoid any breach in confidentiality. Data would be held for 5 - 10 years after the study, and then it would be destroyed. Data obtained were used solely for this research.

4.8.1 Insider Effect

Being both a PhD student and an assistant lecturer at the BCU School of Nursing and Midwifery conferred me with 'insider' status. ' Insider researchers have been defined in several ways (Hellowell, 2006), all indicating a situation in which the researcher possesses intimate knowledge of the population under study, due to previous or current association. It is often assumed that this profound knowledge of the research setting is advantageous because it provides insights that are difficult to achieve by 'outsiders. Being an insider was beneficial for me in so many ways.

For example, I did not need to travel to the research setting for data collection, as my job required me to be on campus. It was also easy for me to navigate the processes of obtaining approval from the heads of units and departments for access to the university resources, as well as to the students, following the ethical approval. Being a member of staff made it easy for me to approach the heads of nursing and midwifery departments to secure approval to send a general invitation email to students and lecturers. I received positive responses to my invite, which otherwise might not have been the case if I were an outsider. It was also easy for me to approach lecturers and address students during some of their lectures to invite them to participate in my study. I was also quick to establish rapport with both students and lecturers, being an insider, something that could have taken considerable time to achieve.

On the contrary, I also considered this insider status to be of possible detriment, especially in the area of power dynamics. An outsider, being a stranger to the research settings, might find it easy to retain perspective and not take things with levity in a way that an insider might not do. The potential of both the lecturers and students to participate in my study as a compulsory exercise or act of favour due to my status in the university was a significant ethical concern. Being conscious of this, I carefully examined my relationship with my participants throughout

my research and made sure I documented this in my reflexive journal (See Appendix I). Practically, I had no direct management responsibility over any of the lecturers or students and was not committed to leading any module that any of the students were taking. In the assisting role, I had no power over anything relating to the students or lecturers, and there is little chance for a significant display of power dynamics. Le Gallais (2003) captured the conflict in my mind as I reflect by stating that research is not a rigid dichotomy but rather assumed as a continuum. I agree with Hellawell (2006, p. 489), who recommended that, in considering the varying sides of ‘insiderism’ and ‘outsiderism’, researchers should weigh their varying positions instead of a single continuum. This helped me realise how my insider status might impact my research and to consider my positionality and relationship with the research participants as complex, multidimensional and in constant flux. For example, when interviewing, I considered ways that being an insider influences my premonitions or pre-conceived ideas and interpretation and how the participants responded to me (See Appendix I). I devised techniques to reduce the negative impact of my insider status, such as highlighting during the interviews that there were no right or wrong answers to the interview questions. I acknowledge that the participants might not have been absolutely reassured by this; their open and honest responses suggest they were not restricted.

4.9 IPA Guided Data Analysis

Most qualitative researchers acknowledge that there is no singular, standardised approach to analysing qualitative data in an IPA study (Smith et al., 2009; Smith et al., 2013; Walliman, 2011). Despite various systematic phases of analysis specified by IPA researchers in the extant literature, no specific phase is universally prescribed or deemed superior (Larkin et al. 2006; Smith et al. 2009; Smith & Nizza, 2021). Instead, IPA offers adaptable guidelines that align with its core analytical principles (Eatough & Smith, 2006; Shinebourne, 2011; Pietkiewicz & Smith, 2014).

Cooper et al. (2012) listed the key characteristics of data analysis of IPA studies: (1) movement from the unique experiences of individual participants to shared experiences across cases; (2) Analytic shift from descriptive accounts to interpretative engagement with participants experience (3) a commitment to capturing the participants' perspectives; and 4) a focus on psychological meaning-making within a specific context. Although Pietkiewicz and Smith (2014) claimed that IPA allows flexibility and creativity, Smith and Nizza (2021) cautioned that the analytical process can be challenging for novice researchers. To navigate this complexity, I recorded my methodological decisions, interpretations and analytical progress throughout the study.

Consistent with IPA's idiographic orientation, analysis commences with an in-depth focus on a single case before moving to other cases (Husserl, 2001; Peat et al., 2018; Smith et al., 2009). In this study, data analysis was guided by Smith and Nizza et al. (2021) six iterative stages of IPA (See Figure 4.1), which include (1) Immersion in the data, (2) Initial noting, (3) Developing emergent themes, (4) Connecting themes, (5) Repeating steps 1- 4 with subsequent cases (6) Searching for connections across emergent themes to derive final themes for reporting.

Figure 4.1 *Application of IPA Guidelines for Data Analysis*

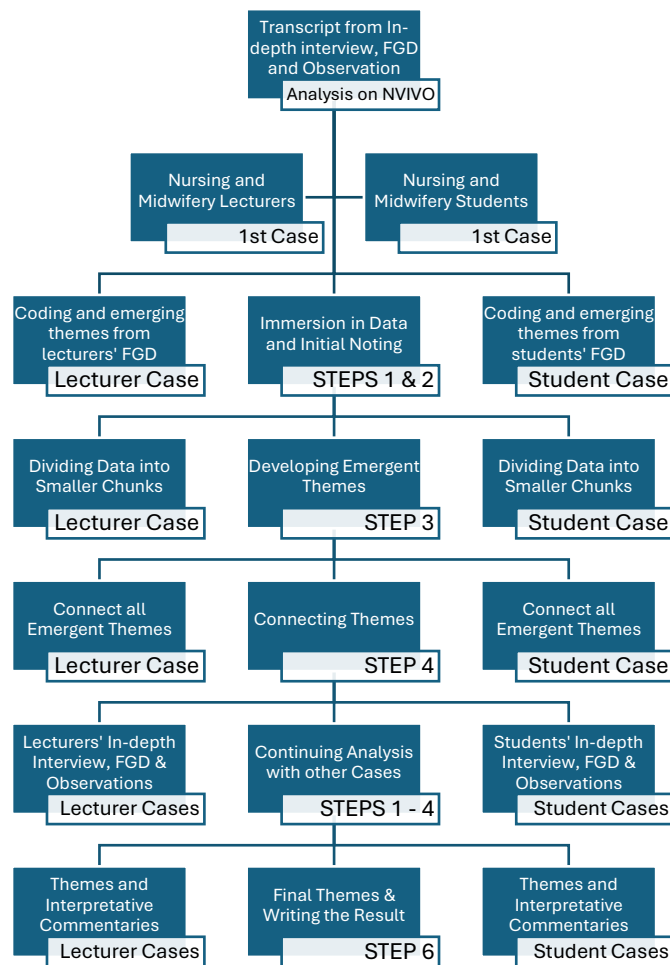


Figure 4.1 shows how the researcher will approach the iterative data analysis process using the guidelines provided for conducting IPA research.

4.9.1 Step 1: Immersion in the Data

The first analytical step, as proposed by Smith and Nizza (2021), necessitates deep immersion in the data, enabling the researcher to metaphorically “step into the respondent’s shoes” and engage with their lived experiences. Completing the transcriptions personally provided a preliminary entry into this phase. However, true immersion goes beyond transcription and demands an iterative process of revisiting and re-examining the data to develop a nuanced

understanding of participants' perspectives (Pietkiewicz & Smith, 2014). In this study, I commenced the analysis with a detailed study of the transcript, reading, re-reading, listening and re-listening to the audio-recorded interviews.

To ensure analytical rigour, I ensured that this process occurred shortly after each interview, allowing me to document my memories of the interview, initial observations and contradictions within participants' responses. These reflections were documented in my reflexive and field notes to capture my evolving thoughts on each interview. Larkin et al (2006), supported by Smith et al. (2013), highlighted the difficulty of totally setting aside premonitions that naturally come to us; however, they emphasise that conscious attempts should be made to do so. I meticulously examined the participants' responses, striving to "bracket" my assumptions and preconceptions, exploring the data without imposing pre-existing theoretical frameworks. Revisiting these notes kept me open to amending my initial perspectives. "Bracketing" in this context, according to Smith et al. (2022), is the process of intentionally putting off every personal idea or premonition from previous engagement with data and approaching each participant's narration as a fresh and individual case.

4.9.2 Step 2: Initial Noting

The second step is called "initial noting," where the researcher reads the case, and as they do so, observations are made, which are frequently written in the transcript's margin. Closely intertwined with the first phase, Smith et al. (2009) described this second stage as detailed and time-consuming. After thorough immersion in the transcript through reading and re-reading, the initial noting stage involves creating notes or making exploratory comments where the researcher highlights key points of interest in the transcript. Pietkiewicz and Smith (2014) advised that this initial commentary be made directly within the transcript to ensure that emerging insights remain firmly grounded in the original data. This approach ensures the

researcher closely engages the participants' narrative while retaining the contextual integrity of the analysis.

Although Smith and Nizza (2021) encouraged working with printed transcripts, this was not possible in this study due to the extensive volume of data collected, necessitating a digital approach. Consequently, all commentary was recorded directly within each transcript using Microsoft Word (MW). My initial noting was guided by the three analytical tools outlined by Smith et al. (2009), including descriptive, linguistic and conceptual comments, each distinguished by different coloured text. In addition, I used various MW features, such as bold and italics, to further differentiate the type of notes. This digital method allowed clear organisation, streamlined interpretation, and eased the analytical process. A sample is presented in Figure 4.2 (See more samples in Appendix G).

Figure 4.2 *Sample Initial Noting Process from a Lecturer Transcript*

TRANSCRIPT

I

So firstly, I would like you to talk about the course you teach here at BCU and the kind of technology that you engage in teaching.

CL 1:25

Previously.

OK, cool.

And so when I first started at BCU and in January 2020 and I taught 3rd year anatomy and Physiology module for the adult nursing students.

And so for that kind of the biggest technology that we kind of used was our exam because and obviously the impact of COVID meant that we had to move from a paper based exam to an online exam as well as kind of like moving all of our sessions online. So I've used kind of exam software and supported students through using that exam software [Drastic change from paper-based to online exam – onsite to online lectures] and now I teach on the very first module of the first year of the nursing program [Teaching first year courses now]. So I teach to all four fields of nursing together and we kind of use technology and in the classroom and we use MS Teams and polls [Teaching all the nursing specialties which is a large class all at once] and then this year we've got asynchronous activities in our timetable. And so yeah, so using lots of different like Moodle related resources and things to support students in that [other new layers added to the space to support learning]. So a bit of a mixed bag [? Metaphor – to describe other new layers added to the space to support learning].

I 2:52

Yeah. Thank you so much. So, what was it like transitioning during the COVID-19? Moving totally online as opposed to the normal classroom teaching.

CL 3:06

Incredibly stressful [? unexpectedly stressful] and we were literally about two weeks away from starting our module and when the first lockdown happened. So we literally had

4.9.3 Step 3: Developing Emergent Themes

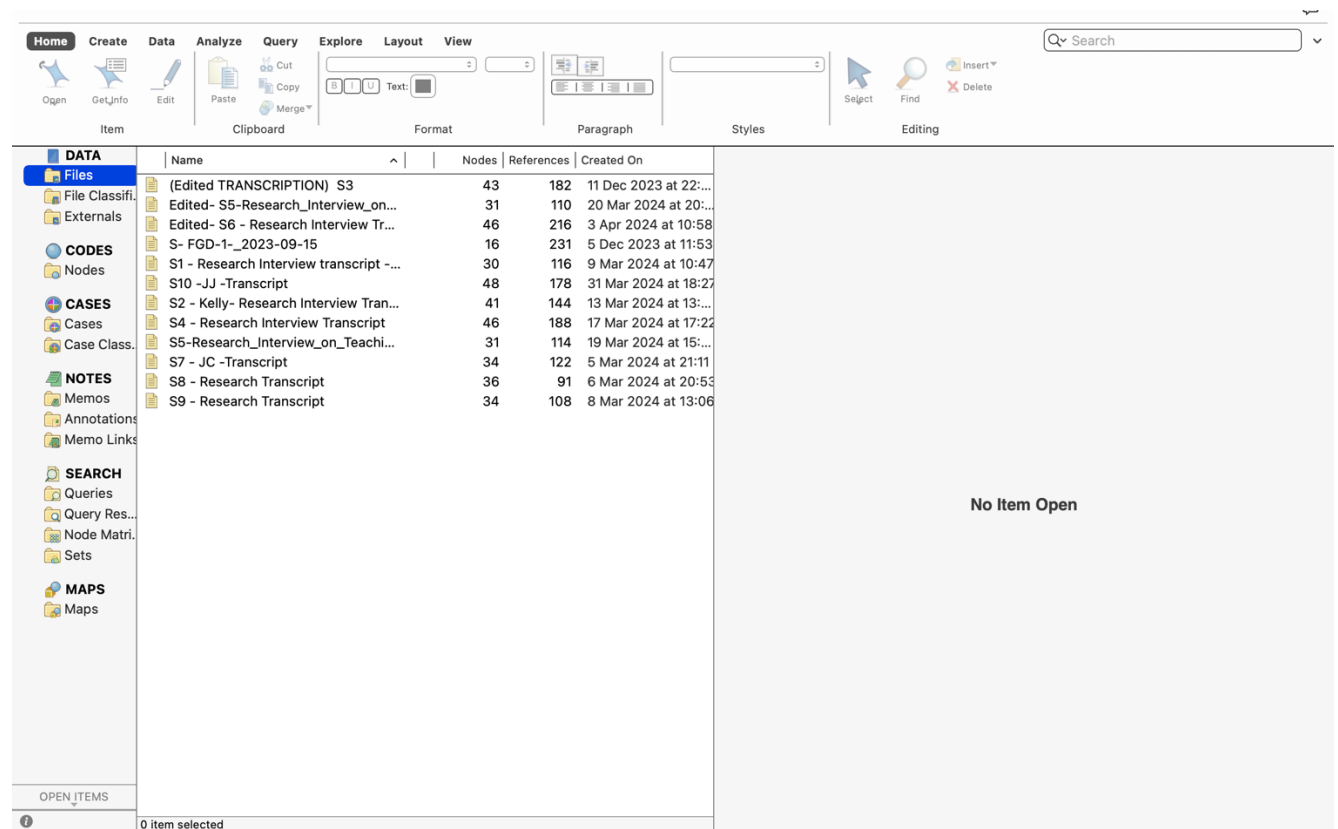
The next step is to develop emergent themes by dividing the data relevant to the case's observational notes into smaller chunks. At this stage, I uploaded the transcript from each case into NVIVO to better manage the analytical process. Although Smith and Nizza (2021) cautioned novice researchers against using digital applications due to the complexity of the data, the enormity of the data I had to deal with necessitated the use of NVIVO. Manually handling printed transcripts with handwritten annotations would have been impractical and risk further slowing down the analytical process that was already labour-intensive. Several authors have emphasised the benefits of using NVIVO in qualitative data analysis, particularly in managing large datasets, enhancing research efficiency, and facilitating collaboration (Shrestha et al., 2024; Zamawe, 2015). I therefore employed NVIVO to systematically advance the analysis, allowing for the creation of nodes or themes grounded in the data.

Smith and Nizza (2021) maintain that the researcher is left with the transcript and exploratory comments at this stage of the analysis. Instead of looking for themes across the ten participants as recommended in other qualitative research analyses (Cooper et al., 2012), my particular focus was on one case at the time, identifying patterns and relationships within the exploratory notes to develop themes peculiar to that case. This allowed me to assume an idiographic focus, as underscored by Smith et al. (2009), to be a significant manifestation of the hermeneutic circle of IPA.

I then focus on specific parts of the interview transcript, bearing in mind my previous comments on the narratives as advised by Pierrkewicz and Smith (2014). This leads to a more elaborate micro-analysis of areas of particular interest previously highlighted within the transcript. The emerging insights from this approach were compared across other parts of the transcripts and the interview itself for consistency. I documented themes that emerged in succinct statements

using the ‘create node function’ on NVIVO (see Figure 4.3 for Samples from NVIVO). These themes encompass both the expressions of the participants and my interpretations, as is peculiar with IPA (Biggerstaff & Thompson, Cooper et al., 2012; Smith & Nizza, 2021) (see sample of transcripts in Appendix G).

Figure 4.3 Student Transcript Files with Number of Themes Created



DATA	Name	Nodes	References	Created On
Files	(Edited TRANSCRIPTION) S3	43	182	11 Dec 2023 at 22:...
File Classifi...	Edited- S5-Research_Interview_on...	31	110	20 Mar 2024 at 20:...
Externals	Edited- S6 - Research Interview Tr...	46	216	3 Apr 2024 at 10:58
CODES	S- FGD-1-_2023-09-15	16	231	5 Dec 2023 at 11:53
Nodes	S1 - Research Interview transcript -...	30	116	9 Mar 2024 at 10:47
CASES	S10 -JJ -Transcript	48	178	31 Mar 2024 at 18:27
Cases	S2 - Kelly- Research Interview Tran...	41	144	13 Mar 2024 at 13:...
Case Class...	S4 - Research Interview Transcript	46	188	17 Mar 2024 at 17:22
NOTES	S5-Research_Interview_on_Teachi...	31	114	19 Mar 2024 at 15:...
Memos	S7 - JC -Transcript	34	122	5 Mar 2024 at 21:11
Annotations	S8 - Research Transcript	36	91	6 Mar 2024 at 20:55
Memo Links	S9 - Research Transcript	34	108	8 Mar 2024 at 13:06
SEARCH				
Queries				
Query Res...				
Node Matri...				
Sets				
MAPS				
Maps				

0 item selected

4.9.4 Step 4: Connecting Themes

This stage involves searching for connections across the emergent themes by grouping the 'chunks of data and 'notes' and considering how they interact. Smith and Nizza (2021) did not specify how this should be done but highlighted the need to be creative and innovative. I examined the themes generated from the whole transcript on NVIVO and removed those that were not related to the research focus and lacked evidence from the data, as specified by Smith et al. (2009) and supported by Loo (2012).

I then began to link conceptually related emerging themes to form clusters (Shinebourne, 2011) using NVIVO hierarchical node structuring, where child nodes were grouped under parent nodes. This approach provided an efficient alternative to the manual separation of printed transcripts across various flat surfaces, such as tables, as suggested for Novice IPA researchers by Smith et al. (2009). Smith and Osborn (2003) emphasised the use of metaphors within the data as “magnets” to group and separate themes, a strategy that proved useful in this analysis. To ensure transparency and maintain rigour, I documented my decisions during this process, including my decisions to exclude some themes due to their limited contribution to addressing my research objectives. I renamed each node, forming clusters of child nodes in NVIVO under a descriptive label to arrive at the superordinate themes. I then exported the code book from NVIVO into MW format, organising the super-ordinate themes in tables for clarity and reference (See Appendix J, Case-by-Case presentation of a detailed breakdown across all 20 interviews).

4.9.5 Step 5: Repeating Steps 1 – 4 in Each Case Left

This phase involves moving on to the next case while ensuring that emerging information and themes from the previous case do not influence the interpretation of subsequent cases, an approach that Smith and Nizza (2021) called “bracketing.” The new case is then considered as an independent entity and approached with an open mind to capture the participants lived experiences without preconceived notions. The analytical process begins all over again from stage one and is systematically repeated through the fourth stage for each case. This iterative process continued until there were no more cases.

While Biggerstaff and Thompson (2008) maintained that the themes from the first case could be used like a compass to identify themes from the rest of the case, I deliberately refrained from adopting this approach for fear that this might impact the idiographic commitment central

to IPA. Smith et al. (2009) acknowledged that previous analysis may inevitably influence subsequent analysis but contend that researchers must be open to new and unique themes emerging from each case. According to Shinebourne (2011:61), “bracketing” the insight from each case is key to upholding the integrity of the IPA process, and researchers must ensure it. So, instead of completing step four of the IPA process across all cases simultaneously, as is common to other qualitative analyses (Thomas, 2006), I ensured that steps one to four were fully completed for each case before proceeding to the final stage of the analysis.

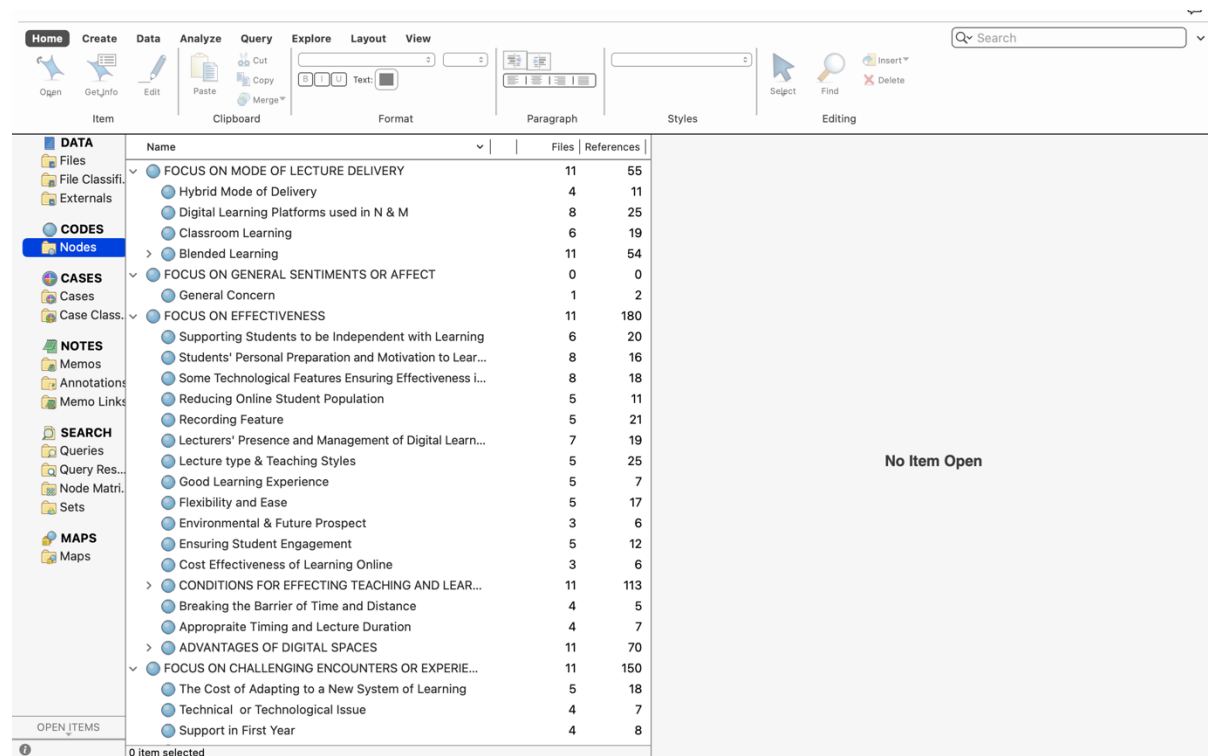
4.9.6 Step 6: Searching for Connections Across Emergent Themes to Derive Final Themes

At this final stage, the researcher progresses to seeking patterns across cases by asking the question: Is there any common theme or pattern that can be identified across cases? (Smith & Nizza, 2021). While maintaining sensitivity to individual differences, overarching patterns were highlighted, and any idiosyncratic variances were noted. As in earlier stages, I continued working with electronic copies of the transcripts and themes generated on NVIVO. This allowed me to compile superordinate themes generated from each case and visualise them on NVIVO, complementing the previously exported codebook for each case.

I carefully examine the themes to identify patterns and find relationships or connections between themes across cases, paying specific attention to the recurrence of themes across cases. Acknowledging that Smith et al. (2009) did not prescribe any particular guideline for what counts as recurrence, I therefore considered any theme that appeared in at least half of the cases as recurrent. I maintained an audit trail by documenting the decisions I made during this process to ensure transparency and rigour. As I closely observed the themes across cases, I used NVIVO to create overarching parent nodes from recurring themes, organising clusters of related child nodes, which were later aggregated into subordinate themes.

At this stage, the analysis moves on to a deeper level of interpretation, aligning with Smith et al.'s (2009) assertion that the researcher must go beyond identifying themes to explore the deeper meaning of experiences. This approach involves evaluating themes across the dataset and using metaphors and temporal referents to convey a deeper meaning. I then developed a final table and graphical representation of themes, showcasing the superordinate and subordinate themes with other illustrative information from the transcripts. Figure 4.4 shows a sample of how connections were made across themes and cases on NVIVO. (See Appendix J for more details)

Figure 4.4 *Sample of how Connections were Made Across Themes and Cases on NVIVO*



4.9.7 Analysis of the FGD

There are no standard rules for the analysis of FGD in IPA studies, nor are there established parameters for triangulating multiple data collection methods. This is largely due to the emphasis placed on in-depth interviews as the gold standard for data collection in IPA studies, as highlighted by Smith et al. (2009) and supported by Smith and Nizza (2021). Consequently,

there is no framework for integrating FGD data within the IPA process. However, my intention for the FGD was to be able to capture shared experiences since De Felice et al. (2021) assert that T&L is embedded in social interaction, making the participants shared experiences relevant to this inquiry.

I commenced data analysis with the FGD, anticipating that this would prepare me as a novice IPA researcher to approach subsequent analysis from the in-depth interviews with more confidence and a better understanding. I adhered to the IPA guideline outlined by Smith and Nizza (2021), as I later did with the in-depth interviews. However, I approached the FGD as an independent case and treated each discussion as a whole entity rather than isolating individual participant experience, which is contrary to the idiographic participant-by-participant analysis recommended by Smith et al. (2009). In addition, I modified the traditional six-step approach to IPA by omitting the fifth step, which involved moving on to another case. Instead, I proceeded directly to the final stage, where I identified connections across themes to develop a consolidated thematic structure that captured the collective experiences within each discussion.

I uploaded the transcripts from the FGD into NVIVO, utilising the software's analytical tools to manage and structure the findings. I exported the resulting code book from NVIVO, and the final themes were presented in tables and graphical formats. The FGD for students was analysed separately from those involving lecturers. After completing the thematic analysis for N&M students, I set aside the final themes and sub-themes before moving on to the case-by-case analysis of the in-depth interviews, as I have previously described.

Subsequently, I compared the final themes from the student participant FGD with those from the in-depth interview in an attempt to triangulate findings, identifying recurring themes, which I then synthesised into a master thematic table for student participants (See Appendix J). The

same comparative process was applied to the findings from the lecturer participants. To ensure that diverse perspectives relevant to the study are not lost, I retained divergent themes from the N&M lecturers and student participants to preserve the unique voices that I might attain to what Creswell (2013) described as contributing to the richness and depth of this study. In the end, findings were presented in the form of a coherent analytical narrative that includes relevant participant quotes and a full interpretative commentary to achieve the study objectives and answer the research questions (Braun & Clarke, 2006; Polit & Beck, 2018).

4.10 Ensuring Methodological Integrity

According to Johnson et al. (2020), reducing bias is essential to ensuring the rigour and credibility of the findings. However, this is difficult in qualitative studies like this because the instruments for data collection are not standardised. Bias has to do with the researcher's influence on the research, and in qualitative research, the researcher is considered an instrument of data collection and analysis as they actively participate in the creation of knowledge with the research participant (Simundic, 2013; Yadav, 2022).

There is an ongoing debate in academic circles on how to determine the rigour or credibility of qualitative research methodologies. Several authors maintained that internal or external reliability and validity in qualitative research can be established based on the principles of credibility, dependability, confirmability, trustworthiness, transferability, auditability, and fittingness (Lincoln & Guba, 1985; Polit & Beck, 2004; Roberts et al., 2006; Ryan-Nicholls & Will, 2009). While the idea of ensuring rigour in qualitative research was accepted by some authors, others strongly rejected it. For instance, Morse et al. (2002) asserted that qualitative researchers should recapture validity and reliability by employing methodologies that ensure rigour. However, Rolfe (2006) was critical of the idea of rigour in qualitative research and advised that researchers should refuse its establishment.

There are no universally accepted criteria for determining rigour in qualitative research. Yadav (2022), in a review to investigate the criteria for good qualitative research, concluded that quality criteria are the result of socio-institutional procedures and existing paradigmatic behaviours. Yadav (2022) further argued that a single and precise set of quality standards is not achievable because qualitative research is paradigmatically diverse. Furthermore, Rolfe (2006) contended that the drive for universal quality criteria for qualitative research is a futile idea given the diversity of its methodologies.

Despite all these, rigour is a vital aspect of qualitative research that must be addressed. In IPA, the four major criteria used to determine credibility and trustworthiness include “sensitivity” to the research context, “commitment and rigour” during data analysis, “transparency and coherence” when narrating the result and “impact and importance” (Finlay 2002; Peat et al., 2018). To eliminate the chances of bias in data collection and analysis for this study, I clearly highlighted my assumptions in the reflexive note (see sample in Appendix G) before embarking on each case of data collection and analysis. This process is consistent with IPA and is called *epoche* (bracketing) (Levitt et al., 2018; Smith et al., 2009; Smith & Osborn, 2007). A participant-focused debriefing was undertaken after each interview session to ensure trustworthiness by verifying the initial interpretation and concurrent data analysis (Lincoln & Guba, 1986; McMahon & Winch, 2018).

Peat et al. (2018) recommended that each stage of IPA research be subjected to peer critique to ensure acceptability and plausibility. This was also supported by Levitt et al. (2018). For this research, every phase of the study was reviewed and critiqued by the two supervisors overseeing this doctoral study. Comments made by the supervisors on each phase were taken into account to ensure transparency and validity of the interpretation of findings. Smith et al. (2009), supported by Peat et al. (2018), recommended subjecting the findings to what they

called ‘structure resonance’ and ‘participant verification’, which involves asking the research participants or people with similar experiences to comment on the findings with a focus on whether it resonates with them. In this research, the transcripts, interpretation, and research findings were sent to all the study participants for participant verification. It was also sent to two specific lecturers and students (names redacted to maintain confidentiality) at the school of nursing and midwifery, who were not part of the study but had significant experience teaching and learning in DS, to read through and comment on the study findings [see Appendix F].

Triangulation has the potential to increase the validity and reliability of a qualitative research study (Leech & Onwuebugzie, 2007). To ensure data triangulation, this study used two data collection methods, including in-depth interviews and FGD. The IPA design or conceptual framework was used as the analytical lens to understand and interpret the experiences of N&M students and lecturers regarding T&L in digital spaces. This ensures that interpretation is approached in a systematic and well-defined way. In addition, a detailed reflexive account and decisions made at each phase of the research process were documented to ensure transparency and trustworthiness. Lazard and McAvoy (2020) assert that reflexivity is an essential aspect of qualitative studies.

4.11 Chapter Summary

This chapter extensively discusses the various aspects of my research methods and methodology, including the ontological and epistemological underpinnings of the study. The paths navigated and the research designs forgone were discussed with rationales for the decisions made. Data collection methods, ethical considerations and the measures put in place to maintain methodological integrity in line with an IPA study were also presented.

The next chapter presents the data gathered from interviewing N&M student participants in this study.

CHAPTER 5

RESULTS - STUDENT PARTICIPANTS

5.1 Chapter Introduction

Data from student participants were collected in two parts: 1.) In-depth interviews of ten nursing and midwifery (N&M) students at Birmingham City University (BCU). 2.) One Focus Group Discussion (FGD) involving five N&M students. Participants were distributed across the various N&M specialities and ethnicities. The results from the analysis of both data sets were reported sequentially. Detailed participant characteristics were presented in Tables 4.3 and 4.4. An overview of the results from each analysis was presented in Sections 5.2 and 5.3, providing a summary of the themes emerging from each data collection. This is followed by the triangulation of the results in Section 5.4, highlighting how the data complement each other, providing additional details, or revealing unique insights not captured by a single method. Sections 5.5 to 5.8 present overarching themes, offering a synthesised report that integrates the themes from the FGD and in-depth interviews.

5.2 In-Depth Interview Result

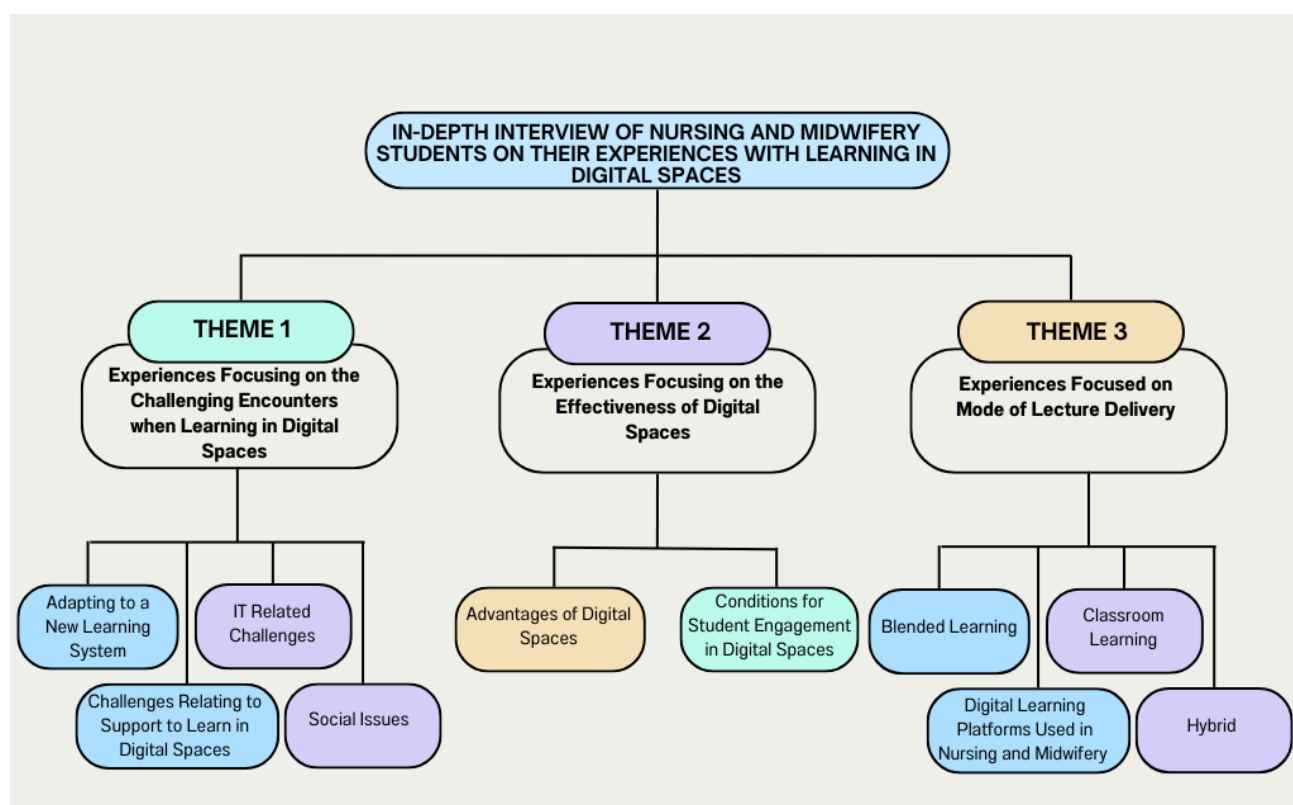
Half of the student participants were in their second year, while the other half were in their third year. Among them, five were from the adult nursing speciality, one from mental health nursing, and four were from the midwifery speciality. Regarding their ethnicity, four respondents identified as Asian, three as white British, one as European, and two as Black. Half of the student participants started at the university in 2022, two in 2020, and three in 2021.

Seven of the participants were female, while three were male, which is disproportionate according to the Royal College of Nursing (RCN, 2023) Nursing in Numbers report, which

revealed a 91% female to 9% male nursing and midwifery workforce. In fact, the NMC (2024) annual report revealed a decline in UK-educated male N&M professionals joining the register. This broadly reflects the gender profile of UK nurses and midwives, which is massively female dominated. Similar patterns of divergence were noted in the participants' age, where the majority (8) of the N&M student participants were young adults aged 20 -39 years and only two fell within the middle-aged category of 40 – 64 years, according to contemporary classifications of adulthood (Dattani, 2023; Dyussenbayev, 2017; NHS, 2024). This distribution, although disproportionate for the period this study was conducted (2020-2022), based on the report from the Office for Students (OFS, 2019), corresponds with recent wider trends. Recent reports have noted a gradual reduction in the proportion of adult students admitted into N&M courses in the UK, with an 11% decrease for 30-34 years, 9% decrease for above 35 years and a slight rise in ages below 30 yr (Anderson, 2025). Overall, these patterns on one hand could have been significantly influenced by this study's recruitment process, and on the other hand may suggest an evolving demographic profile within the broader student N&M population.

Further details are outlined in Table 4.3 of the preceding chapter. Adhering rigorously to the principles of IPA, each participant's experience was analysed case by case to maintain an idiographic focus central to IPA methodology. See Appendix J for an overview of the experiential themes for individual cases presented in tables. Upon comparing the themes across the ten cases in the N&M student participants, three major themes emerged from the analysis, including experiences focusing on the challenging encounters when learning in digital spaces (DS), experiences focusing on the mode of lecture delivery, and experiences focusing on the effectiveness of DS. Further details about the themes and subthemes are provided in Figure 5.1.

Figure 5.1 Experiential Themes Emerging from the Students' In-depth Interviews

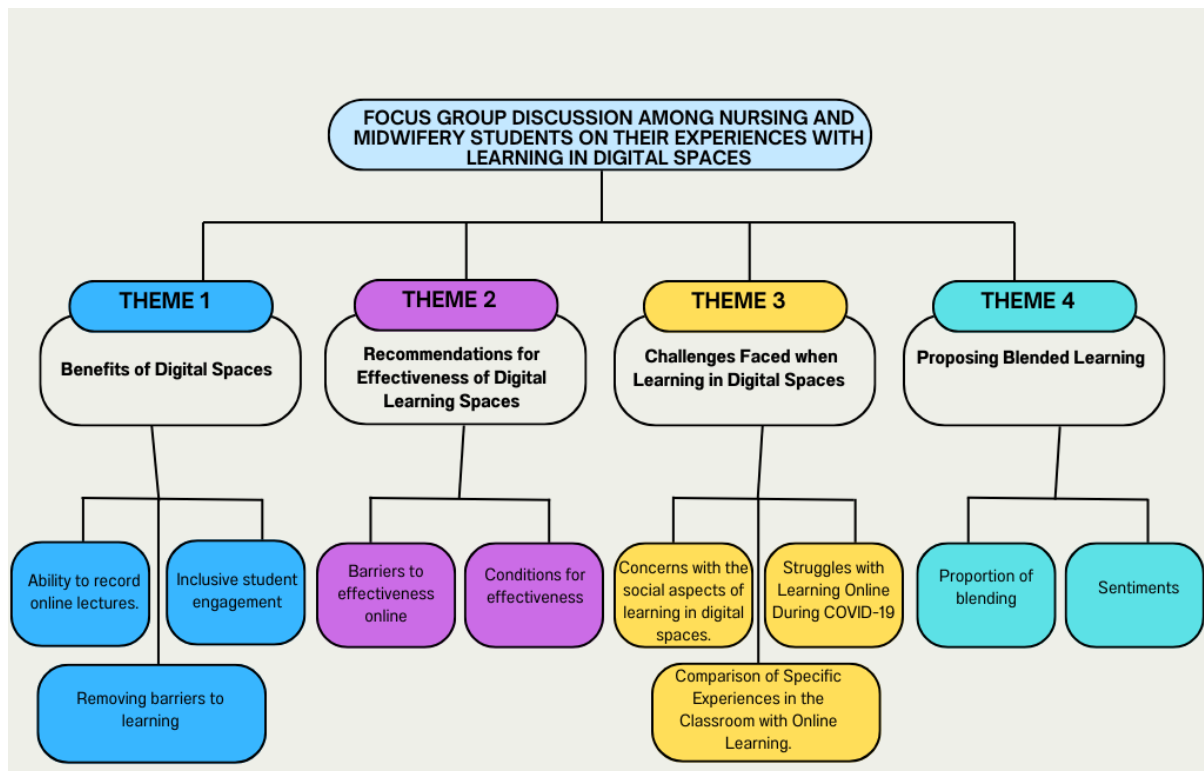


5.3 Focus Group Discussion (FGD)

Five students participated in the focus group Discussion. Three of the participants were in their second year of study, while two were in their third year. Among them, two were from the adult nursing speciality, one from children's nursing and two from the midwifery speciality. Two of the students started their studies in 2022, two started in 2021, and one commenced in 2020. Regarding their ethnicity, three of the respondents identified as black, one was white British, and one was Asian. One of the participants identified as a male, while four were females. Four of the N&M student participants were young adults aged 20 -39 years, and only one fell within the teenage category of less than 20 years. Further information is presented in Table 4.4 in the preceding chapter.

Four major experiential themes emerged from the analysis, which include the benefits of DS, challenges faced when learning in DS, proposing blended learning, and recommendations for effective digital learning spaces (DLS). Further details of the themes and subthemes are provided in Figure 5.2.

Figure 5.2 Experiential Themes from Students' Focus Group Discussion



5.4 Data Integration

In triangulating the data, intersections were identified between the in-depth interview and focus group discussion of pre-registration N&M students. Each method illuminates the findings from the other, enhancing the depth of analysis. Participants in the FGD and the in-depth interviews were distributed across various ethnicities, including four white British, five blacks, five Asians and one European. Similarly, these students commenced their studies at the university in the years 2020, 2021 and 2022, suggesting that they have substantial experiences during the COVID-19 pandemic when DS were extensively used for teaching and learning (T&L). Each

data collection method provides details about emerging ideas while adding new dimensions to the narrative. For instance, both methods showcase students' experiences around the use of a blended mode of learning, the proportion of mix and related suggestions. Although there were a few mentions of the hybrid mode of learning during the FGD, the in-depth interview analysis reveals a common misconception, as students often confuse blended for a hybrid learning modality.

Challenges faced when teaching and learning in DS emerged as a major theme both in the in-depth interviews and focus group discussions. While the FGD presents discussions around social challenges, difficulties associated with digital learning and a comparative analysis of student experiences between the classroom and online spaces, the in-depth interview provides an extensive exploration of these subthemes in addition to other emerging ideas. The in-depth interviews primarily addressed concerns with adapting to DS as novel learning systems, IT-related difficulties, social issues and perceived inadequacy of support provided to students for effective learning in digital spaces.

However, the FGD presents an in-depth exposition of students' struggles with digital learning, further providing insights into their efforts to adapt to what they considered a new learning system. Additionally, the FGD allowed students to compare their experiences learning in the classroom with those online, further elaborating on the difficulties encountered in the digital environment.

The benefit of digital learning emerged as a major theme during the FGD, indicating a thorough exploration of the advantages of learning in DS. These conversations highlighted several key points: firstly, the recording capacity of DLS, which ensures reflexive learning, understanding and better retention. Secondly, the inclusive environment for students with various needs provided by DLS, and the capacity of the DLS to remove barriers to learning. In the in-depth

interviews, the advantages of digital spaces featured as a subtheme, encompassing cost-effectiveness, breaking the barrier of time and space, allowing student engagement, environmental benefit, flexibility, ease, recording capacity and good learning experience. A unique finding from the in-depth interview was the discussion on the environmental benefits of DLS, especially its role in reducing carbon footprints, which would otherwise be generated by lecturers and students travelling to the classroom. During the in-depth interviews, students' discussion about the effectiveness of DLS focused on the advantages and the necessary conditions for ensuring student engagement in DLS. However, the FGD provided a richer context by exploring the barriers to effectiveness, which were not addressed in the in-depth interview as well as factors necessary for effectiveness.

5.5 Overarching Themes from the FGDs and In-Depth

Interviews of the Student Participants

Upon comparing the themes from the In-depth interview and the FGD, commonalities were synthesised into overarching themes, including challenges, opportunities and sentiments. These themes capture the core dimensions of participants' lived experiences and provide a framework for understanding their interactions within digital educational contexts. The superordinate and subordinate themes, as advised by Smith and Nizza (2022), are presented in Table 5.1.

Table 5.1 Overarching Themes for Student Participants Synthesised from the In-depth Interviews and FGD

Superordinate Themes	Subordinate Themes
Challenges of Learning in Digital Spaces	<ul style="list-style-type: none"> ▪ <i>Adapting to a New Learning System.</i> ▪ <i>Concerns with the Social Aspect of Learning in Digital Spaces.</i> ▪ <i>Challenges Related to IT and appropriate support.</i>
Opportunities Associated with Digital Learning Spaces	<ul style="list-style-type: none"> ▪ <i>Advantages of Digital Spaces</i> ▪ <i>Conditions for Effective Teaching and Learning in Digital Spaces</i>
Sentiments	<ul style="list-style-type: none"> ▪ <i>Digital learning platforms used in nursing and midwifery</i> ▪ <i>Blended Learning.</i> ▪ <i>Classroom</i> ▪ <i>Hybrid</i>

5.6 Superordinate Theme 1: Challenges of Learning in Digital Spaces

Nursing and midwifery students recounted the challenging encounters they had when learning in DS. These challenging experiences were spread across various issues relating to learning in digital spaces, including adapting to a new learning system, concerns with the social aspect of learning in digital spaces, and challenges related to IT support

5.6.1 Subordinate Theme 1.1 - Adapting to a New Learning System

The N&M student participants started by describing DLS as a “new learning system”, which only became widely used for learning as a response to the COVID-19 pandemic. This aligns with Wallace et al. (2020), who highlighted the pandemic’s significant role in influencing the accelerated integration of DLS. They maintained that even though DLS were instrumental in sustaining educational activities, they were new to it, and it was not clear if learning actually took place. For instance, Sadia thought DLS to be a new process introduced to the university because of the COVID-19 pandemic but expressed the uncertainty of this platform in bringing about learning among the students and the lecturers, which is one of the main purposes for

introducing it. Sadia's last statement suggests that her idea was hypothetical, assuming some gained, and others did not, when they learnt in digital spaces.

"...it is a new process that came out because of COVID-19, but it's difficult to state whether people really learnt during the COVID-19, since almost all were new to digital spaces, lecturers inclusive. I think you put it 50/50; some did actually gain a lot and some perhaps did not. Sadia, 2021 cohort, Female, 23-year-old, Adult Nursing, In-depth Interview

The students' choice of the word "new" as used to describe their encounter with DS at the university is noteworthy because DLS are not new, as confirmed by Oxford Learning College (OLC, 2023). Their use of the term "new" does not suggest that DLS is an entirely novel learning methodology but rather reflects their perception of DLS as an unfamiliar mode of delivery within their specific discipline and the university context. While nearly all the student participants considered DLS a new learning system, Sandy challenged this perspective, stating that prior exposure to online learning facilitated their quick adaptation to DLS.

"It wasn't new to me because I had used digital platforms before I came into the Uni. I was already exposed to some of those things, probably because of what I was doing so, it wasn't really something new to me. It was easy for me to adapt." Sandy, 2022 Cohort, Male, 22-year-old, Adult Nursing, In-depth Interview.

Most of the student participants stated that some lecturers were uninterested in teaching online, which affected their learning experience online. For instance, during the FGD, Sally narrated that some lecturers openly declared their lack of interest, using the phrase "not a fan of", to describe their attitudes towards teaching in DLS. This perspective navigates between the e-learning sceptics, who Petit-dit-Daniel et al. (2013) stated have become pessimistic about DLS due to previous negative experiences and the humanist category of nurse educators, who lay

emphasis on human contact. Within the context of this study, DLS witnessed widespread adoption due to the COVID-19 pandemic, so it is unlikely for any of the lecturers to have had a substantial prior negative experience with DLS to the extent of making them e-learning sceptics.

“...during our classes, some of our lecturers even say they are not fans of online learning and would avoid it if they had their ways...” Sally, 2021 Cohort, Female, 30-year-old, Midwifery, FGD.

The student and educator’s lack of interest in DLS could be because of limited previous exposure to the platforms, as well as an underdeveloped individual perception of the T&L modalities. Many student participants narrated how ignorant they were at the onset and felt the lecturers were also ignorant. They recounted their entry into the university at a time when all lectures in their first year were delivered entirely online. This unfamiliarity with DLS, compounded by the unprecedented nature of the global crisis, contributed to their perception of DLS as an entirely new and challenging experience.

Many of the student participants reported having an unpleasant experience during their first year because they did not get enough support to prepare them to navigate digital learning platforms. For instance, Kay highlighted the challenges of commencing university studies online amid the pandemic, noting how first-year students appear disoriented. While acknowledging the importance of this learning approach during the pandemic, they argue it’s an unjust way to begin university life.

“...when we first started during COVID-19 with online... Uh, I think it would be unfair to say to first-year students, you’re starting online. You know, for the first few months, we’re just on with no clue. I understand it has to be, and it had to be done because of COVID.” Kay, 2021 Cohort, Male, 24-year-old, Children nursing, FGD

The first year for higher education students is critical, as highlighted by Trautwein and Bosse (2017), because it is the period characterised by a lot of uncertainty, confusion, high expectations and critical decision-making. It is the time when students begin to lay the foundation for their academic and professional journeys, shaping the trajectory of their university experience. For N&M students, the practical nature of their discipline, as noted by Arundell et al. (2024), added an extra layer of intricacies to these challenges, necessitating even greater support. From the students' narratives, it was evident that starting their studies at the university in a DLS felt unfair, as many of the students expressed a sense of being lost with no clear understanding of what was expected of them or how to navigate the unfamiliar educational environment.

The student participants acknowledge the key role played by digital platforms in ensuring safety and being an alternative solution to the challenges of learning spaces during the pandemic, contributing to the evidence that learning spaces are not limited to just classrooms or university environments, as highlighted by Patel (2022). However, the student participants in this study contend that this is not enough reason to continue learning in DS afterwards.

N&M Student participants described distractions when learning in DLS as part of their struggles to adapt to the new system of learning. Their experience suggests that they are easily distracted when learning online due to the lack of proper monitoring opportunities within the platforms. They compared how distraction occurs online with the classroom settings, noting that the classroom is void of those elements of distraction that are usually present online.

For instance, Pet identified several distractions in DLS, such as students taking telephone calls or stepping away to make a cup of tea, interruptions that are not common in classroom sessions where student engagement is easily monitored, and distractions can be minimised. This underscores that there are factors relating to student engagement, especially peer and lecturer

presence, that contribute to ensuring a focused learning experience. In a classroom setting, the subtle dynamics of non-verbal cues, eye contact, and quick feedback encourage participation by default, making it easier for lecturers to assess and respond to student engagement. Conversely, these elements become difficult to measure online, thus affecting the degree of student engagement and overall learning outcomes.

“... there can be a lot of distractions online. I will say that sometimes you get distracted since nobody is watching you; you could turn off your camera, go make a cup of tea, sit down and talk to someone else... it could be very distracting and sometimes you may not be able to learn the way you want to learn...A telephone call could come maybe from a family member, you just go out, nobody is looking at you” **Pet, 2022 Cohort, Male, 45-year-old, Mental Health Nursing, In-depth Interview**

Kay reported how difficult it was for students with children to control the remote learning environment, particularly in mitigating distractions from children. This challenge extends to lecturers who also struggle with managing DLS.

“But then I think as a parent when online, you are at home and there’s so much more distraction you see. And as much as they want to concentrate, that’s when the kids are coming and speaking. The last time I think even the lecturers themselves, they had some children speaking in the background...” **Kay, 2021 Cohort, Male, 24-year-old, Children nursing, FGD**

Chid responded to Kay’s report during the discussion on the distractions that occur when learning in digital spaces remotely by justifying how distractions in DS can be managed.

“That can be managed as well. It can, you can come to the library if distracted. They don’t have to leave because it doesn’t apply to everyone...” **Chid, 2022 Cohort, Female, 19-year-old, Adult nursing, FGD**

Conversely, some student participants stated that they find it easy to pay attention to lectures when delivered in the classroom, especially because of the presence of the lecturer. They added that it was impossible to sleep during classroom lectures. Some student participants also stated that classroom lectures reduce distractions, and the non-verbal cue of communication contributes to comprehension of what is being taught, which they may not get online. Olly questions the need to wait for long to get queries answered online highlighting how she prefers to come on campus to ask questions from the lecturers to get more direct answers, which are often delayed in DLS.

“Unfortunately, I’ve had to come to the Uni to ask them questions... I’ll come in on Monday just to ask them questions directly because I know I will get a straight answer rather than typing it up online because I don’t get an answer straight away. Why wait so long?” **Olly, 2020 Cohort, Female, 22-year-old, Adult nursing, FGD**

A student had a slightly different opinion by expressing the difficulty in reducing distraction, noting that distraction is common to both online and classroom learning modalities. Students still have access to non-educational digital platforms through their mobile phones or laptops when learning in the classroom, as noted by the Joint Information Systems Committee, JISC (2021), which could be a distraction. This perspective indicates that neither DLS nor classroom learning makes a difference in reducing or allowing distraction when learning. Instead, the presence of distractions appears to be a common challenge across both learning spaces, though they may manifest in different ways. Rather than viewing distraction as a challenge unique to one mode of learning, it is important to recognise that strategies promoting focus and

engagement can have a broad impact across the modes of lecture delivery.

“...I’ve sat all over the place in the classroom, see what my peers are doing, and there are some people that sit there ordering stuff from various shops online and having a look at what they’re doing the weekend and on Facebook. And others are on the presentation and they’re trying to read the presentation or previous notes, and they’re making notes like crazy people. How do you get engagement from all of them? I don’t know how you could do it any differently if it was online because obviously then you can still have your camera off and sit there ordering your stuff online...having the lecture in a class is not gonna take that away” **Amy, 2022 Cohort, Female, 33-year-old, Adult Nursing, In-depth Interview**

In describing their struggles with adapting to a new learning system, most student participants described how they felt compelled to adapt to digital spaces, though they believed nothing could replace the experience of learning in the classroom. Students felt they had no choice but to get used to learning in digital spaces.

“...because the system requires us to change, we still try to adapt to that change... and we just want to manage and adapt to this new way of learning online.” **Pet, 2022 Cohort, Male, 45-year-old, Mental Health Nursing, In-depth Interview**

Steph specifically used the words “push” and “mucked around” to describe how they felt about being asked to attend lectures online. “Push” in this context could mean coercion into learning online, either through direct action or by providing no alternative options. “Mucked around” could mean spending time doing things that are not useful, resulting in a waste of time.

“...and I just feel like they’re trying to push as many students as possible in, to do online. And I just feel like we get mucked around a lot.” **Steph, 2022 Cohort, Female, 27-year-old, Midwifery, In-depth Interview**

Students also reported that they struggled with the cost of adapting to a new system of learning, describing what it was like for them to navigate DLS. For example, Amy describes how it took them one year to acclimatise to the digital platform, only to be compelled to navigate a similar learning curve with the introduction of new modules online.

“...it took me 12 months to get my head around it. Umm. And when they threw in the last module, the clinical skills, that again threw me off balance because I was like what? What am I pressing? I don’t understand again.” **Amy, 2022 Cohort, Female, 33-year-old, Adult nursing, In-depth Interview**

5.6.2 Subordinate Theme 1.2 - Concerns with the Social Aspect of Learning in Digital Spaces

Student participants narrated the social disadvantages of learning in DS, noting a lack of meaningful social interaction, making learning in DS frustrating or difficult. Some students narrated how learning online makes them feel bored to the point of sleeping, while others felt boredom is common to both online and classroom learning. Many of them felt that, despite the interactive features of DLS, they still felt disconnected from a community, leading to loneliness when learning online. They emphasised the importance of non-verbal communication cues such as facial expressions, which they believe foster effective learning and are absent in online spaces. Furthermore, they stated that the social advantages of classroom lectures make it difficult for them to fully embrace online learning.

“The loneliness was quite umm, I did feel lonely and so isolated from the rest of the team when learning in digital spaces.” **Jo, Female, 39 year-old, 2020 Cohort, Adult Nursing, In-depth Interview**

Chid, on the contrary, argued that online lectures should not be labelled as boring because classroom lectures can be boring as well, citing an example of times when lecturers simply read from the PowerPoint slides regardless of the mode of delivery. This perspective broadens the discussion on boredom, positioning it as a fundamental aspect of the T&L experience rather than solely the result of using a specific method for delivering lectures.

“So, I wouldn’t; I wouldn’t call online lectures boring because physical lectures can be boring as well. I know many of my colleagues who have confirmed that lecturers would just read from the slide whether online or in the classroom....” **Chid, 2022 Cohort, Female, 19-year-old, Adult nursing, FGD**

Pet’s use of the metaphor *“I am in the system but am out of the system”* to describe the digital learning experience provides a richer hermeneutic interpretation of students’ phenomenological claim of the social impact of DLS. This statement reflects a sense of detachment despite being a part of the DLS, indicating that while they are listed as being a part of an ongoing lecture, they feel disconnected from the actual learning experience. Further discussion around this statement indicates that students desire to have a sense of belonging or being a part of a system when learning, but they do not get it when learning online.

“Going to class is fun, it is lively, you can see people’s faces when they are talking. It is all part of you being part of a system. But when you are using this technology to learn, I am in the system but am out of the system...you don’t feel like you are part. So, it’s like you are inside the class but you are outside the class.” **Pet, 2022 Cohort, Male, 45-year-old, Mental Health Nursing, In-depth Interview**

Most student participants describe their experience when learning online as diminishing engagement and attentiveness. This experience may be linked to the absence of social interaction, which plays a critical role in fostering a sense of connection and active participation. The impersonal pattern of online lectures with large student cohorts, which are frequently dominated by answering student questions, further degrades the collective learning experience, resulting in a perceived lack of substantial educational value.

“There’s no social interaction and mostly when I’m online, I’m sorry I’m in bed, I don’t pay attention as much and most of the time they are answering over 400 people’s questions in online session and I don’t see any learning happening...” **Steph, 2022 Cohort, Female, 27-year-old, Midwifery, In-depth Interview.**

5.6.3 Subordinate Theme 1.3 - Challenges Related to IT & Appropriate Support

Student participants described the IT-related challenges they had with learning in DS. They expressed concerns about learning on Microsoft Teams (MS Teams), particularly regarding the technical challenges encountered and the absence of recorded lectures.

Students narrated how IT and internet issues were the major challenges encountered when learning in DS. They felt that the inability to revisit sessions since they were not recorded limited their ability to reinforce learning, while persistent technical issues further disrupted their engagement and comprehension. Students struggled when lectures delivered in DLS were not being recorded as they found it difficult to memorise or keep track of every detail being taught during lectures. This could have been easy for them if they had the lecture recording to fall back on.

“Recently we finished one of the modules and none of the lectures taken online were recorded. So, I found it really hard because that was a presentation module...they never recorded those sessions...I don’t remember, I forgot about it. I’m awful at memorizing stuff” **Amu, 2020 Cohort, Female, 20-year-old, Midwifery, In-depth Interview**

They specifically mentioned challenges with the internet connection required to access online lectures and entry into the attendance register, noting that the current technologies do not entirely support learning. These challenges added to their frustration, highlighting the need for more adaptable and supportive digital learning environments.

“The Internet is my initial issue...the Internet connection is not good. Sometimes you’re trying to log in with your phone, but you are not able to get in... sometimes we struggle with the attendance register when we attend online lectures, we meet the admin and they say you haven’t logged in with your BCU account but actually we did or it’s your laptop’s fault, so I think it’s more IT issues which is basically not very supportive towards the learning.” **Amu, 2020 Cohort, Female, 20-year-old, Midwifery, In-depth Interview**

Students described their difficulties with attending online lectures, associating these challenges with insufficient preparation and assistance from the lecturers in navigating online platforms. Having narrated difficulties faced as new students on campus during their first year, most of the student participants expressed the need to be supported enough technically when learning online, especially in their first year. This is consistent with the reports of Newman et al. (2019), based on a national survey of UK HEIs. They feel they did not get the support they needed due to the many unresolved challenges they had. One of the issues they identified was the proper registration process which makes it possible for students to be added to the MS Teams attendance emphasising a timeline towards the end of the first year, indicating the university

had enough time to fix the problem. While trying to describe the many things they had to deal with and to showcase how much of a struggle they had, Amy asked a rhetorical question: “Am I a dinosaur?”. By posing this rhetorical question, Amy metaphorically conveys their feelings of obsolescence and struggle with adapting to new technologies, accentuating a perceived disconnect between her abilities and the evolving demands of the learning environment. This hermeneutic interpretation offers a nuanced insight into the challenging experience of N&M students and the critical need for support.

“I don’t feel that we were given the support that we need, lots of us had so many problems. When we were trying to access things and trying to, I mean, we were at the end of year one, and people still coming up as guests on MS Teams, it was, you know, uncalled for. The time timetabling and everything’s online, and trying to read, do your research and everything online. I mean, am I a dinosaur?... It didn’t work for me. I know it didn’t work for a lot of my peers. We struggled. We struggled through it, and then you’ve got like the youngsters that still sit there..., they’re in the wrong chat rooms...”

Amy, 2022 Cohort, Female, 33-year-old, Adult Nursing, In-depth Interview

Kay’s use of the metaphor “*they forget that we are humans and not robots*” offers insight into the hermeneutic interpretation of their experiences, highlighting a perceived lack of empathy and individualised attention expected from the lecturers in DS. This further reveal students’ dissatisfaction with online learning, advocating for lecturers to engage and monitor students actively.

“The lecturer must be interested as well. I think sometimes “they forget that we are humans and not robots”, they need to monitor what we’re doing...That’s why I don’t like online. Like really, I don’t.” **Kay, 2021 Cohort, Male, 24-year-old, Children nursing, FGD**

Chid complained of not being supported enough to learn online and not getting quick answers to their email, especially because the module email is too general and not assigned to a particular lecturer to manage. Hence, the delay because no one sees it as their job.

“...I also think it became a barrier when they said that we should send all queries to NUR 5081 email. That’s you sending questions to the whole module team... but I preferred when you could send it individually to them... but now we don’t have that. I feel like it makes the lecturers feel like oh OK, anyone can answer anyway. which causes the delay to be fair....” **Chid, 2022 Cohort, Female, 19-year-old, Adult nursing, FGD**

Conversely, Kay recounted that while they received minimal support during their first year, they were expected to navigate subsequent years independently.

“We used to get support in year one, but from year two it’s more of self-learning where you have to do your research and your own uhm... So, I think the higher you go, they want you to be more independent about your learning.” **Kay, 2021 Cohort, Male, 24-year-old, Children nursing, FGD**

5.7 Superordinate Theme 2: Opportunities Associated with Digital Learning Spaces

Nursing and midwifery students described their experiences with the effectiveness of T&L in digital spaces and the potential opportunities. These experiences were grouped under two major subthemes: The advantages of digital spaces and conditions for effective teaching and learning in digital spaces.

5.7.1 Subordinate Theme 2.1 - Advantages of Digital Spaces

Student participants discussed various benefits of DLS, including cost-effectiveness, breaking the barrier of time, space and distance, ensuring student engagement, environmental benefits, flexibility and ease, good learning experience and being able to record lectures. While they acknowledge struggling with distance, resulting in some of their colleagues arriving about an hour late to the classroom, the convenience of online lectures eliminates travel time, making punctuality easy. Students who drive to campus stated that learning online saves fuel and helps them learn at their convenience. In describing how they feel about learning online, Sally articulates her satisfaction with the reduced financial burden, expressing contentment with not having to spend more to attend lectures.

“When I see an online lecture, I’m very happy because I don’t have to spend money or say spend more money to access lectures.” **Sally, 2021 Cohort, Female, 30-year-old, Midwifery, FGD**

They also narrated how DLS ensure inclusivity in the area of interactions like asking or answering questions during lectures, especially for students who find it difficult to interact in face-to-face classes. They further stated that these categories of students, as well as other colleagues, would be able to post questions or answers during online lectures and remain anonymous. They attributed these interactive capabilities to features of digital learning platforms such as the chat box. They used the words “inclusivity”, “equality”, and “equity” to describe the advantage DLS provide students who are naturally timid and find it difficult to interact physically during classroom lectures. For instance, Amu stated that while some of their colleagues are reticent in the classrooms, they interact more freely in DLS. However, the variation in the effectiveness of these platforms necessitates the need to integrate diverse learning preferences and individual differences.

“I have noticed some of our colleagues who do not at all talk in the class...they ask the questions online, and they become more open, and that is inclusivity or equity, but as I said to you, it depends on the individual. Everyone is different, isn't it?” **Amu, 2020**

Cohort, Female, 20-year-old, Midwifery, In-depth Interview

Amy had a different opinion, stating that the mode of lecture delivery does not make any difference in student engagement, emphasising that the same set of students who engage in the classroom also engage online. Her phenomenological narrative reveals that student engagement may be largely influenced by students' personality and willingness to participate rather than the mode of lecture delivery. She observed that the same group of students who actively contributed to face-to-face classes were also the ones engaging in online sessions in her cohort.

“My cohort is different because a lot of time it's the same people engaging online and in class, even putting their hands up, asking questions or in the chat bar, no other person contributes...” **Amy, 2022 Cohort, Female, 33-year-old, Adult Nursing, In-depth**

Interview

Some of the students narrated how learning in DS reduces the carbon footprint released by travelling to campus every day. Some of them used phrases like “destroying the planet with carbon” to refer to the negative impact of going on campus to learn, thereby highlighting the advantage of learning in DS in reducing the harm done to the environment. However, Amy maintained that as a nursing student, there will always be an occasion to contribute to the carbon footprint because of the need to attend a placement or go to work after qualifying as a nurse or midwife.

“... when the lecture is online, there'll be less pollution, and we won't be throwing carbon around. Having said that, how are we gonna get to placement because when we

qualify as a nurse, we're not gonna be working from home? So, the impact on the environment is still there... Sorry, but we're gonna travel to get to our placement... we're gonna be releasing the gases from the car on the way or from the bus. It's just part of the job... We don't get to do our job from home...” **Amy, 2022 Cohort, Female, 33-year-old, Adult Nursing, In-depth Interview**

Student participants narrated the flexibility that comes with learning in DS, allowing flexibility in terms of the time and space for lectures as opposed to classroom lectures, where other groups of students are already waiting outside to occupy the lecture hall at the predetermined end time. Jo, for example, acknowledges the value of DLS in providing the flexibility needed to balance the demands of motherhood and academic responsibilities, as well as immediate feedback from lecturers. This adaptability was critical for those in this category to navigate their dual roles without feeling overwhelmed.

“...I am a mum and quite a busy person, so it did suit me, and I loved the flexibility as I could take my kids to school and come back and still not have to miss or get late for my lectures. So, in that aspect, digital spaces are advantageous_and I kind of enjoyed it...” **Jo, 2020 Cohort, Female, 39-year-old, Adult nursing, In-depth Interview**

Many of the student participants stated that, unlike classroom lectures, online sessions can be recorded if lecturers decide to, thus providing significant benefits for reflective learning, improving understanding and retention.

“You can't record the live classroom sessions, can you? These recordings of online sessions are really good for reflection, like going back to it definitely helps a lot with learning.” **Chid, 2022 Cohort, Female, 19-year-old, Adult nursing, FGD**

5.7.2 Subordinate Theme 2.2 - Conditions for Effective Teaching and Learning in Digital Spaces

Student participants discussed various factors that could determine effectiveness when teaching or learning in DS. They discussed conditions such as appropriate timing and lecture duration, subject and teaching styles, lecturer's presence and management of DLS, reducing online student population, using technological features that facilitate engagement, students' personal preparation and motivation, and supporting students to be independent with learning. Many of the student participants mentioned the lecturer's teaching style as an important condition, which Huang et al. (2024) asserted might be able to reshape the way digital T&L is designed and delivered to enhance effectiveness. They specifically stated that a monotonous style of teaching online, where lecturers just read the PowerPoints, upsets them and dampens students' interest. Their reflection underscores the criticality of adapting teaching to ensure student engagement and improve the overall learning experience in DS.

Recounting the importance of the lecturer's teaching style, Amu provides more detail by explaining that the teacher must be proficient in the subject and at delivering it. However, the assertion that the lecturer's proficiency is a determining factor in teaching effectiveness is contentious. According to the Nursing and Midwifery Council (NMC, 2010), standards for mentors, practice teachers, and teachers, individuals recruited as N&M lecturers are typically deemed experienced and competent within their field of specialisation. This suggests that subject expertise is an established prerequisite, potentially challenging the student's notion that it remains a variable in teaching effectiveness.

"...the lecturer's teaching style is very important...the teacher should be very good at explaining and understanding what students like.... Yeah, the second, which I would say is knowledge of the teacher." **Amu, 2020 Cohort, Female, 20-year-old, Midwifery, In-depth Interview**

Student participants recounted how they benefited from lectures that used some resources that facilitated engagement. They narrated several beneficial experiences in which lecturers used model-like videos to communicate vital details during physiology lectures, significantly facilitating engagement. They also mentioned some assistive technologies used in creating quizzes and stated that WhatsApp mobile messaging applications assisted with the communication of vital information. They identified several features of digital learning platforms that facilitated engagement, including the chat feature and breakout rooms on MS Teams, as well as Padlet, an assistive DLS used along with other platforms to elicit student responses and interactions. Chid remembered a time when a lecturer used assistive digital learning technology, including Padlet or Quizizz, to facilitate student engagement at the beginning of the lecture and suggested using them more often to ensure effective teaching and learning in digital spaces

“I think there’s one lecturer who did something really good, which I’d love to have often. So, during the online section, he did a quiz using an online platform, I think it is Padlet or Quizizz... he did this really nice quiz, and I think starting with that was kind of engaging....” **Chid, 2022 Cohort, Female, 19-year-old, Adult nursing, FGD**

They suggested that online lectures should be segmented into shorter sessions for effectiveness, emphasising shorter online lessons per day and highlighting the challenges of sustained attention when online lectures are too long.

“...only if you do online lectures in shorter bits. So, I think I don’t like a whole lot like long days of online lectures because of the people’s concentration levels...maybe just doing it so that you can’t have up to 4 lessons online in one day...” **Lucy, 2021 Cohort, Female, 40-year-old, Midwifery, In-depth Interview**

Many student participants stated that the kind of subject being taught determines student engagement online, noting that certain lectures attract higher student engagement than others. Sandy narrated how she engages or interacts more during lectures related to their assignment, despite affirming that all lectures are important. Sandy also recounted their nonchalant attitudes towards other subjects or lectures.

“All lectures are important to be candid, but we students see it this way...lectures related to assignments or exams, we pay extra attention to these ones and engage well. But if it’s just like normal classes that are not related to our assignments or exams, you find out that most students just clock in, put their phone on silent and sleep or engage in other things...” **Sandy, 2022 Cohort, Male, 22-year-old, Adult Nursing, In-depth Interview**

Student participants stated the importance of lecturers’ presence and having more than one lecturer manage online lectures. This arrangement ensures that while one teaches, the other monitors the student queries and engagement in the chat section, providing continuous feedback to both the students and the other lecturer. They further stated that the presence of a lecturer during their online simulation class fostered a positive and respectful environment that favours learning interactions. Thus, maintaining the lecturer’s presence contributes to a good learning experience through effective student engagement and adherence to boundaries.

“... Having two or three lecturers in an online class so that one can observe the comments section. So, they look through what’s maybe students’ worries and contributions since we have some students who have a fear of being vocal. Lecturers actually do answer the questions ...” **Chid, 2022 Cohort, Female, 19-year-old, Adult nursing, FGD**

Student participants stated they had a good learning experience when they learnt in a smaller group, citing examples of an online simulation session. They narrated how easy it was for students to engage online with a smaller group. However, they considered this not feasible for some nursing specialities like adult nursing because of the usual large student population. Sandy describes the experience of having many students in online sessions as meaningless, emphasising how difficult it was for the lecturers to maintain control over learning activities.

“... when there are too many people in class online, it doesn’t make sense, even the teachers can’t control things.” **Sandy, 2022 Cohort, Male, 22-year-old, Adult Nursing, In-depth Interview**

Students recounted the initial support they received upon commencing studies at the university and desired continuity. Some of the student participants stated how they were financially challenged and how the university provided technological gadgets, such as laptops, and technical help. They were also signposted to the university departments for further support with their learning needs and mental health issues stemming from the isolation associated with learning online. Pet recommends that students be prepared early in their academic journey at the university to understand and use the university’s digital learning technology.

“...Get us prepared before we start, so we begin to adjust before we get into the class...we should know what kind of technology they will be using for learning... so that will help us to have a better understanding of how the system works.” **Pet, 2022 Cohort, Male, 45-year-old, Mental Health Nursing, In-depth Interview**

While the student participants highlighted the importance of their lecture delivery preference and satisfaction level as critical to ensuring effectiveness when learning online, they emphasised personal discipline, which requires them to do what must be done at the right time, as an indispensable factor. For instance, Sandy maintains that effectiveness when learning

online solely depends on the students, as there is nothing the university can do to make students maximise the opportunity to learn in digital spaces.

“Umm. I think when it comes to being effective when learning online, it depends on the student, per se. There’s nothing the university can do when it comes to student attendees paying attention during lectures... It depends on how individuals see it... It just boils down to individuals’ perspective to just take it more seriously...” **Sandy, 2022 Cohort, Male, 22-year-old, Adult Nursing, In-depth Interview**

5.8 Superordinate Theme 3: Sentiments

Nursing and midwifery students reported their perspectives, reflecting on their experiences with various modes of lecture delivery. Their insights offer a valuable account of how different learning modalities influence their overall learning process. These experiences were grouped into subordinate themes, including digital learning platforms used in nursing and midwifery, blended learning, classroom learning, and hybrid learning.

5.8.1 Subordinate Theme 3.1 - Digital Learning Platforms Used in Nursing and Midwifery

Students described various digital platforms used for learning purposes within the nursing and midwifery unit of the university. They include MS Teams, Moodle, Notepads, Padlet, and Quizizz. Students identified MS Teams as the main digital platform used for teaching and learning at the university. Some students considered the use of PowerPoint both online and in the classroom, as integrating one digital space to support another or classroom learning. They noted that lecturers often connect to YouTube links during lectures and provide additional YouTube links on Moodle for them to watch because many of the nursing topics are difficult to explain, and the students lack practical experience. They also narrated how the lecturers who taught anatomy and physiology were able to support their teaching on MS Teams by

incorporating another digital platform that allowed real-time drawing. For instance, in addition to highlighting the primary use of MS Teams at the university for educational purposes, Amu also mentioned the use of notetaking tools, Moodle, Padlet and Quizziz used by the lecturers to facilitate student engagement.

“...The technology we use is MS Teams, most of the time.... I put in notes on notepads and use other digital technology... Apart from that, I think at university we use Moodle as well. For our learning and then emails for any concerns or any queries...the lecturers also use Padlet or Quizizz to encourage interaction” Amu, 2020 Cohort, Female, 20-year-old, Midwifery, In-depth Interview

5.8.2 Subordinate Theme 3.2 - Blended Learning

Most of the students discussed their preference for a blended mode of learning, stating that they would like to learn online but will still want to retain the classroom options to ensure they still have physical contact with colleagues and lecturers. They described the potential gain of a successful blend of learning online and in the classroom. When classroom lecture is combined with online, there is better time management and a more relaxed environment conducive to attentive listening. Some of the students accurately used the term “blended learning” to describe the integration of online and classroom modes of lecture delivery. Attempts were made to express this idea by using phrases like “mixing” and “bringing together”, arguing that they desire to retain the advantages of learning in DS and do not want the beauty of being in the classroom taken away from them. Indra, for example, feels blended learning is a better provision for delivering lectures as it allows online access and close interactions with peers and lecturers in the classroom.

“I think the blended provision is much better because you’ve got like a 1-to-1 interaction in the classroom, whether with fellow students or with the lecturers and on

the other hand, you've got that access to do things online. So, I'm really in support of the blended system." **Indra, 2021 Cohort, Female, 25-year-old, Midwifery, In-depth**

Interview

The proportion of blending was also highlighted as an important issue that requires the consideration of a lot of factors. Students suggested some modules or subjects they believe are not suited for online delivery, and some suggestions for effective online delivery. They stated their dislike for the current proportion of blending within the university, especially concerning which subjects are to be delivered in the classroom and online. They expressed their desire to have fewer subjects that require more interaction online due to the limitation of proper interaction. They noted that assignment-related subjects elicited more student engagement when delivered online. Specifically, they emphasised that clinical skills and practical-related subjects are unsuited for online delivery. Most student participants suggested that nursing skills and tutorials are better done in the classroom to allow better interaction, while subjects that require detailed information and fewer responses or interactions from students are better delivered online. Sally perceived it as illogical to hold some of the lectures they had in the classroom because some of these classroom lectures were better delivered online. They concluded that it is essential to carefully select which lectures to deliver online or classroom to maximise the benefits.

"There are some classes that we came in for and could have been done online...And then they put the serious ones online...They did that last year, and lots of it didn't make sense ... Why come in for a 30-minute class when it could be done online? ... Pick the right classes that are meant to be physical and online, it would be worth it..." **Sally,**

2021 Cohort, Female, 30-year-old, Midwifery, FGD

Sally used the phrase “serious ones” to describe the types of lectures or subjects that were delivered online instead of in the classroom, based on her expectations. Her subsequent statement provided more insight into what she meant by “serious”, as she linked this idea to the lecture duration. She questioned the need to attend a classroom session for a 30-minute lecture, expressing frustration over what she perceived as an inefficient use of time, effort and resources. The hermeneutic interpretation of Sally’s experience would infer that while long online lectures could be convenient, they stand the risk of being too demanding and reducing student engagement.

Some students expressed dissatisfaction with the current disproportional mix or blend of online and classroom lectures at the university, noting that more lectures are held online than in the classroom. They believe that the ratio should favour classroom lectures. For instance, Steph expressed frustration over the university’s predominantly having online lectures despite students getting accommodation close to the campus in anticipation of attending lectures in the classroom. This structure, with only a few lectures delivered in the classroom, appears to render the financial investment in nearby housing futile.

“...people who have come from far away, like my friends from London, who’s coming and stayed away from family to be in her accommodation to do most sessions online and then one in campus, she has to stay in her accommodation for just one campus session and I feel like it’s really stupid and I feel like they’re really trying to take advantage of this because we’re not saying anything or doing anything about it.”

Steph, 2022 Cohort, Female, 27-year-old, Midwifery, In-depth Interview

Mel analysed how much she averagely spends to come on campus to attend classroom lectures, expressing dissatisfaction with the current proportion of lecture delivery modalities. They

highlight the disproportionate number of lectures delivered in the classroom compared to online, contrary to their preference for a better balance.

“...Now we have like 4 lessons in class, one lesson online...but I’ll say personally it’s costing me a lot, I live about 24 miles away from campus...So every day I’ll buy fuel for £25, and £5 for feeding, that’s about £30 a day for me to go to the university. If I go four days a week, that’s about 120 pounds altogether. I’ll spend it outside my house expenses...For students who live close by, they can just walk into the class, which is not a big deal, but they have to pay an excessive amount of rent, about £1500 in the city centre, which for me is a lot. I pay only £400 for rent where I live. It’s all gonna be the same amount of money we’re going to spend at the end of the day.” **Mel, 2022 Cohort, Male, 28-year-old, Adult Nursing, In-depth Interview**

On the contrary, Olly expressed her disinterest in the lectures, regardless of the delivery modality. She claimed that if the lecture was not related to the assignment, she would prefer to sleep instead of listening and believes that some of her colleagues have a similar experience.

“If the lecture is not about the assignment, I’m not listening. I’m sleeping and no, it’s not gonna benefit me, and I think it’s the same for some of my colleagues.” **Olly, 2020 Cohort, Female, 22-year-old, Adult nursing, FGD**

Some students suggested an equal mix of online and classroom lectures, noting the kind of lectures that are suitable for each mode of delivery. They suggested that the Self-medicate module, involving medications and calculations, as well as the policy module, is best delivered online. Mel expressed a preference for an equal proportion of online and classroom lectures as was done the previous year. Additionally, Mel suggested that the classroom is best for practical modules such as moving and handling.

“From my own experience, I would prefer online, but I would prefer it to be 50:50 mixed, like what we did in the past year. They called it blended. I think classrooms are very good for practical work, for example, when you’re doing personal moving and handling training, when you’re doing all that, it’s OK for that.” **Mel, 2022 Cohort, Male, 28-year-old, Adult Nursing, In-depth Interview**

5.8.3 Subordinate Theme 3.3 - Classroom Learning

Responses from the student participants regarding their preferred learning modality were diverse. While most students desired the blended mode of learning, they expressed a preference for classroom lectures. They stated that even though they have accepted the challenge of a new way of learning, they still love to learn in the classroom for several reasons, but most especially because the lecturers can read their emotions, and they can express theirs. They also described the uniqueness of learning in the classroom, especially the ease of getting support from peers in the classroom.

“...I love being in the classroom, I love being involved because I grew up with that from a young age and then coming to face this idea of being at home, being taught and being involved was quite different from what I had envisaged. But if you ask me ‘what I would prefer’, I still love being in the class.” **Bee, 2022 Cohort, Female, 25-year-old, Midwifery, FGD**

Steph faulted the university for not allowing enough in-person classes, observing that it could be due to limited lecturers. They further expressed a dislike for online learning because of the inability to interact with the lecturers one-on-one after the class.

“But when we come to campus, they’re not able to give us enough sessions or there are not enough lecturers...it’s just more interactive doing those sessions on campus, but

online for me is just a complete no. I feel like I wouldn't be able to actually ask a question online or have that opportunity where, at the end of the lecture, I'm able to ask questions." **Steph, 2022 Cohort, Female, 27-year-old, Midwifery, In-depth Interview**

5.8.4 Subordinate Theme 3.4 - Hybrid Learning

Some student participants reported their preference for a hybrid mode of lecture delivery. However, a good number of them confused blended learning with hybrid learning in their description when further asked to clarify. For instance, Olly concluded her narrative with a question that presents doubt about her understanding of hybrid learning. In describing hybrid, Olly painted the picture of blended learning and subsequently asked whether this description accurately represented the hybrid mode of learning.

"Yeah, I think it's really good to have a hybrid form of teaching and learning because it has got both components of learning online and learning in person... So, what I mean by hybrid is when we combine face-to-face learning with online in the sense that, if we have 20 classes, we may have 10 online, depending on the nature of the lecture and then have the rest in class. Is that not a hybrid?" **Olly, 2020 cohort, Female, 22-year-old, Adult Nursing, FGD**

Two students who talked about the hybrid mode of learning rightly defined it and further outlined the conditions or measures required for its successful implementation. For example, Steph accurately described a hybrid approach to lecture delivery, advocating for students to be allowed to choose between online and classroom learning for each subject because of the diverse circumstances of students.

“If we had an option where people could do online, while some others could do in-campus at the same time, such that both the online and in-class are attending the same lecture in real time because everyone has their own situation...” **Steph, 2022 Cohort, Female, 27-year-old, Midwifery, In-depth Interview**

5.9 Chapter Summary

This chapter reports the data collected from nursing and midwifery student participants through in-depth interviews and FGDs. It begins with a description of the participants’ characteristics, with individual experiential themes derived from case-specific analysis included in the appendix. Patterns were identified across the ten cases and synthesised into distinct themes. Similarly, the FGD data were analysed, and themes were presented. A triangulation of data was conducted, culminating in the integration of themes from both the in-depth interviews and FGDs into overarching superordinate and subordinate themes.

The next chapter systematically presents the findings from the lecturer participants.

CHAPTER 6

RESULTS – LECTURER PARTICIPANTS

6.1 Chapter Outline

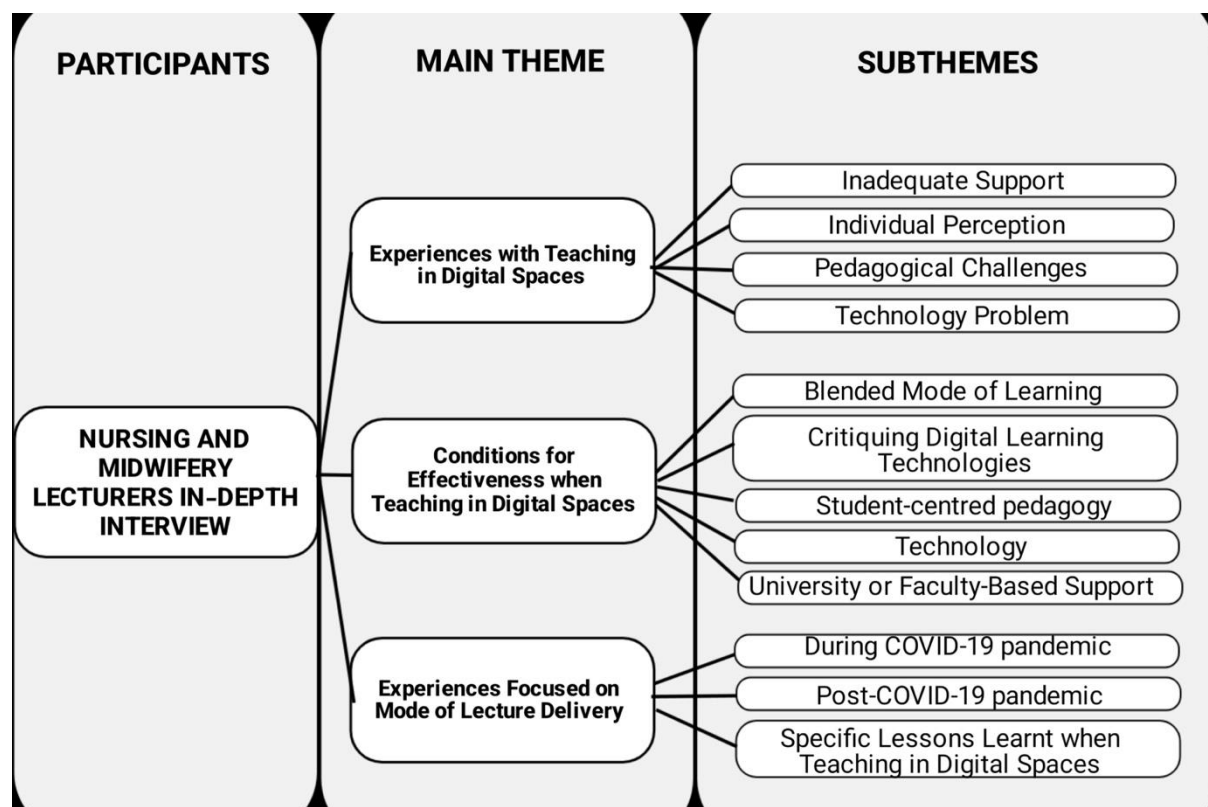
This chapter presents data collected from nursing and midwifery (N&M) lecturer participants. Data were collected in two parts: 1.) In-depth interviews of ten N&M lecturers at Birmingham City University (BCU). 2.) One Focus Group Discussion (FGD) involving five N&M lecturers who were not part of the in-depth interviews. Participants were distributed across the various N&M specialities and ethnicities. Detailed participant characteristics were presented in Tables 4.5 and 4.6. An overview of the results from each analysis was presented in Sections 6.2 and 6.3, providing a summary of the experiential themes emerging from each data collection. This is followed by a triangulation of the results in Section 6.4, which highlights how the data complement each other and provides additional details or unique insights not captured by a single method. Section 6.5 presents overarching themes, offering a synthesised report that integrates the themes from the FGDs and in-depth interviews. Finally, Section 6.6 identifies themes and subthemes unique to each data collection method, ensuring that the distinct perspectives of participants are retained, particularly those that did not intersect across methods.

6.2 In-Depth Interview Result

Four lecturers were from the adult nursing speciality, four from midwifery, one from mental health nursing and one from learning disability. Six of the lecturers identified as white British, two as black, and two as Asian. Seven lecturers have taught at the university for 3 – 10 years, while three have taught at the university for more than 10 years. Two of the lecturer participants were males and the rest of the eight were females, reflecting the gender distribution within the

profession (RCN, 2023). Half of these participants were young adults between 20-39 years, while the second half belonged to the middle adult group between 40 – 64 years. This age classification is based on contemporary evidence (Dattani, 2023; Dyussenbayev, 2017; NHS, 2024). Further details are presented in Table 4.5 in the methodology chapter. Three major experiential themes emerged from the analysis of the in-depth interview, which included challenging experiences with teaching in digital spaces, conditions for effectiveness, and transitioning within the COVID-19 context. Further details are provided in Figure 6.1.

Figure 6.1 Experiential Themes Emerging from the Lecturers’ In-depth Interview

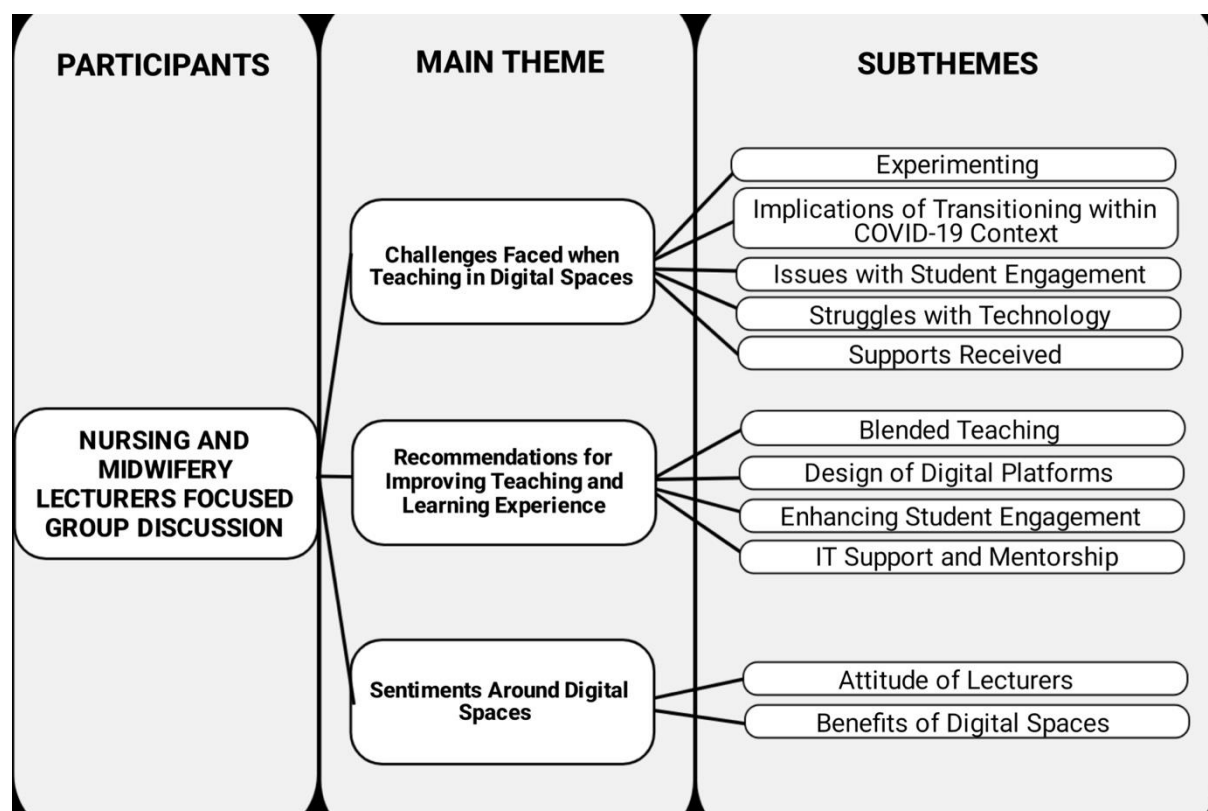


6.3 Lecturer Focus Group Discussion Result

Five lecturers who were not part of the in-depth interviews participated in the FGD. Two participants have taught at the university for 3 years, another two have taught for 4 years, and one has taught for 6 years. Among them, two were from the adult nursing speciality, one from learning disability and two from the midwifery speciality. Two of the lecturers commenced

teaching at the university in 2019, another two started in 2020, and one commenced in 2017. Regarding their ethnicity, two of the respondents identified as white British, two as black, and one as Asian. One of the participants was a male, while the rest of the four participants were females. Four of the lecturer participants in this FGD were middle-aged adults between the ages 40-64 years while only one was a young adult between the ages 20-39 years. Further information is presented in Table 4.6 in the methodology chapter. Three major experiential themes emerged from the analysis, which included challenges faced when teaching in digital spaces, recommendations, and sentiments around digital spaces. Further details are provided in Figure 6.2.

Figure 6.2 Experiential Themes Emerging from the Lecturers' FGD



6.4 Data Integration

By triangulating the data, intersections and divergences between the in-depth interviews and FGD of nursing and midwifery lecturers were identified. Each method complements and

enriches the findings of the other, thus boosting the thoroughness and complexity of the analysis. More than half of the lecturer participants in the in-depth interviews identified as White British, a demographic that also predominated the FGD. This suggests a limited ethnic diversity among the N&M lecturers employed at the university. In addition, these lecturers have been teaching at the target university for a minimum of 3 years, having commenced their roles before or in 2020. This suggests that they possess substantial experiences before, during and after the COVID-19 pandemic, a period characterised by extensive use of DLS for teaching. Each data collection elucidates emerging ideas while introducing new dimensions to the narrative. For instance, both methods highlight lecturers' challenges when teaching in DLS, their recommendations for improving online teaching experiences, and the transition between classroom and DLS during and after the COVID-19 pandemic.

Although the in-depth interview comprises limited narratives about the lecturer's sentiments about teaching in DLS, the FGD provides an extensive account of their attitudes and perspectives on the benefits of DLS. During the in-depth interviews, transitioning to various learning environments within the COVID-19 context was extensively discussed and emerged as a main theme, while the implications of transitioning within the COVID-19 context emerged as a sub-theme in the FGD analysis.

Analysis of the two different data sets reveals a significant intersection in the emergence of two main themes, which include the challenges faced when teaching online and the potential opportunities for making this teaching modality effective. In the in-depth interviews, the theme that focused on the challenges faced by lecturers when teaching online featured issues such as inadequate support, varying individual perceptions, pedagogical challenges and technology problems. Conversely, the FGD provides a more robust discussion featuring experiments or trials that occurred during the pandemic, implications of transitioning within the COVID-19

context, issues with student engagement, struggles with technology and support received. Similarly, the recommendations for improving teaching and learning experiences derived from the analysis of the FGD introduced more layers, such as the design of digital platforms and strategies for enhancing student engagement. These insights augmented the themes on opportunities for ensuring effective online teaching previously highlighted in the in-depth interviews

6.5 Overarching Themes from the FGD and In-Depth Interviews of Lecturer Participants

A comparison of the themes from the In-depth interview and the FGD highlighted commonalities, which were synthesised into overarching themes. These themes encapsulate the central points of participants' lived experiences and provide a structure for understanding their interactions within digital educational contexts. The superordinate and subordinate themes, as advised by Smith and Nizza (2022) are presented in Table 6.1.

Table 6.1 Overarching Themes for Lecturer Participants

Superordinate Themes	Subordinate Themes
Challenging Experiences of Teaching in Digital Spaces	<ul style="list-style-type: none"> ▪ <i>Adapting to Teaching in Digital Learning Spaces.</i> ▪ <i>Challenges with Technology</i> ▪ <i>Level of Support</i> ▪ <i>Lecturer's Sentiment towards Teaching in Digital Spaces</i>
Transitioning within COVID-19 context	<ul style="list-style-type: none"> ▪ <i>During COVID-19 Pandemic</i> ▪ <i>Post-COVID-19 Pandemic</i>

6.6 Superordinate Theme 1: Challenging Experiences of Teaching in Digital Spaces

N&M lecturers narrated their challenges when teaching in DLS. These challenging experiences were spread across various issues, including pedagogical challenges, struggles with technology, and levels of support.

6.6.1 Subordinate Theme 1.1 – Adapting to Teaching in Digital Learning

Spaces

Lecturer participants narrated the challenges they faced while teaching in DLS in two interwoven ways. Firstly, the challenges of adapting their individual self to teaching online and secondly, the challenge of adapting their teaching styles to digital learning platforms.

One of the major concerns they had was the difficulty in picking up non-verbal cues of communication when teaching in DLS. They discussed how they tried out several features of digital platforms to replicate a teaching and learning (T&L) experience similar to that of the classroom. They stated that they experimented with gamification as a style of engaging students when teaching and left them to learn on their own. They reported that this period of experimentation was a learning period for them, as they were unprepared for anything that happened during the pandemic. However, they mentioned that the evolving nature of digital learning platforms now reflects new features that improve teaching and learning experiences.

Many of the lecturers cited examples of times when students did not do well when they delivered a module online and through a blended modality after the pandemic. This narrative is indicative of the need to look beyond the modes of delivering lectures to understand other factors that come into play. For instance, Jane expressed concerns over the consistently low pass rates in the second-year module (Health policies and guidelines) that they taught online, noting the abstract nature of the module. After getting a similar low pass rate after delivering the module through a blended approach, their experience suggested there could be factors beyond the mode of delivery contributing to students' difficulties.

“You know, I taught in the year 2 module, where we taught very abstract topics like health policies and guidelines. Since I joined the team, the pass rate for the assignments has been very low, and it’s a concern to the team... I thought the failure rate was perhaps because we took the whole lecture online, but the next cohort had a blended mode of delivery. We had some classes face-to-face on campus, while some were done online, but the pass rate was still low...” **Jane, Female, 47-year-old, Midwifery, Taught for 3 years, FGD**

Lecturer participants suggested several teaching styles that they have previously explored in DLS. They stated that it was easy for them to address students specifically by name and tailor their teaching towards individual needs online. They suggested using gamification to encourage student engagement with learning content on digital platforms like Moodle. Sally describes the possible benefit of gamification in digital spaces, especially on the Moodle platform. By integrating a game-like element, such as badges of completion, they noted a significant rise in student engagement in digital spaces, as this served as a motivation for the students.

“I’m particularly interested in those digital platforms that work around gaming. So, we used it on our Moodle page. Last year, we had our engagement monitoring linked up to the gamification so that if students completed so many activities, they got a badge, and it gave them a little bit of a motivational...the engagement was massive” **Sally, Female, 40-year-old, Adult nursing, taught for 3 years 8 months, In-depth interview**

They stated that lecturers are responsible for preparing students to navigate online platforms through module launch. They also suggested that the effectiveness of T&L in digital spaces depends on the cooperation of the students and lecturers. They recommended having more than one lecturer to teach online to manage the online class properly. Some lecturers described how

they adapted their teaching when online and brought some classroom rules into DLS. They asserted that they could ensure inclusivity when teaching in DLS as they can engage students who are typically too shy and not confident enough to engage during lectures, as well as students with special learning needs. Paula suggests that digital spaces could potentially enable student-centred teaching. They stated that it is easy to address students by their names as it is displayed on the digital learning platforms, and they could analyse students' attitudes from the video.

“So, I think technology has an opportunity to really allow lecturers to know their students specifically”. **Paula, Female, 57-year-old, Midwifery, taught for 16 years,**

In-depth interview

Although some lecturers stated that the chat and breakout room function of DLS fosters learning interaction, other lecturers implement measures such as temporarily disabling the chat box, segmenting students into smaller groups with staggered schedules or using the breakout room to facilitate student engagement and keep them focused on the lectures. This suggests that there are no rigid or standard rules that should govern the use of DLS features to facilitate student engagement. Rather, their effectiveness appears to be shaped by individual differences, context and how these tools are intentionally integrated into the learning experience.

Among several strategies for ensuring effectiveness in DLS mentioned by the lecturer participants, they proposed having short sessions when teaching online with short breaks, avoiding teaching with just one tone or voice, building students' confidence, encouraging self-directed learning or granting students a measure of autonomy with how they learn. Lecturers stated how they learnt the importance of considering the peculiarity of students' diverse demographics and their challenges when determining the styles of teaching. They advocated for the use of multiple teaching mediums, such as combining teaching on MS Teams with

Padlet or Quizziz to facilitate engagement, thereby ensuring inclusivity and effectiveness when teaching online.

Lauren listed interactive tools such as Quizziz, questions, Mentimeter, opinion polls and other engagement tools that enhanced student engagement when teaching in DLS. They argued that these features ensure the learning process is dynamic and participatory. They discovered the students benefited more from their teaching as the lecturers became more proficient, suggestive of a positive correlation between technological competency and educational outcomes.

“... what we tried to do to build engagement was to break it up with various quizzes, questions and engagement tools using a lot of the technology. For instance, Mentimeter was a good one. Some other sort of opinion polls...and as we became more skilled using the technology, I think the students got more of the benefits from using those kinds of technology” **Lauren, Female, 29-year-old, Midwifery, taught for 3 years 6 months,**

In-depth interview

Ron reflected on the possible gains of integrating various teaching styles. The approach of using videos of themselves to facilitate student engagement suggests the importance of diverse pedagogical methods to accommodate various learning preferences and enhance student participation and interaction.

“...I have recently been thinking it would be great to be able to create things where they might have me on the video, so that's to be an interaction. They might be getting a little bit bored, but me channelling this into interaction. So, you get more interaction with different styles of learning...” **Ron, Male, 44-year-old, learning disability, taught for**

6 years, In-depth interview

They stated that online simulations and other adjunct features of digital spaces facilitate student engagement. They also maintained that DLS, like the Moodle platform, facilitates student engagement, especially because it allows the integration of adjunct features that enhance interactions. Brian supported the idea of Jane during the discussion by asserting that the Moodle platform enables collaborations and interactions among students and teachers.

“I echo Jane’s sentiments about Moodle. It’s a versatile platform that allows for seamless communication, interactions and collaboration among students and lecturers.” **Brian, Male, 50-year-old, Learning Disability, Taught for 4 years, FGD**

Furthermore, some lecturers expressed concerns regarding the value of education delivered via digital learning technology, posing the question of whether the university is becoming more concerned about its business side of making Higher Education universal and students, consumers of certificates. Some of the lecturers attempted several means to reduce the social isolation that occurs when teaching online, with little or no success. They also expressed concerns over the impersonal nature of teaching online and how difficult it was to adjust their teaching, stating that there were times they considered their lectures online like a monologue. This is in addition to the difficulty in managing online classes, especially with a large online student population and a limited number of lecturers. It then became difficult to know who was listening or engaging in online learning platforms.

Ron used the metaphor “so I became a robot” to describe the dehumanising impact of the impersonal and non-engaging nature of online lectures. The statement underscores the detrimental impact of the lack of interaction in online teaching spaces on the lecturer’s motivation and effectiveness, leading to a mechanical and detached teaching style. This hermeneutic interpretation of the narratives of Ron suggests a need for more interactive and

responsive digital teaching strategies to ensure effectiveness and dynamism in the delivery of lectures.

“... you'd be asking a question, and they'll be silent. Is anyone there? And I think then that slowly began to eat away at me. And I just sort of lost my interest. I didn't stop giving the lessons, but I think a lot with the warmth of how I was delivering them became very cold and isolated. So, I became a robot itself...” **Ron, Male, 44-year-old, learning disability, taught for 6 years, In-depth Interview**

Similarly, Sandy asserts that online teaching creates a significant barrier to meaningful interactions between lecturers and students. She noted that limited visual perception prevents students' capacity to fully understand the lecturer's teaching style and personality, which they believe could impact the overall outcome of T&L. This suggests that the nuances of learning interaction essential for learning were not fully replicable in DLS.

“...I actually think there's a bigger barrier between the students and lecturer online because they only see your head, they don't know you. There is something about understanding the full context of a person, their type of person that you just can't give online in the same way...” **Sandy, Female, 35-year-old, Adult nursing, taught for 3 years and 6 months, In-depth interview**

Lecturer participants reported low student engagement with some of the content uploaded to the Moodle platform. They stated that students do not even engage in some of the content at all. This has become a major concern, but a more critical concern is how to really assess student engagement in those DLS. They narrated the difficulty of a realistic measurement of student engagement on the Moodle platform, highlighting that the completion tick at the end of each milestone on Moodle is inadequate to assess engagement with the learning content. They noted that although MS Teams could register who comes on the platform to attend lectures, there was

no way to identify those listening. They found it disturbing that some students intentionally joined synchronous sessions on MS Teams lectures with no intention of attending the lecture since they knew the platform would register their presence. However, a few students were not smart enough to log off when the class ended, which further reveals they were never present with their computers. Simeon recounted the challenge of accurately evaluating student engagement with learning materials in digital spaces. They emphasised the possibility of falsely assuming engagement when students superficially complete reading or videos.

“...even the materials that we expect the students to read, it’s difficult to know if they were really engaging those documents because it’s easy for the students to just scroll to the end of the article without reading and click complete to show that completion...they do a tick and go... even the video shows they don’t watch it, and they could have left it playing without really watching, and we would think that they did watch it.” Sam,

Female, 44-year-old, Midwifery, Taught for 4 years, FGD

6.6.2 Subordinate Theme 1.2 - Challenges with Technology

Lecturer participants recounted their challenging encounters with digital learning technology, describing their struggles with several digital learning platforms and their features. They first established that the same digital learning platform was used across the N&M faculty. Some lecturers found it difficult to teach on some platforms like Zoom, especially because they were not used to it. The university at that time approved the use of MS Teams and Moodle as digital platforms for T&L. They described the issues they had with poor or unstable internet connections as well as the digital knowledge needed to navigate and teach on those learning platforms.

Sally noted that some devices, like mobile phones, that could have assisted or contributed to enhancing student engagement in the classroom could not pick up network signals in most

lecture halls. This frustrates teachers' plans to encourage student participation during online sessions.

"... last week we tried to use Padlet to allow anonymous interactions, and it just didn't work because half the students couldn't get onto the Internet to use Padlet." **Sally,**

Adult nursing, taught for 3 years and 8 months, In-depth Interviews

They stated that at the onset of the COVID-19 pandemic, when digital learning platforms were newly introduced to the university, both the lecturers and students lacked technological skills. Brian used the metaphor *"It's like a tug of war"* to elucidate the challenges faced in navigating and managing digital teaching platforms. This metaphor signposts a possible hermeneutic interpretation of this initial experience of navigating DLS. Their narratives describe situations when they inadvertently activated unknown functions during online lectures, resulting in difficulties in resolving the issues. To manage expectations, Brian acknowledged their continual process of learning to use technology, demonstrating a consistent commitment to adapt and improve.

"... I've been in online sessions where I clicked on something that reflected on the screen, I didn't know what I clicked, nor did I know how to undo it. So, during those times, it's like a tug of war, you know, trying to sort things out. But of course, have always told the students that I'm still learning..." **Brian, Male, 50-year-old, Learning**

Disability, Taught for 4 years, FGD

6.6.3 Subordinate Theme 1.3 - Level of Support

Lecturer participants recounted the struggles they had with getting support to teach online and having to support students to learn in DLS. They stated that they received little support from the university to get themselves set up to use the Moodle platform for teaching activities. Some

others reported being supported by senior colleagues on online teaching skills and necessary modifications. Many of the lecturer participants stated that they had to find ways to support themselves with teaching online, while some of them got minimal support from colleagues. For instance, Sandy described how they attended online courses that provided them with the information and skills to teach in DLS.

“I went on all the digital courses. I basically taught myself by going, and I had my own self-motivation to have a go” **Sandy, Female, 35-year-old, Adult Nursing, taught for 3 years and 6 months, In-depth interview**

Conversely, some other lecturers reported that the university’s response during the initial adoption of DLS was very useful. They stated that they continued to receive support even after the national restriction when they commenced a blended mode of teaching, which combines classroom with digital learning. They noted that on several occasions, their challenges remained unsolved despite the intervention of the university to provide support. Thus, they are reduced to a similar position to those who have received no support. Jane acknowledged the support received from the university, but still believes they are faced with a greater challenge of low student engagement, which they believe still makes their struggles with teaching in DLS unresolved

“...the Uni provided additional support for us, but you know these supports cannot really solve all the challenges. They provided resources to students too... but engaging these resources is still a major concern” **Jane, Female, 47-year-old, Midwifery, White British, Taught for 3 years, FGD**

Some lecturer participants stated that they piloted a virtual community of practice as an avenue to check on colleagues, provide support and discuss pressing issues relating to their practice. They stated that time is very important when learning to use DLS, but it is difficult to find time

to learn. They stated that their workload was so heavy that even if the university provided training to help them with technological or teaching skills, it would be difficult for them to be able to access them. They advised making sure lecturers are allowed the time to get trained and supported to teach in DLS. They recommended the need for computer and technical experts at the university to help and support lecturers in acquiring the skills to navigate through DLS. Simeon recounted how the community of practice organised by the head of the department supported them from the possible effects of isolation when teaching remotely. They also highlighted the need for more improvement in the support and digital resources provided by the university.

“...I believe there is still room for improvement regarding support and resources for lecturers and students. More training and professional development opportunities are needed to help lecturers effectively integrate technology into their teaching. Also, the community of practice that was organised by the head of the adult nursing department to catch up with all the staff so that we wouldn't feel locked out of the world helped a lot.” **Sam, Female, 44-year-old, Midwifery, Taught for 4 years, FGD**

Lecturer participants proposed the need for the university to invest financially in the appropriate digital or blended modes of T&L. They suggested having preparatory sessions for lecturers to provide initial training and ongoing professional development, thus equipping them with the required skills to maximise DLS. They further recommended conducting training sessions for students to prepare them to effectively navigate digital learning platforms. They argued that online teaching requires more than one lecturer in a session, thus encouraging the university to recruit more lecturers. Sandy cited examples from Barts and London University, highlighting their comprehensive infrastructures supporting hybrid and blended learning modes. They noted that implementing a similar structure requires significant financial

investment by the university to establish the necessary educational and technological framework

“Umm, you know that we can give people options and even better is moving to the similar ways of working like at Barts and London University that have got a completely whole university that is completely dedicated to hybrid and blended learning spaces where every lecture can go hybrid or blended because their whole university is set up for these modes of learning. So, it's a financial investment that the university must commit to.” **Sandy, Female, 35-year-old, Adult nursing, taught for 3 years 6 months, In-depth Interview.**

6.6.4 Subordinate Theme 1.4 – Lecturers’ Sentiments towards Digital Learning Spaces

Lecturer participants perceived that the experiences of everyone are unique in DLS. Some described how some students and lecturers are still fixated on the old way of teaching and learning. They also highlighted the socioeconomic status of students as one of the challenges faced in teaching in DLS because of the required digital infrastructure. For instance, Jack expressed the fear of being expendable within the university if digital learning is embraced, citing examples of recording his lectures, which could be reused without needing his further input. Jack expressed apprehension, not only about being expendable but its potential impact on the quality of teaching. They emphasised that continually preparing teaching material allows for modifications that reflect current research and trends, which otherwise may not be possible with the continuous recycling of recorded lectures.

“...one of my concerns was that I was worried that if I made recordings of myself teaching, there would be pressure on the university to just repeat using those recordings. And I was making myself dispensable...the university is a business, and if they can cut corners and save money, they wouldn't really need me, and that was a big concern for me...” **Jack, Male, 38-year-old, Mental Health Nursing, taught for 8 years, In-depth Interview**

Lecturer participants stated their preference for online simulation in addition to teaching on MS Teams. They compared Zoom with MS Teams, but maintain a preference for MS Teams because it has many features that support teaching and enhance student engagement. They acknowledged the uniqueness of DLS, describing important features of the MS Teams platform, such as video, audio, emojis, chat function and breakout room, that made it suitable for T&L in nursing and midwifery. They stated that DLS may give students autonomy over how they learn, and the subjectivity of this autonomy became a major concern to the lecturers. Some lecturers did not like DLS, comparing classrooms with digital teaching, to justify their preference for classroom teaching and dislike for DLS. In describing their dislike for DLS, they used the phrase “not attracted to digital teaching” to describe their perceptions. Despite stating a preference for classroom teaching, Lee acknowledges the uniqueness and benefits of DLS and advocates for its retention.

“I love classroom face-to-face lectures more than anything, but digital spaces have saved us in so many ways, including time, convenience, finances, space and other ways that I can't remember. I don't think I would like to discard that kind of system or platform.” **Lee, Female, 39-year-old, Adult Nursing, Taught for 3 years, FGD**

Lecturer participants asserted the need to carefully design the N&M curricula to reflect current technological advancements. They stated that the current clinical practice equipment integrates

technology, and there is a need to bring students up to speed on technology use. They advocated for the use of all features of DLS, such as breakout sessions, chat boxes, recordings, and suitable backgrounds, as appropriate for a particular session or the objectives of the lectures. They also recommended combining various digital learning platforms to achieve optimal results, advising the university to purchase licences for full access to auxiliary or assistive digital spaces that could be used to support or complement other platforms.

There were arguments around recording online lectures, while some lecturers believed that it allows for reflective learning as the students can always go back to the recorded lecture to reinforce their learning and better retention, others stated that it could allow complacency on the part of the students as they would have more reasons to boycott lectures. Many lecturers asserted that they had concerns initially with using the recording function and believed that when the students begin to repeatedly request that the session be recorded, they probably do not intend to stay till the end of the lecture or do not intend to pay attention or attend at all. Some suggested recording only the question-and-answer sessions held online and uploading them or their transcript on Moodle so that students can always have access to them. For instance, Sandy suggested not recording the full length of the lecture to bring a balance, such that when students consider the loss of some aspect of the lectures that would not be recorded, they may be motivated to attend the lectures, while they would still be able to go back to the aspect recorded.

“I think there can be complacency with digital spaces that I'll go back to it later and they just don't engage as a level of apathy... so it's around having good boundaries when using digital spaces or how it's used, and I would suggest any online would not have a full-length recording. With that, they have to turn up for lectures.” **Sandy, Female, 35-year-old, Adult nursing, taught for 3 years and 6 months, In-depth interview**

Sheila reflects on the importance of creating visually engaging digital learning platforms, especially for visual learners. They emphasise the need to engage students with interactive elements rather than merely reading from the slides. They concluded that the selection of technological space or tools should align with specific educational goals and improve the overall learning experience.

“But there are still ways around making digital spaces visually appealing because we know about the visual learners... we are not just to be talking off the slides... How can we engage them with the Moodle page? That's where my fundamental thinking is... It's about what you're looking for, using it properly and what you're trying to achieve. This is how I pick the technology that's gonna most enhance what I'm trying to achieve.” **Sheila, Female, 39-year-old, Midwifery, taught for 6 years, In-depth interview**

6.7 Superordinate Theme 2: Transitioning within COVID-19

Context

N&M lecturers narrated their experiences with transitioning within the context of the COVID-19 pandemic. As they reflected on their experiences during the transition, they described the shift as a sudden and challenging one because it gave them a feeling of hopelessness. Their experiences with transitioning were discussed across several time frames, which were grouped into subthemes including: during COVID-19 and post-COVID-19.

6.7.1 Subordinate Theme 2.1 - During the COVID-19 Pandemic

Lecturer participants described DLS as the only bailout for them to ensure they continue to teach during the COVID-19 restrictions. They initially expressed dislike for DLS at the onset of COVID-19, but gradually began to embrace it as they had no choice. They stated that DLS

successfully removed the barriers of space, time and distance, especially because of the limited classroom space at the university. They discussed not having to worry about travelling to campus to attend lectures due to the benefits of DLS, thus offering environmental benefits through the reduction of carbon emissions.

Some lecturers felt it was a new experience for them transitioning online, despite previously learning online from some online platforms provided by institutions like Harvard University. They reported a gradual interest and preference for DLS, especially MS Teams and some of its features, because of their flexibility and cost-effectiveness. Although one of the lecturers stated that digital learning is not entirely new, suggesting the need to learn from the Open University, which is an exclusively online university.

They described the transition period from classroom lectures to online lectures during the pandemic as a very stressful time in their career. Many used the words ‘sudden’, ‘stressful’, and ‘incredibly stressful’ to summarise their transition experience. Jack recounted the challenges of a rapid transition to online teaching, highlighting the constraints of moving all module content online within 2 weeks. This indicates that this transition phase was a period of experimentation and adaptation to the new teaching method.

“... I think one of the features of that time was how we only had two weeks to try to transfer all the module content online, and during those two weeks... staff were asking each other, Have you tried this? Have you tried that and...I remember a few different ideas at the time, and then, you know, gradually only some of them seem to work out.”

Jack, Male, 38-year-old, Mental Health Nursing, taught for 8 years, In-depth Interview

They also stated that the COVID-19 pandemic had a depressing impact on them, which in turn influenced how they teach. Those who started working at the university at the onset of the

COVID-19 pandemic in 2020 stated that the transition was more difficult for them because they were new to the university at the onset of the pandemic and did not know who to contact for support. Some others stated that the challenges faced during transition were compounded by family challenges, especially as they relate to supporting the children and helping them to cope during the COVID-19 restrictions. Clay described the transition as getting thrown out and left to struggle with finding their way through the platform. This metaphor offers insight into making meaning of the experience of lecturers at the point of moving away from the classroom to digital teaching. This reflects a feeling or state of being abandoned with high performance expectations.

"I was not a digital person, so I would kick against using digital technology of any kind...So the transition is like getting thrown out and left to struggle; that's it. The transition was actually quite stressful because we had no training, and we had no real IT support and how to do it. And yet had to work it out for yourself," **Clay, Female, 58-year-old, Adult nursing, taught for 20 years, In-depth Interview**

Some lecturers reflected on how they had to quickly learn to teach differently online, as the experience for them was different. They narrated how they experimented with several digital learning platforms such as Zoom, MS Teams, HP5, O-matics, Sway document, and HP5 and tried to use them to complement face-to-face after the COVID-19 pandemic. They recounted making a few mistakes while adapting to teaching online during the pandemic. They described this phase of transition as a learning period for them. They stated that they benefited from auxiliary or assistive digital platforms such as Mentimeter and Padlets, which they used to complement the main platform used for teaching. They described the change from paper to online-based lectures and assessments as a drastic change.

Sally reflected on their struggles in moving exams from the physical to digital format, stating that it necessitated an understanding of the system that the university has put in place for examinations. This is particularly crucial in upholding standards for invigilation to ensure exam integrity as mandated by the Nursing and Midwifery Council.

“And then the biggest stress was the fact that our exam was paper-based... we used to have up to 100 students in a room writing an exam, and we knew we weren't going to be able to do that anymore. So, on top of the teaching and learning, we were also having to know what systems the university had in place for online exams. And then having to try and work out how we could use them, because obviously with nursing having a professional regulatory body, and we wanted to make sure that things like invigilation didn't totally disappear”. **Sally, Female, 40-year-old, Adult nursing, taught for 3 years 8 months, In-depth Interview**

Lecturer participants emphasised that the design of digital learning platforms should be student-focused. They also highlighted a need for flexibility and adaptability that allows creativity and innovation when designing DLS. They stated that the design and maintenance of DLS should take into account regular feedback and assessment from students. They suggested making digital platforms user-friendly, emphasising making the platform simple and easy for students and lecturers to navigate. They suggested prioritising a humanistic approach to educational technology, noting that this emphasis is crucial to achieving parity in quality with classroom-based lectures.

Lee highlights the importance of being flexible in educational approaches to address the diverse learning needs and preferences of the students. They emphasise the dynamic and evolving nature of DLS, suggesting that lecturers should be receptive to novel concepts and inventive methods to efficiently use DLS.

“I believe we need to consider flexibility and adaptability to accommodate diverse learning needs and preferences. Like encouraging experimentation, creativity, innovation, and collaboration across multidisciplinary members of staff and students. I believe that digital space is volatile, I don't know if that's the right word but it's constantly evolving. So, we must be open to innovation and creativity as lecturers.”

Lee, Female, 39-year-old, Adult Nursing, Taught for 3 years, FGD

Lecturers highlighted the importance of critically engaging digital learning technology to ensure effectiveness when teaching in DLS. They emphasised the necessity of careful deliberation when deciding on suitable digital platforms for the delivery of a subject. This selection process should consider how the selected platform could impact the students' understanding and grades. They advocated for more scientific inquiries and critical examination based on experiential evidence of teaching in digital spaces. Some lecturers highlighted the need to glean from the Massive Open Online Courses (MOOC) frameworks as it has been in existence before the COVID-19 pandemic. They also suggested that feedback from students and lecturers could be used to improve digital learning platforms.

Sandy noted the criticality of being intentional in the use of digital technologies in higher education, discouraging the arbitrary use of DLS and advocating for its use based on clear objectives and desired outcomes.

“...I think what's really important with digital Technologies is not throwing digital technology in just because you're going to use it. I think what's really keenly important is what you want from it. How are you using it and using the right digital platform within whatever you're doing...” **Sandy, Female, 35-year-old, Adult nursing, taught for 3 years and 6 months, In-depth Interview**

Despite the flexibility that comes with teaching in DLS, some of the lecturer participants thought it created a partition between the students and lecturers. They stated that peer learning was absent among the students during the COVID-19 pandemic. Lecturer participants stated that they experimented with some measures to reduce the social isolation felt when learning in digital spaces. An example of this was starting monthly catch-up meetings for both lecturers and students, which helped them cope during the pandemic. However, they stated that while they continued to use DLS after the COVID-19 pandemic, this method no longer worked. They also introduced regular breaks after an hour of teaching online for students to step away from the screen for 10 -15 minutes before continuing the lecture.

Simeon described their response to the COVID-19 experience as “*a knee-jerk reaction*”, underscoring the immediate and instinctive response by both the lecturers and students at the onset of the pandemic, filled with fear and uncertainty. This reaction was prompted by a lack of understanding and clarity about the unfolding events, leading to pervasive unease and confusion among the student population.

“...there were some big challenges. I mean, obviously there's the initial knee-jerk reaction that everybody had and that scared us in the early days because nobody knew what was going on... the whole body of students across the university just didn't know what to do and they were scared” **Sam, Female, 44-year-old, Midwifery, Black Africa, Taught for 4 years, FGD**

6.7.2 Subordinate Theme 2.2 - Post-COVID-19 Pandemic

Many lecturer participants stated that though they were excited about returning to the classroom post-COVID-19, they found it challenging to go back to teaching in the classroom. Some lecturers stated that they felt unease at the point of transitioning back to the classroom mode of teaching post-COVID-19. They stated that returning to campus after the pandemic was both

good and bad. Good in the sense that they have been a long time away from campus, and it was good for them to now deal with the people in person, but bad because of the daily struggle to get through the traffic to the campus. One of the lecturers stated that transitioning to classroom lectures post-COVID-19 was quite difficult because they started at the university during the second national restrictions, amid COVID-19, when all lecturers were delivering online.

Clay recounted the transition back to classroom teaching after a long period of digital teaching due to the COVID-19 restrictions and illustrated the experience with the phrase *"getting off a bike and getting back on like you never got off"*. Clay metaphorically described the sudden return to the usual teaching style with additional routines like wearing masks as stressful and apprehensive. The hermeneutical interpretation of their phenomenological claim of getting off a bike describes their experience at the onset of the COVID-19 pandemic, when authors like Bramer (2020) and Wallace et al. (2021) documented that all educators were forced to leave the conventional classroom teaching modalities to teach fully in DLS. On the other hand, getting back on the bike like you never got off offers insight into the quick move to return to conventional classroom teaching as though nothing had happened previously, thus giving less attention to lessons learnt during the first experience. This was a major concern for N&M lecturer participants after the COVID-19 pandemic, which could potentially impact their future adoption of either a digital or blended learning program.

"...coming back onto campus... we were told to teach with a mask on and a visor on, you know, it was difficult because we've obviously been off campus for such a period of time. We hadn't seen real people for actually a really long time, outside your immediate whoever lived in the house. So that was actually quite stressful because it's quite anxiety-raising... it was like getting off a bike and getting back on the bike like you'd never got off, really" **Clay, Female, 58-year-old, Adult nursing, White British, taught for 20 years, In-depth Interview**

Sheila noted that even as COVID-19 restrictions eased, a significant portion of practice learning modules continued to be delivered in DLS, partly due to scheduling convenience. Nevertheless, practical sessions, which make up half of the curriculum, were not given much priority in comparison to theoretical teaching. They stated that it was not until 2023 that the university began to prioritise classroom lectures, aligning more closely with the course's practical needs. This shift emphasises the challenges of maintaining a balance between practical and theoretical components while transitioning from online back to classroom teaching.

“... as we started to come out of COVID and we were taking on the practice learning modules, we still predominantly did a lot of sessions online because it was sort of fitted in with their timetabling and some of the sessions. Unfortunately, because of practice, even though it's 50% of the course... it was only really this year 2023 that it started to become more face-to-face teaching with the practice learning team....” **Sheila, Female, 39-year-old, Midwifery, White British, taught for 6 years, In-depth Interview.**

Sandy expressed fear over losing the good features and capability of DLS in the process of transitioning to a face-to-face mode of lecture delivery. This suggests that even though most of the lecturers were initially sceptical about adopting DLS, they eventually found it useful, with thoughts around how to integrate both teaching modalities post-pandemic.

“Umm, I think transitioning now into face-to-face, there is more of a worry about losing all the good stuff that we had... We could get a lot of feedback from students about what they liked and didn't like within our teaching and how we could change it and I'm just worried... that we're going to be losing all this wonderful technology and disadvantaging students from engaging...” **Sandy, Female, 35-year-old, Adult nursing, Black, taught for 3 years 6 months, In-depth Interview**

Following the adoption of DLS during the COVID-19 pandemic and its persistent use post-pandemic, DLS continues to evolve with new features that are assumed to enhance educational activities. Sally used the phrase *“It’s a bit of a mixed bag”* to describe the recent state of evolution of DLS, characterised by the integration of asynchronous activities and some other new features on the Moodle platform. This indicates the positive yet challenging aspects of incorporating these diverse educational methods

“...and then this year we’ve got asynchronous activities in our timetable. And so yeah, using lots of different Moodle-related resources and things to support students in that. So, it’s a bit of a mixed bag.” **Sally, Female, 40-year-old, Adult nursing, Black, taught for 3 years 8 months, In-depth Interview**

Despite the benefits of DLS, most of the lecturer participants stated that the adoption of digital learning during the pandemic has resulted in an extra workload for them, even after the pandemic. For example, Paula indicated that even though DLS ensured significant productivity during the COVID-19 pandemic due to their flexibility, it has resulted in a heavier workload after the pandemic.

“Since COVID, I have learnt to do so much more in a day than I was doing before. I thought I was busy before, but I get so much busier as my work now does not end on campus, I still continue at home. However, I get many things done by the flexibility that this university is giving us.” **Paula, Female, 57-year-old, Midwifery, White British, taught for 16 years, In-depth Interview**

Gabi emphasised that this challenge of heavy workload precipitated by the adoption of DLS has continued after the pandemic and now contends with the time lecturers spend with their families.

“And even afterwards, I’m thinking how digital spaces have burdened us as lecturers, you know what I mean, like a heavy workload, unlike what we had previously. Now our work doesn’t end on campus as it used to before; we now have loads of extra stuff that we can and have to do at home, at the expense of spending time with family. Seems learning has been polarised by digital spaces, we’ve had to create course content, edit, and even mark beyond the normal work hours” **Gabi, Female, 56-year-old, Adult Nursing, Asian, Taught for 6 years, FGD.**

Lecturer participants reported that the university adopted a blended mode of teaching, incorporating online and classroom learning after the pandemic. During this period, they continued to use assistive digital platforms such as Mentimeter to support both the main digital platform and the classroom delivery. They discovered that some online teaching approaches could be integrated into classroom lectures. For instance, they realised that the Moodle platform and MS Teams were effective in complementing classroom lectures.

Although blended teaching became more prominent after the pandemic, as the university adopted this modality, it emerged as a key subject during the data analysis. Lecturer participants proposed a blended mode of teaching as a potential opportunity that DLS may offer to ensure the effectiveness of T&L in this post-pandemic era. They argue that the various teaching modalities can complement each other, thereby improving outcomes. Some lecturers considered the transition from online lectures to a blended modality as a good step down from fully online to classroom lectures, as they were tired of teaching online. However, some believe the blended method is the future, which may not leave anytime soon. They reported that the blended provision can address the challenges of an increasing nursing student population with limited T&L spaces.

Simeon advocates for a blended teaching approach that involves a combination of the classroom and digital methods of teaching. They stated that a blended approach presents a balanced structure that leverages the strengths of both methods, as the digital provision offers flexibility and accessibility for lecture delivery while practical sessions could be done face-to-face in the classroom.

“... I believe in a blended approach that incorporates both face-to-face teaching and teaching in digital spaces. Face-to-face interactions allow for hands-on learning experiences and interpersonal connections with students. However, digital spaces offer flexibility and accessibility, or during times of disruptions like the COVID-19 pandemic...” **Sam, Female, 44-year-old, Midwifery, Taught for 4 years, FGD**

In addition to proposing a blended mode of lecture delivery, Paula noted that some lectures are more suited for classroom delivery to ensure interpersonal connections. However, the large student population and the capacity of DLS to accommodate such numbers attract its use in many circumstances to complement classroom methods.

“Umm, I think we should mix it, like have it blended, because there are certainly some things that should be done face-to-face to bring people together. But I also think, because of the numbers that we have and because of the technology, I like MS Teams in certain circumstances as well. I like a mix or blend” **Paula, Female, 57-year-old, Midwifery, taught for 16 years, In-depth Interviews**

Their discussions emphasised the challenges posed by the diverse preferences for lecture delivery modes among students and lecturers, stating that an appropriate blend could be the middle ground, effectively accommodating the various preferences. This middle ground relates to the proportion in which different module components are delivered through either of the two

teaching modalities. For instance, Sheila believes an equal distribution between DLS, and classroom delivery is a balanced approach to teaching.

“I'm half and half, I think. I love face-to-face and online lectures equally.” **Sheila, Female, 39-year-old, Taught for 6 years, Midwifery In-depth Interview**

Sam was also of the same opinion as Sheila; however, she suggested delivering practical role plays in the classroom, while DLS is used for discussions and presentations.

“As a midwifery educator, I find that a blended approach works well in providing a holistic learning experience. Face-to-face sessions allow for role-playing and hands-on practice, while digital platforms facilitate discussions and case presentations, enhancing critical thinking and clinical reasoning skills” **Sam, Female, 44-year-old, Midwifery, taught for 4 years, FGD**

They suggested ways to blend the delivery of lectures, noting that complex subjects such as research and health care policy, as well as clinical and practical related subjects, were unsuitable for online delivery. Sally doubts if clinical skills can be delivered in DLS, suggesting that DLS can be used to provide instructional resources while retaining the classroom to allow interaction.

“But personally, I do not think that we could learn clinical skills online like taking someone's pulse, it's just not gonna happen... maybe using the computerised aspects as a resource and still have face-to-face teaching so people can answer questions around it... I think that's the one aspect that allows human beings to still think...not just taking it on face value.” **Sally, Female, 40-year-old, Adult nursing, taught for 3 years and 8 months, In-depth Interview**

Kai recommended using student feedback, cost, and the module/course team's ideas to decide on the proportion of blending, that is, which is to be held online and face-to-face.

"I think what lecture is appropriate for face-to-face or online delivery needs to be decided by the cost... the course team and the module team together, and of course, considering students' feedback on the modules that have been delivered..." **Kai,**

Female, 60-year-old, Adult nursing, taught for 20 years, In-depth interviews

Clay suggested that reflective practice and subjects with sensitive content are better delivered face-to-face than online.

"...but for me as a lecturer, I think that reflection, reflective practice, anything that requires sort of communication skills, anything that requires exploration of self...and sensitive teaching topics, I do think is far better face-to-face because you can gauge how the audience is processing that information." **Clay, Female, 58-year-old, Adult**

nursing, taught for 20 years, In-depth interviews

Conversely, Kai maintains that any lecture delivered online could equally be delivered face-to-face.

"Umm, I think what can be delivered online could be delivered face-to-face..." **Kai,**

Female, 60-year-old, Adult nursing, taught for 20 years, In-depth interviews.

Similarly, Jane expressed concerns over the consistently low pass rates in the second-year module that they teach online, noting the abstract nature of the module. After getting a similar low pass rate following a blended approach to module delivery, their experience suggested there could be factors beyond the mode of delivery contributing to students' difficulties.

“You know, I taught in the year 2 module, where we taught very abstract topics like health policies and guidelines. Since I joined the team, the pass rate for the assignments has been very low, and it’s a concern to the team... I thought the failure rate was perhaps because we took the whole lecture online, but the next cohort had a blended mode of delivery. We had some classes face-to-face on campus, while some were done online, but the pass rate was still low...” **Jane, Female, 47-year-old, Midwifery, Black, Taught for 3 years, FGD**

6.8 Chapter Summary

This chapter presents the data collected from N&M lecturer participants through in-depth interviews and FGDs. It begins with a description of the participants’ characteristics, with individual experiential themes derived from the case-specific analysis included in Appendix J. Patterns were identified across the ten cases and synthesised into distinct themes. Similarly, the FGD data were analysed, and themes were presented. A triangulation of data was conducted, culminating in the integration of themes from both the in-depth interviews and FGDs into overarching superordinate and subordinate themes.

The next chapter discusses the findings from the student participants within the context of the extant literature.

CHAPTER 7

DISCUSSION OF FINDINGS FROM STUDENT PARTICIPANTS

7.1 Chapter Outline

This study aimed to explore the experiences of nursing and midwifery (N&M) students and lecturers about teaching and learning (T&L) in digital spaces, focusing on identifying ways to improve their experiences. The data that represents the experiences of N&M students in digital learning spaces (DLS) within the target population has been presented in Chapter Five. In this chapter, I present a discussion of the findings from the student participants, drawing on the data and pertinent literature. Appropriate literature is used to contextualise the study and to analyse the experiences of N&M students in DLS.

7.2 Challenges of Learning in Digital Spaces

This theme thoroughly analysed the multifaceted challenges N&M students face when learning in digital spaces. It highlighted the gaps in IT infrastructures and support structures, the challenges of adapting to DLS, and concerns about the social aspect of DLS.

Digital learning space was perceived by N&M students as a “new learning system”, which they found challenging to adapt to. Evidence shows that online learning is not new; in fact, its origin dates to seven decades before now. For instance, authors have asserted that DLS has been established and adopted globally as far back as 1963 in the US and Canada (Bitzer et al., 1969; Oxford Learning College, 2023; Vitoria et al., 2018). These early instances highlight the long-standing existence and evolution of digital education in N&M. Although student participants in this study reported DLS as a ‘new learning system’ that poses significant challenges for

adaptation, it is necessary to critically analyse the meaning behind their use of the word ‘new’. Since existing literature establishes that DLS are not inherently novel, the perceived ‘newness’ highlighted by the participants may rather reflect students’ previous limited exposure or experience with DLS. Even though DLS is not new, it was not widely adopted until the pandemic, when it was used to sustain educational activities, as mentioned by Wallace et al. (2020).

While most of the student participants considered DLS to be new, and the University adopted it at the onset of the pandemic, a minority challenged this perspective. They attribute their ability to adapt to DLS at the university to their prior exposure to post-secondary training delivered online. This new perspective might offer insight into the concerns raised earlier about the students’ use of the word “new” to describe DLS. DLS is new to N&M students in this study because most of them had limited prior exposure to digital learning, particularly due to the limited adoption of DLS. If students have not previously used digital technology specifically for educational activities, whether during their secondary education, post-secondary or personal development, they may perceive DLS as new. Consequently, they find it challenging to adapt to these platforms as they navigate through features and approaches entirely new to them. An Australian and Indian study by Keane et al. (2023) and Gopika and Rekha (2023) corroborates this finding.

It can be cautiously argued that the extant literature within the UK HEIs has largely overlooked the role of students’ previous digital learning experiences in shaping their adaptation to DLS when education moved from classrooms to digital spaces, which this study’s findings have highlighted. This gap is evident even in the reports of the Joint Information Systems Committee (JISC) on students’ digital learning experience in UK HEIs between 2019 and 2024 (Newman et al., 2019; JISC, 2020; JISC, 2021; JISC, 2023; JISC, 2024). This evidence suggests that the

difficulties associated with adapting to DLS among N&M students are more likely to be rooted in individual familiarity and ease with DLS rather than the newness of the platforms themselves. Their accounts highlight a deeper need for structured guidance, mentorship, and resources to help them transition effectively into higher education, particularly during their first year of study within a profession that demands both theoretical knowledge and hands-on clinical proficiency.

Apart from perceiving DLS as unfamiliar, adapting to digital learning was significantly demanding for N&M students. For many, the transition required not only technical adjustment but also emotional, physical and cognitive effort, highlighting the substantial impact digital learning had on their overall learning experience. The hermeneutic interpretation and sense-making of their experience indicate their perception of being subtly coerced into learning online due to the absence of alternatives and engaging in unproductive or trivial activities, leading to an inefficient use of time. As a result, they became naturally obliged to navigate a steep learning curve necessitated by an entirely digitalised education, with many of the students indicating that it took them an entire year to fully adapt to DLS.

This is consistent with the findings of Mousavizadeh (2022), who emphasised how students were subjected to imposed and non-negotiable digital learning experiences, leaving them with no viable options. The pervasive nature of the COVID-19 pandemic, as rightly articulated by Jensen et al. (2022), required a completely digital mode of education, with the students continuously making an effort to adapt to a new educational paradigm during and post-pandemic. Together, these authors support this study's finding, re-echoing the unavoidable and often abrupt transformation students were required to navigate within the evolving educational landscape. This perspective reflects the confusion and uncertainty that characterised the initial

use of DLS, influencing educational activities and impacting both students and lecturers during the period of rapid adaptation and transition.

Distractions in remote learning environments were also highlighted as a major challenge faced in DLS, particularly for N&M students with children or younger siblings, undermining effectiveness. This challenge is further compounded for lecturers, who also face similar challenges in managing distractions within remote learning environments. In both cases, it becomes apparent to lecturers and students during online lectures as they can see the interference of children during the sessions. Although DLS have provided better access to education, it also presents a significant challenge of distractions and interruptions, especially in the immediate remote learning space. These challenges were also highlighted by Jane et al. (2023) and Tapeh and Darvishpour (2024). This issue of frequent distractions from family members in a remote learning environment is a significant concern to N&M students, as it was for the student population surveyed by JISC (2022). A minority of the student participants in the FGD strongly believe that these distractions that occur in DLS can be well managed by anyone, either by removing the source of distraction or removing oneself from the distraction. This is particularly true for remote or distance learning, as highlighted by Coad et al. (2023), it is crucial for N&M students to prepare a conducive environment free from any form of distraction to ensure an effective distance learning program. Thus, learners and educators, teaching or learning remotely, must carefully select a learning environment free from all forms of distraction or a location where these distractions can be easily controlled.

Nursing and Midwifery students expressed uncertainty and a lack of clarity on whether educational goals were met. This concern was exacerbated by limited past exposure to DLS among students and a perceived lack of motivation from lecturers to engage with digital teaching approaches. Holden et al. (2021) and Devlin and Samarawickrema (2022) corroborate

these findings. They argued that the pandemic has introduced more uncertainties to the effectiveness of teaching and learning in HEIs, particularly how to determine efficacy when lectures are delivered online. Recent evidence has shown that effectiveness in an educational context comprises the ability to accomplish learning goals with minimal wasted effort, regardless of the instructional modality (Adesuyi et al., 2023; Dwivedi et al., 2023). The N&M student participants' scepticism over the effectiveness of DLS in facilitating genuine learning underscores concerns that align with wider issues highlighted in the literature, particularly around the efficacy and integrity of online education.

Firstly, the efficacy of T&L is intricate and could be difficult to measure, especially in this instance where students associate inefficacy with previous limited experience of DLS. The extant literature on the efficacy of DLS is extensive and divided. A larger number of empirical comparisons of the effectiveness of DLS and classroom delivery favour DLS based on student performance (Driscoll et al., 2012). However, many of these studies are limited by a range of methodological weaknesses such as irregularities in variables examined, non-randomised designs and reliance on small samples. If, at the end, the goal is to determine whether students meet the intended learning outcomes regardless of the mode of lecture delivery, then this study contributes to a larger concern of how the various modes of learning contribute to achieving it. The voices of N&M student participants offer a deeper understanding of how their DLS experience was shaped by their limited prior exposure to DLS and their overall perception of effectiveness in supporting their learning. Consistent with the literature, student perception of effectiveness is one of the major parameters for evaluating educational efficacy, a factor that the findings of this study have successfully highlighted.

While DLS presents unique advantages over classroom modalities, the social concern associated with learning online remains a significant challenge. Nursing and Midwifery student

described how they experienced significant social disconnection when learning in digital spaces, highlighting their inability to interact and the absence of non-verbal communication cues, which they perceive as critical to effective learning. They also reported feeling bored, isolated and lonely, especially in a large online population, contrasting this with the sense of community in classroom settings. The hermeneutic sense-making of this aspect of their experience reflects a sense of detachment despite being a part of the DLS, indicating that while they are assumed to be a part of an ongoing lecture, they feel disconnected from the actual learning experience they so much desired. This is supported by Asgari-Tapeh and Darvishpour (2024), who confirmed that digital learning can be boring, discouraging students from attending online lectures. Similarly, students reported a decreased capacity to fully engage during lectures in digital spaces due to the lack of non-verbal cues and communication differences despite mandatory attendance (Gopika & Rekha, 2023).

These communication differences are particularly relevant to the target population of this study, given the diversity of the student population with many non-native English speakers, where differences in communication style could become more pronounced in digital environments. The student's poor interaction and sense of belonging in DLS, identified in this study and supported by Asgari-Tapeh and Darvishpour (2024), could be because the interaction in DLS majorly occurs through the chat space and is dependent on the lecturers' attention to students' comments and questions, which is susceptible to human oversight. It is, therefore, imperative to explore strategies to integrate peer instruction and active teaching pedagogies into DLS to foster student engagement and facilitate better learning experiences.

Conversely, a few of the N&M student participants contended that boredom and social disconnection could occur both online and, in the classroom, challenging the idea that low engagement is exclusive to DLS. This finding is worthy of note, as it contrasts with the

prevailing consensus in the literature about the social impact of digital learning. For instance, JISC reports from 2019 to date claimed that students experienced reduced social interaction with their peers and the lecturers, loneliness, poor concentration, limited engagement and a sense of disconnection from others within the digital environment (Newman et al., 2019; JISC, 2020; JISC, 2021; JISC, 2023; JISC, 2024). This implies that there could be more to student engagement beyond the dominant narrative of it being native to DLS.

Gourlay (2021) argued that the social issues relating to DLS are a result of the lack of understanding of factors that initiate connectedness. Factors such as monotonous tone of lecture delivery, the lecturer's over-reliance on the PowerPoint slides, absence of non-verbal cues of communication and impersonal interaction were brought to light in this study, addressing the gaps highlighted by Gourlay (2023). These factors largely relate to the educators' pedagogical strategies and the design of DLS, prompting a reflection on how these factors influence students' experience within DLS. For instance, the tone of lecture delivery relates to how dynamic a lecturer can be with tone, volume and pitch of their voice when teaching, which Paulmann and Weinstein (2025) highlighted as important in classroom delivery.

The findings from the Focus Group Discussion (FGD) specifically highlighted barriers to adapting classroom pedagogies like the use of PowerPoint presentations and digital writing boards in online spaces, which, according to Mousavizadeh (2022), is a major concern in DLS. PowerPoint slides in themselves are a form of DLS, which has long been integrated into classroom modalities based on the claims of Hashemi et al. (2012), but it has not received enough attention in terms of how it is used in DLS. While there is no specific approach to the use of PowerPoint slides for both modes of lecture delivery (Brill, 2016), there are notable inconsistencies in their use across all T&L modalities. This study's findings reveal an unpopular pedagogical concern regarding how the use of DLS is disengaging for N&M

students and a barrier to effectiveness. Loureiro et al. (2021) further corroborated these findings, noting that both students and teachers are still unfamiliar with the full potential of digital learning tools, thus limiting their ability to harness the capabilities of digital spaces compared to classrooms.

In addition, overreliance on PowerPoint slides that students can read for themselves, without offering additional explanation, can diminish the learning experience. The absence of non-verbal cues of communication and the impersonal nature of interactions due to the reliance on technological devices, which, if not used appropriately, may limit students. While many of these factors are not unique to a particular mode of learning, the impersonal interactions and the loss of non-verbal communication are specifically pronounced in DLS. Despite the significant improvement in DLS designs to allow interaction (Derakhshan et al., 2021; Sadeghi, 2019), evidence from this study has shown that these gaps remain. There is a clear need for improvements in the design of DLS and digital communication skills of students and lecturers to maximise these tools and improve the overall learning experience.

Furthermore, N&M student participants encountered significant IT-related challenges in DLS, including unreliable internet connections and technical difficulties in accessing digital learning platforms, the same findings highlighted in several other studies, such as Gopika and Rekha (2023), JISC (2024) and Tapeh and Darvishpour (2024). It was noted that these challenges were compounded by a lack of IT support and the lecturer's decision not to use some digital features like recording lectures, which students noted as crucial for retention and revision of learning. This is consistent with Haanes et al. (2024), who reported difficulties with accessing DLS on PC and smartphones, noting that the private networks, which students relied on when learning off campus, were suboptimal, with limited availability of IT support.

The findings of this study noted that the IT-related challenges encountered by the students were particularly critical during their first year of study because of the peculiarity of the transitional phase they experienced upon entering the university. During this period, the N&M student expressed feelings of not being up-to-date and struggling with coping with the new learning technology, resulting in a disconnect between their abilities and the rapidly evolving demands of DLS. Although Meum et al. (2021) and Haleem et al. (2022) maintained that it takes time to become familiar with new functionality like DLS and to adapt to its use in relation to established routines, it is important to acknowledge the distinct challenges faced by first-year students as they navigate the various requirement and expectations, which could be overwhelming. The hermeneutic interpretation of this aspect of their experience presents a nuanced understanding of the challenges that N&M students face in DLS and the critical need for support, particularly at the early phase of their journey in the university. This suggests the need to implement targeted measures to facilitate their transition.

Nursing and Midwifery students complained of not being sufficiently prepared or supported by the university to help prepare them to navigate online platforms. Upon sharing the challenges faced as new students during their first year of study, they emphasised the importance of accessing technical support when using DLS. This aligns with the national survey report on digital education in the UK HEIs conducted at the onset of the pandemic (Newman et al., 2019). The hermeneutic sense-making of their experience underscores a perceived lack of empathy and individualised attention that the students expected from lecturers in DLS, resulting in dissatisfaction with DLS. For them, this need is critical in the first year, a period characterised by adaptations not only to university life but to the unfamiliar demands of DLS. Thus, early and effective technical support has the potential to significantly influence new students' transition and adaptation into the university system, ensuring students have a more positive learning experience.

The N&M student participants desire to have their lectures in DLS recorded, as it allows them to revisit the lecture for better understanding and retention. JISC (2021) and Foronda and Lippincott (2014) corroborated this finding, reporting students' preference for recorded lectures to aid retention. However, in this study, N&M student participants expressed concerns about how most lecturers refuse to use this recording function. Their consistent request for the recording of lectures and lecturers' decision not to record lectures held in DLS raises a compelling question about the students' request and the response of the educator. On one hand, lecturers may have concerns about ethical issues related to recording or fear that students might not attend live sessions. On the other hand, given the diverse population of students at BCU, including many students for whom English is a second language, it might be difficult to retain or understand the lectures during initial attendance, hence the demand for recording. All these barriers suggest the need for more interactive, adaptive and empathetic approaches to digital learning to facilitate engagement and support.

7.3 Opportunities Associated with Digital Learning Spaces

The findings under this theme suggest that DLS offers several advantages, including flexibility, which eases balancing personal responsibilities and breaking the barrier of time, space and distance. Furthermore, DLS facilitate student engagement, cost-effectiveness, and environmental benefits by reducing travel and promoting inclusivity by fostering participation from reserved students. This result resonates with a systematic review conducted by Haleem et al. (2022), which summarised several benefits of learning in DLS, especially the ones highlighted in this study. Similarly, a study reported that nearly all students considered digital learning as cost-effective, inclusive and easy to access. (Nikoonezhad & Zamani, 2014). Digital learning spaces are poised to become a critical T&L environment, particularly as an efficient alternative to classroom lectures, allowing easy access to instructional material,

communication and sustenance of educational activities where physical presence is restricted (Kian, 2014; UNESCO, 2020).

When N&M students learn online, they can quickly and easily access instructional content. There would be no need to travel to campus for those living far away from school, there would be no need to book a specialised classroom that can accommodate the population of students in a cohort. This means ease for the students, lecturers and the university. Newman et al. (2019) also confirmed these findings by reporting flexibility, easy accessibility and closing the gap of time and distance as part of the 12 domains that influenced the overall satisfaction of students with digital learning in the UK. Nursing and midwifery student participants' perspectives about DLS underscore the significance of these factors in shaping their perceptions of the advantages of DLS. An Indian study by Gopika and Rekha (2023) reported similar findings across both learning modalities, with the majority of the students finding digital learning easier than classroom lectures and offering greater flexibility in time and location. The national JISC report on students' digital learning experiences across the UK HEI during and after the pandemic consistently identified flexibility, easy accessibility, elimination of time constraints, student engagement, and environmental benefits (JISC 2021; JISC 2024). The extant literature aligns with the findings of this study, highlighting the benefits of DLS from the student's perspective.

The results of this study indicate that DLS's capacity to record online lectures was considered beneficial for reflective learning and improved retention among N&M students. According to Price (2024), reflective practice is extensively taught in nursing education programs across the UK, especially because it offers fresh insight into learning and practice. It also facilitates innovative thinking relevant to improving nursing and midwifery care (NMC, 2024; Price, 2024). Aljanabi et al. (2024), in research conducted among nursing students in Saudi Arabia, reported that integrating recorded lectures into DLS has further improved students' flexibility

and retention capabilities. Several authors have described the potential of recorded lectures to ensure retention and transformative learning (Bramer, 2020; Pullan et al., 2022; Scamell & Hanley, 2017). Although recorded lectures have been a central feature of most digital learning programs even before the widespread use of DLS post-pandemic (Jiang et al., 2022; Kang, 2021), primarily to enable self-directed learning, by allowing students to access the lecture anytime. This study presents a distinct perspective of N&M student participants' desire for real-time recording of synchronous sessions, highlighting the importance of easy access to lecture recording immediately after class for review or in case they missed certain aspects. This nuanced preference has not been extensively explored in the extant literature, which typically focuses on pre-recorded content rather than real-time recording for post-lecture access.

DLS have the potential to foster a sense of equity and inclusivity, enabling students who otherwise find it difficult to interact in physical classrooms to engage freely. According to N&M student participants, this is because DLS features allow them to contribute without being identified by their face, voice or name. This is supported by Tapeh and Darvishpour (2024), who assert that DLS empowers timid students and allows them to interact freely in the learning environment just like their colleagues. Inclusivity and equity are crucial in educational practice as they prioritise the students' central role in the learning process and ensure that educational activities are accessible and responsive to the diverse student needs. Liasidou (2023) also supported this study's claim by emphasising that DLS can create an inclusive learning environment if appropriate approaches to learning pedagogies are implemented. This evidence reinforces the findings from this study, which suggest the need for lecturers to adopt teaching methods that leverage digital features, allowing students to choose whether to participate anonymously or be acknowledged.

Although the reports from Abid et al. (2022) and Abilmazhimova et al. (2021) affirmed the capacity of DLS in providing equitable opportunities to interact and creating an inclusive education environment, aligning closely with the present study. It further indicates that variation in the effectiveness of DLS necessitates the need to integrate diverse learning preferences and individual differences into digital pedagogical strategies. For example, within any cohort, there could be students who learn differently; some may be visual or auditory learners, while others may not be able to participate actively in large group discussions. It is unwise to assume that all students will feel equally comfortable engaging in just one of the interactive features of DLS. While some may be able to speak on audio without showing their face, others might engage more readily through the smaller breakout rooms, chat functions, emojis or gamified features embedded with DLS. By understanding these varied learners' preferences and aligning them with appropriate DLS features and subject-specific requirements, lecturers have an opportunity to cultivate a learning environment that is not only more equitable but genuinely fosters inclusivity.

While the majority of the N&M student participants reported that DLS facilitate engagement, a minority contended that the mode of learning or lecture delivery does not impact student engagement, claiming that the same set of students who participate during physical classroom lectures are the ones who engage online. The implication is that N&M students will engage with instructional material or participate during lectures if they want to do so, irrespective of the methods used in learning. This observation briefly shifts our attention from the common narratives that position learning modalities either as an enabler or as a barrier to student engagement, a theme echoed across several studies (Aditya et al., 2021; Ali et al., 2018; Gkrimpizi et al., 2023; Uprichard, 2020).

Instead, it invites a more nuanced exploration of the personal and social characteristics of individual N&M students as influential factors in shaping their level of engagement, whether in DLS or classroom settings. This does not, however, diminish the importance of how the two learning modalities are used to deliver N&M lectures. Rather, it expands the discourse by highlighting that individual characteristics, such as preferred learning style, confidence, and intrinsic motivation, may serve as key drivers of engagement. In doing so, this research result highlights the complex, personal nature of learning, suggesting that facilitating student engagement requires attention not only regarding the instructional design but also the unique contexts and characteristics each learner brings to the educational experience.

Anonymity was identified in this study as a strength of DLS in facilitating student engagement, especially among timid students. Several authors present evidence that supports this finding by asserting that DLS allows student engagement. For instance, Martin and Bollinger (2018) maintained that DLS enhance student engagement by incorporating active learning opportunities such as case studies, group work, presentations, discussions, resource sharing and reflective activities. This view was also supported by several other authors, who highlighted anonymity as a motivation for less confident students to participate during lectures (JISC, 2024; Kahn et al., 2017; Nepal & Rogerson, 2020). The findings of this research resonate with most of the evidence in the literature, demonstrating that DLS facilitate student engagement through active learning opportunities and anonymity.

Conversely, Ali et al. (2004) reported a decline in student engagement due to anonymity in DLS. However, Ali et al.'s (2004) finding is from two decades ago and may not reflect recent trends in digital education. Although Loureiro et al. (2021) also reported a decrease in student engagement online compared to the classroom, just as Ali et al. (2004) did, they attributed this downward trend to technical difficulties and students' lack of familiarity with DLS. This

perspective adds to the growing body of evidence emerging from this research, reinforcing the idea that fostering student engagement in DLS is a complex and multifaceted process shaped by a dynamic interplay of factors such as individual learners' preferences, pedagogical approaches, motivations, and technological design.

Digital learning spaces were said to help reduce carbon emissions through reduced travel needs, which otherwise is not the case with classroom lectures. Nursing and Midwifery students and lecturers who live far away from the campus, especially a distance that cannot be reasonably covered on foot or by cycling, will inevitably depend on personal vehicles or public transport to get to campus. In both cases, this form of travel contributes to carbon emissions, raising important ecological concerns. While this may seem like a practical matter of daily logistics, it also underscores the broader ecological implications of campus-based education, especially when compared to the potential sustainability benefits of well-designed digital learning alternatives. Consistent with this finding, several authors have also claimed that DLS have helped reduce environmental waste, from significantly reducing paper waste for handouts and books for research to timesaving and the convenience of less travel (Beardsley et al., 2022; Camilleri & Camilleri, 2017). The recent national survey of JISC (2024) among students in UK HEIs reported that students acknowledged that digital learning platforms could save the environment, allowing them to work off campus, thus preventing campus travel and more efficient use of time dedicated to their study at home or in the student accommodation. However, other participants expressed concern about their inevitable contribution to the carbon footprint as future N&M professionals, particularly because of the need for compulsory clinical placements and work-related travel.

Several factors, including lecture timing and duration, lecturer's presence and teaching styles, personal discipline and motivation, support mechanism, and use of features such as Padlet and

Quizizz that allow participation, were highlighted as factors that facilitate effectiveness in DLS. This finding addresses the concern raised in the JISC (2024) reported about the need to understand the factors influencing students' experience in DLS with the goal of improving their learning experience. Padlet and Quizizz are independent digital platforms that include some gamified elements in addition to being used to augment other digital learning platforms, especially when there is a need to elicit responses from students (Halem et al., 2022; Wallace et al., 2021).

Based on N&M student perspective, several digital learning features such as chat functions, smaller online class sizes, breakout rooms, Padlet, Quizizz, and other interactive tools significantly contributed to enabling students' active participation, inclusivity and the overall effectiveness of DLS. These features, particularly the ones that integrate elements of gamification, such as earning virtual stars or a crown upon the completion of a task or progressing through levels in a reward-based system, were motivating. Nursing and Midwifery students described these features as making the learning process feel more dynamic and goal-oriented, consequently allowing a deeper level of engagement. This was supported by Arshi (2021). This perspective highlights the need for intentional instructional designs in DLS, where simple but innovative features can make a significant difference in how students interact with the course

The hermeneutic interpretation of the experience of N&M students indicates that when lecturers engage them during synchronous sessions using features of DLS such as the breakout room or chat function, regular monitoring of students' participation contributes to improved engagement and attentiveness. They attest that just like in the physical classrooms, the presence of lecturers during lectures reduces distraction and ensures decorum is maintained. When lecturers are present to guide students, it enhances their overall learning experience, allowing

them to better benefit from the sessions. So, in many cases, the pedagogical design or module delivery, also highlighted in Langegard et al. (2021), is critical and shapes students' overall educational outcome.

More specific to DLS is the idea of having at least two lecturers deliver a session in DLS. According to the N&M student participants, this ensures that while one lecturer teaches, the other monitors the student queries and engagement, providing immediate and continuous feedback to both. This insight adds more layer to the already established perspective from this study, highlighting the significance of lecturer's presence in fostering a positive and respectful environment that enables learning interactions in DLS. Garrison et al. (2000), who contributed to highlighting the importance of the lecturer's presence, were unable to provide practical guidance on how this presence should be enacted within real-world teaching contexts. Interestingly, this practice of having two lecturers co-facilitate a session emerged as a pragmatic solution during the COVID-19 pandemic, particularly at BCU. Yet, this specific adaptation appears largely absent in the extant literature. Although McAleavy and Gorgen (2020) mentioned lecturers' presence as an important aspect of digital pedagogy, which transcends mere presence, the results from this study underscore the evolving understanding of what it means for lecturers to be present in DLS and further contend the concept of student autonomy in DLS.

This raises the question of how autonomy is contextualised and applied in DLS, especially synchronous sessions. Although authors such as Cullen and Oppenheimer (2024) have produced recent evidence to demonstrate the positive impact of autonomy on student development in higher education, this present study offers a more nuanced perspective. It suggests that while autonomy is beneficial, it must be appropriately balanced with deliberate pedagogical strategies that encourage a shared sense of responsibility between lecturers and

students. This implies that effective engagement in DLS does not solely arise from student autonomy but also the presence and guidance of lecturers, especially in synchronous sessions.

At the same time, the asynchronous aspect of digital learning, designed to be self-directed, as noted by Erandika et al. (2023), requires more emphasis on students' self-discipline and personal motivation. These qualities were underscored by N&M students in this research as key components influencing the effectiveness of DLS, especially when lecturer support was not immediately accessible. While autonomy in asynchronous learning offers flexibility, it can also present challenges when students lack the internal drive or structured support to remain focused, a concern also highlighted by Vermeulen and Volman (2024). Sinclair and Kalvala, (2016) claimed that lower student engagement and overall effectiveness in DLS are usually driven by students' choices. While this is true, one may argue that students' personal motivation and self-discipline are equally required for academic success, regardless of the learning modalities. This argument is consistent with Deci and Ryan's (1985) theory of self-determination. Motivation and self-discipline are therefore needed from students in order to optimise their experience in DLS, including synchronous and asynchronous modalities. Supporting N&M students to cultivate these qualities should be the central focus of digital pedagogical interventions, especially for those in a digitally mediated academic environment.

While the assertion of Sinclair and Kalvala's (2016) rigidly emphasises that student engagement is primarily a personal choice, undermining the significance of other factors, the findings of this study acknowledge the pivotal role of lecture timing and duration, in addition to self-discipline and motivation, in determining the outcome of their study. Nursing and Midwifery students raised concerns about the late afternoon or evening lectures as well as the excessively long sessions without sufficient breaks that often lead to less participation or disengagement. Although student attention span and engagement have recently become an area

of ongoing debate among scholars and educators, Bradbury (2016) argued that it is not merely the duration or learning environment that affects attention span and engagement, but how the lecturer delivers the lecture. This pattern of lecture delivery must take into consideration measures to improve students' attention span by reducing cognitive overload through regular breaks, as proposed in Sweller's (1988) cognitive load theory. Evidence from this study contributes to that conversation, highlighting that lecture timing and pacing, in addition to delivery style, self-discipline, and motivation, significantly shape student participation and attentiveness in DLS.

In addition to the lecturer's delivery style highlighted by N&M student participants, they further describe the need for lecturers to improve the design and use of PowerPoint presentations during lectures. They emphasise the importance of avoiding the use of one tone and an unengaging monologue pattern when presenting the slides due to its negative impact on their engagement, which was also noted by Wallace et al. (2021). This unveils the potential for pedagogical transformation in digital learning, in which fascinating presentation of learning contents, accompanied by the use of active learning methodologies, may offer significant promises. This pedagogical transformation could address the social concerns resulting in poor interaction, boredom, loneliness, and a lack of a sense of belonging to a community, highlighted in the previous theme from this research. This contribution may represent the kind of pedagogical shift that Langegard et al. (2021) envisioned as a promising outcome of DLS, a shift marked by more emphasis on active and meaningful interaction. Consistent with the concluding part of the JISC (2023) reported, the hermeneutic interpretation of the experience of N&M student participants in this study suggests that DLS could potentially foster a more participatory system of learning that redefines traditional pedagogical boundaries when used intentionally to support interaction.

A minority among the N&M participants expressed disinterest in the lectures, regardless of how they were delivered. They claimed that if the lecture was not related to the assignment, they would prefer to sleep instead of listening. This result offers a deeper lens through which to view the assertion made by Sinclair and Kalvala's (2016), who suggested that motivation and engagement are entirely within the student's control. While their perspective highlights student agency, the present study sheds light on the broader implications of this viewpoint, particularly how motivation or the lack thereof that stems from the subject content can significantly shape student engagement across all learning environments. The findings of this study suggest that even with the best pedagogical strategies, certain students may not engage if the lecture or lesson is perceived as irrelevant to their immediate academic tasks, like assignments. Rather than considering motivation and engagement as isolated internal characteristics or dependent on the learning modalities, the findings suggest it is interwoven with curricular relevance and alignment with student interests.

The theme on the opportunities associated with DLS presents a 3-sided condition for ensuring the effectiveness of digital learning, highlighting the roles of students, lecturers and the university administration. Students are required to engage with interest, discipline and determination. The lecturers must ensure pedagogical transformations, dynamic delivery of lectures, and maintain an active presence in the online space to ensure students are in a conducive learning space. Furthermore, university administrations are to ensure that digital platforms are designed to allow ease of access, be user-friendly and visually engaging, contributing to a better learning experience.

7.4 Sentiments

This theme extensively analyses student participants' sentiments around various methods of lecture delivery used in N&M education and how they relate to digital learning. It highlights

the various digital learning platforms used in N&M education, blended, classroom and hybrid modes of learning.

Most N&M students expressed a preference for blended learning, which integrates online and classroom modes. However, the first concern worthy of note was the initial confusion around the use of the terms “blended” and “hybrid” as students used the words interchangeably, mistaking blended learning for a hybrid method in most cases. This finding reflects current realities in the extant literature. Although ‘blended’ and ‘hybrid’ are often used interchangeably, several variations exist in how these two learning modes are conceptualised in the literature (Moraes, 2023).

Upon further clarification, it became evident that N&M students’ preference was indeed for blended learning, as they all agreed on one definition when describing their preference for having a mix of learning methods. They described the mix or blend as a mode of learning in which students come into the classroom to attend some lectures while some other topics in the same module are delivered online. This description is consistent with the predominant consensus in the literature about the definition of blended learning (Imran et al., 2023; Moraes, 2023; McCulloch et al., 2022; Patwardhan et al., 2020; Sharma & Shree, 2023).

On the other hand, only two of the N&M student participants who used the word ‘hybrid’ clarified their understanding of hybrid learning as a method in which a proportion of students unable to attend lectures in the classroom simultaneously attend lectures in real-time through digital platforms remotely, aligning with Rao (2019). This description also aligned with what Thomas and Bryson (2021) call real-time blended learning, suggesting that variations exist in how authors have defined blended or hybrid learning modalities.

Despite the initial confusion around the terminologies used to describe the mix of classroom with DLS, the findings from this study reveal a preference for blended learning among students.

This presents the need for a better understanding and standardisation of the terminologies used to describe the various learning modalities. A clearer understanding of these modalities could improve pedagogical designs and align students' expectations, reconciling practice with students' preferences and strengthening a closer alignment between teaching styles and student preferences.

This research addresses the concerns of maintaining a balance between the various learning modes through a blended modality, which Boys and Raes (2021) claimed holds a promising educational potential in a post-modern era. The finding reflects a nuanced perspective, as some N&M student participants desire to learn in the classroom, yet do not want to lose the benefits of DLS. Conversely, others favoured digital learning but still sought to maintain physical interaction with the university, their peers and the lecturers. These mixed preferences highlight the pivotal role that learning environments play in shaping educational experiences and outcomes. This is consistent with Johnson et al. (2010), who proposed a blend of online and classroom learning modalities over a decade ago, based on their strength and weaknesses.

Blended learning has the potential to help maintain balance by incorporating both online and classroom modalities, enabling each mode to complement the other. Furthermore, students' complaints of loneliness or boredom in fully online spaces might be mitigated through a blended mode of learning. A better social learning condition could potentially improve N&M students' learning experience and overall learning outcome, aligning with the claims of Sorokova et al. (2021).

Given the peculiarity of N&M education, which requires both theoretical and hands-on skill training (Maitanmi et al., 2024; Zulu et al., 2021), determining the appropriate balance for combining online with classroom modalities remains a critical consideration for effective curriculum design. This study's findings also contribute to addressing the concerns of balancing

online with classroom learning modalities, which Bovill et al. (2016) and Lubicz-Nawrocka argued could lead to transformation within the education context. Nursing and midwifery student participants expressed a desire to be allowed to select which lectures to attend online and which to participate in physically. This reflects a larger context of students desiring autonomy in their learning experience and co-creating knowledge, which has been critically analysed and contested earlier with the data from this research.

Regarding the proportion of blending, they expressed their dissatisfaction with the current blending proportion that favours more classroom lectures than online, a concern which was in contrast with the experiences reported for Manchester University students, who, according to Jenkins (2021), complained that it favoured online learning. These contrasting perspective reveals the deeply subjective nature of learning preferences and highlights the importance of acknowledging individual and contextual differences when designing and implementing blended learning modalities. What becomes evident is that there is no specific approach to this blending proportion; rather, a more responsive and flexible design may be needed to accommodate diverse learner expectations and experiences.

A majority of the N&M student participants expressed a preference for learning abstract subjects online that only require passing information across and do not require significant responses or interaction from them, while practical skill sessions or lectures that require more interaction should be delivered in the classroom. Several empirical reports, including those by Killen and Didymus (2022) and JISC (2022), lended consistent support to this claim, yet they could not provide details on how complexity or difficulty is determined. This raises the question of what students perceive as complex or difficult subjects and whether learning them online or in the classroom makes any difference. Understandably, this perception is subjective and depends on the student's personal preference and the nature of the topic. In this study,

modules such as health policy and nursing research methodologies were frequently highlighted as difficult, an observation echoed in the work of Janes et al. (2023). Unfortunately, learning abstract or cognitively demanding topics in DLS can aggravate students' feelings of boredom/loneliness, which already constitute a major challenge in DLS, as highlighted in this research and supported by Mojtahedzadeh et al. (2024).

Nonetheless, contrasting results from the literature suggest that DLS in certain contexts can effectively support the delivery of practical skills training. For instance, Brereton et al. (2022) demonstrated a successful delivery of practical midwifery skill training on perineal suturing in Ireland but warned about generalising their discovery. This caution aligns with the findings of this study, underscoring the limitations of DLS in delivering practical skills or hands-on tasks that require direct supervision and immediate feedback. The effectiveness of DLS is contingent upon thoughtful alignment between content complexity, student needs and pedagogical strategy. It further suggests that the suitability of certain subjects or lessons for specific modes of learning should be a crucial consideration when designing a blended learning framework. A more nuanced and flexible approach that considers both the topic and students' lived experiences is essential for achieving meaningful learning outcomes.

Nursing and Midwifery students shared their sentiments about the lack of individualised support and delays in communication they experienced, which they underscored as a barrier to the effectiveness of DLS. This issue becomes salient when considering the way students are given a general inquiry email rather than one assigned to a specific lecturer, leading to a failure to address student needs on time. At BCU, for example, students are advised to direct module-specific queries to a centralised email address assigned to each module. While this system may appear efficient on the surface, the findings from this research suggest that it can inadvertently hinder timely feedback and reduce students' sense of connection with their lecturers.

From the student perspective, the inability to address concerns to a named academic whom they can identify or hold responsible can lead to feelings of discouragement, disconnection and in some cases, attrition. This concern resonated with the arguments presented by Ali et al. (2004) and, more recently, by Dunn et al. (2024), who both emphasise the critical role of personalised academic support for students. A personalised communication channel is crucial to facilitate timely responses. The hermeneutic interpretation of N&M student participant experiences suggests a perception among the students of the lack of empathy and individualised attention provided by the lecturers in DLS. This reflects a broader sense of disconnection, underscoring the need for faster and more person-centred approaches to student support, an idea echoed by Janes et al. (2023). When students feel that their concerns are lost in a faceless system, they do not just see it as delayed feedback but a deeper erosion of the relational aspects of learning, something very crucial in DLS, where face-to-face interaction is absent. This, therefore, underscores the importance of not just timely responses but also the human touch in academic support structures, which can serve as an essential anchor for student motivation and well-being.

Microsoft Teams (MS Teams) was highlighted by student participants as the primary digital platform used in N&M education for synchronous learning, while Moodle was used for asynchronous learning at BCU, a decision that was largely prompted by the COVID-19 pandemic. Several evidence supporting this finding have shown that HEIs across the globe began using video conferencing platforms to sustain educational activities during the pandemic without prior piloting (Adeoye et al., 2020; Etando et al., 2021; Islam, 2021; Lamb et al., 2021). In the JISC (2023, 2024) reports, the Moodle platform was one of the top three digital platforms cited, and MS Teams was the top ten digital platforms for teaching and learning in HEIs in the UK. According to the students, these platforms are supplemented with Padlet, Mentimeter,

Quizizz, and Notepad, are supplemented to foster participation and a socially constructed learning space, which were also highlighted in Balalle (2024) and Phenwan (2023)

Furthermore, the integration of multiple digital learning tools, such as Videos, YouTube links and real-time drawing tools, could potentially enhance understanding of complex topics, particularly in anatomy and physiology. Several studies have shown that N&M students prefer the combination of digital platforms equipped with video and recording features, as this aids their retention (Abilmazhinova et al., 2021; Bramer, 2020; Gopika & Rekha, 2023; Pullan et al., 2022; Scamell & Hanley, 2017). According to the N&M student participants, this multi-platform approach fosters engagement and compensates for the students' lack of practical experience. Students were more satisfied when multimedia contents were incorporated into the design of DLS, underscoring the value of diversified digital tools in supporting online learning and interactive pedagogy.

This distinct perspective shared by the N&M student participants highlights the significant role that DLS, especially MS Teams and Moodle, play within their learning environment at BCU. Rather than merely functioning as administrative or content delivery tools, these platforms were described as integral to shaping students' educational experiences in ways that suggest the potential for transformative learning. To understand the transformative potential of these technologies, it is important to go beyond the mere appreciation of their functionalities and explore how they actively mediate student engagement, development and reflection within the context of N&M education. MS Teams, for example, enables real-time interaction through chat, voice and video, which can foster connection and quick responses to student queries, even across long physical distances. When lecturers use features such as breakout rooms, live polls, or shared digital whiteboards, students are not just passive recipients of instruction, they are invited into a more participatory and engaging learning process. This shift from passive to

active learners can be fundamental to transformative learning, as it challenges students to articulate their perspectives, listen to others and reconstruct their understanding through social interaction.

Similarly, Moodle's capacity to hold a wide range of learning resources, including asynchronous forums and reflective assignments, can support students in self-directed learning and critical reflection. These capabilities are consistent with Mezirow's (2008) theory of transformative learning, which emphasised the importance of disorienting dilemmas, critical reflection, and perspective transformation. For N&M students, facing challenging clinical scenarios or practice questions through digital simulations, case studies, or peer discussions can provide the kind of cognitive friction that prompts re-evaluation of previously held assumptions. Through structured reflection tasks embedded in Moodle, such as "hot questions" and "discussion boards", students have opportunities to make sense of these experiences in a supported yet autonomous way.

As noted in the works of Beer (2019) and Daly et al. (2019), DLS can become agents of meaningful transformation when they are designed and used pedagogically, instead of mere technical use. This research reinforces that view, offering insights from N&M students into how digital features can facilitate deeper learning when thoughtfully integrated into curriculum delivery and engagement strategies. By this, students are not only acquiring knowledge but also developing professional identities, collaborative skills, and a capacity for critical reflection, critical qualities for nurses and midwives in a fast-rising digital healthcare. Therefore, the transformative capacity of DLS like MS Teams and Moodle lies not just in the tools themselves but in how they are used to create relational, reflective and engaging learning spaces. These insights require HEIs and lecturers to approach DLS not just as a technological

convenience but as an opportunity to facilitate more inclusive, participatory, and transformative learning experiences.

7.5 Chapter Summary

This chapter utilised evidence from the literature to discuss findings relating to the experiences of nursing and midwifery students within the target population. Their experiences reveal the challenges and benefits of learning in digital spaces. Some challenges highlighted were students' limited previous exposure to digital platforms, difficulty adapting, feelings of coercion into digital learning and scepticism about its effectiveness, worsened by poor interaction and social disconnection. Other challenges were technology-related, including poor internet and insufficient IT support, which hindered adaptation, particularly during the start of their studies. These challenges have led students to a steep learning curve during the pandemic. Despite these challenges, digital spaces were commended for cost-effectiveness, inclusivity, and flexibility, addressing the challenges of time, space and distance. Recording synchronous lectures was seen as important in fostering reflective learning and retention, but students expressed concerns about many lecturers not recording their lectures. Blended learning emerged as a student's major preference, noting that practical sessions and complex topics are better suited for classroom delivery, while theoretical content for online delivery. The findings suggest the need for dynamic teaching strategies incorporating multimedia, gamified elements and other interactive elements to facilitate student engagement. Furthermore, IT infrastructures, lecturer presence and timely support are important to ensure the effectiveness of online learning programs.

Discussion of findings from the lecturer participants is discussed in the next chapter.

CHAPTER 8

DISCUSSION OF FINDINGS FROM LECTURER PARTICIPANT

8.1 Chapter Introduction

This study aimed to explore the experiences of nursing and midwifery (N&M) students and lecturers about teaching and learning (T&L) in digital spaces, with a focus on identifying ways to improve their experiences. The previous chapter discussed findings from the student cohort, which represents the experiences of N&M students with digital learning spaces (DLS) within the target population. In this chapter, I present a discussion of the findings from the lecturer participants, drawing on the data and pertinent literature. Appropriate literatures were used to contextualise the study and to analyse the experiences of N&M lecturers with teaching in DLS.

8.2 Lecturers' Challenging Experiences with Teaching in Digital Spaces

This theme extensively analyses lecturer participants' challenging experiences with teaching in digital spaces in nursing and midwifery education.

8.2.1 Challenges with Student Engagement

A critical issue identified in this study was the low level of student engagement witnessed in DLS when used to deliver both synchronous and asynchronous sessions. An even greater challenge lies in the inability to accurately track student engagement on the current digital platforms used for educational activity at the N&M department. For instance, while the Moodle platform used for asynchronous learning records engagement when students navigate from page to page, it is unclear whether they actively interact with the learning content. Students can do a "click and go" by clicking on next until the system reads completion without truly

engaging with the contents. Similarly, MS Teams, used for synchronous teaching, registers student presence once they log in, but it does not provide insight into their active participation during the session. These observations are particularly important because insight into these significant concerns may improve the confidence of N&M lecturers with their teaching styles and activities, as well as the overall teaching experience. These perspectives align with those of other researchers who emphasised the challenges associated with low student engagement in online and blended learning modalities, which are not present in classroom learning space (Ahshan, 2021; Erandika et al., 2023; Wang et al., 2022).

This study provides more details in that N&M lecturers noted that it is often apparent that students leave their devices logged in with little or no participation during synchronous lectures, while attending other activities. This becomes obvious by their continued presence on the synchronous MS Teams platform long after the lecture has ended, since they are expected to log out at the moment the lecture ended. Since there is no standardised or electronic means of measuring students' participation in online sessions, N&M lecturers rely only on the initial register that captures the student's first connection to the meeting. However, N&M students could join the online session with their device and walk away from it without participating. In this case, their names continue to appear on the list of students on the MS Team meeting calls several minutes or hours after the lecture has ended. Erandika et al. (2023) echoed this difficulty in assessing student engagement in online and blended learning, particularly for courses that require long lectures. Nursing and midwifery courses exemplify such disciplines that require students to systematically engage with extensive theoretical content and practical instructions. These courses cover a broad spectrum, including the human body, disease patterns and social behaviours, which serve as foundational knowledge before transitioning to hands-on practice in the skills laboratory or at their clinical placement (Gregory, 2024; Mubarak Al Baalharith, & Aboshaiqah, 2024; NMC, 2024; Price, 2024). As a result, there is a need to develop robust

frameworks and structures for assessing student engagement online and in blended learning environments.

8.2.2 Challenges with Pedagogical Adaptation

Another major challenges that N&M lecturers face is adapting their teaching styles to digital learning platforms. According to them, these challenges were primarily due to the marked difference between the two modalities. They expressed uncertainty about whether their established pedagogical approaches developed over the years in classroom teaching would efficiently translate to DLS. This issue is more about the pedagogical unease, highlighted in several studies (Etando et al., 2021; Islam, 2021; Lutfor et al., 2023; Mudenda et al., 2023; Ossai, 2020), a contention about whether the familiar markers of student engagement, comprehension, and learning impacts could still be achieved within DLS. This pedagogical unease concerns lecturers' struggle with knowing how to effectively teach online due to their unfamiliarity with DLS.

Digital learning spaces are distinct from in-person classroom modalities, offering unique features and conditions that require a separate approach to teaching and engagement. For example, while students can physically raise their hands to engage in the classroom, reproducing such interactive gestures can be challenging in DLS. In the face-to-face classroom modalities, lecturers rely heavily on non-verbal cues of communication, immediate feedback, and spontaneous interactions to evaluate understanding and adapt their delivery in real time. Conversely, DLS often obscures these indicators, a major concern predicted by several authors (Bates, 2019; Garrison, 2017; Krishnamurthy, 2020; Wallace et al., 2020).

When students put off their cameras, mute their microphones and engagement filtered through chat features, emojis or breakout rooms, lecturers are left to navigate a virtual silence that can feel pedagogically disorienting. As a result, they question the suitability of the methods they

have long trusted and used in the classroom in DLS. This sense of pedagogical displacement is understandable and underscores a major tension in contemporary higher education. Although there has been some improvement in the features of digital learning platforms that could foster student engagement and enhance the T&L experience, this study highlights the evolving nature of DLS and the mandatory need for educators to intentionally navigate learning paths for effective adaptation and preserve the essence of a meaningful learning experience.

Amidst the struggle to adapt teaching styles to DLS, N&M lecturers at BCU have found value in a digital education that integrates synchronous learning through MS Teams and asynchronous content delivery via Moodle. While they acknowledge that reproducing the conditions and exact results from a classroom modality is difficult, incorporating synchronous and asynchronous elements into digital learning programs has provided an alternative that supports N&M education. According to these participants, using synchronous and asynchronous aspects of DLS affords them a rethink of pedagogical strategies, not to merely replicate the exact classroom learning condition, but to explore how DLS can be maximised to deliver effective and engaging learning. This finding builds upon the broader discourse around digital education and aligns with the work of Coad et al. (2023), who advocate for an intentional adaptation of N&M courses to suit DLS, especially in the context of Massive Open Online Courses (MOOCs). This emphasis on adapting courses to DLS to meet the evolving training needs of nurses and midwives underscores a fundamental shift in how we conceive educational effectiveness in clinical training.

However, much of the current focus on adapting teaching strategies to DLS appears preoccupied with replicating the classroom experience, often using face-to-face measures of engagement and effectiveness as benchmarks. The N&M lecturers' perspective in this research suggests the need for a conceptual shift, one that moves beyond replication towards fully

embracing the unique potentials of DLS. Rather than using classroom learning as the standard, lecturers might be able to consider the distinctive benefits of DLS, such as flexibility, diverse interactive channels, and various instructional content that can be harnessed to meet the specific needs of N&M education. By doing this, the field may be better positioned to unlock the latent possibilities within digital education, not just as a substitute for face-to-face modality but as a unique, robust and innovative method. This perspective invites HEIs and lecturers to see DLS not as a second best, as was painted during the pandemic, but as a ground for pedagogical innovation tailored to the complexities and realities of preparing tomorrow's healthcare professionals.

The N&M lecturer participants raised critical concerns about the consistently low pass rate of a particular second-year module, despite being delivered solely online and on another occasion through a blended approach. This pattern suggests that factors beyond the mode of delivery may be contributing to students' difficulties in attaining the module learning outcome. According to these participants, the module is considered abstract, requiring more effort and concentration to understand. These findings align with those of Zeraati et al. (2015), who claimed that classroom and online modes of learning did not differ in their impact on students' learning experience and academic performance. Conversely, some recent experimental studies have demonstrated that DLS significantly improve various student cohort performance (Egoigwe et al., 2020; Javaid et al., 2020; Watty et al., 2016). While some authors recorded improved academic grades in the use of DLS to deliver lectures, they were not clear on the nature of the module delivered.

However, findings from this study suggest that teaching modules with abstract content pose unique challenges that may influence students' academic performance regardless of the mode of delivery. A particular illustrative example offered by participants was the health policy

module, which introduces N&M students to the process of developing health care policies, their translation into clinical guidelines that guide N&M practice. The theoretical complexity of this module demands a strong grasp of intricate and often abstract processes, such as policy development cycles, legal frameworks (Lancaster et al., 2020; O'Brien et al., 2020) and the institutional mechanisms that shape clinical governance. Unlike more practical subjects that lend themselves to experiential learning or practical demonstration, this content is predominantly discursive and interpretive. As such, it typically involves extensive theoretical exposition with limited opportunities for interactive engagement or visualisation, which students may find disengaging. According to these lecturers, the lack of practical anchoring results in students' reduced participation, boredom and, consequentially, lower pass rates.

This concern is not unique to this context. A growing body of international literature has reported similar perceptions in modules requiring abstract reasoning and extensive understanding of complex biological systems. For instance, subjects that N&M students take, such as pathophysiology, research process, biochemistry and pharmacology, are frequently cited as cognitively demanding and challenging to teach effectively (Arundell et al., 2024; Shen et al., 2024). These abstract subjects, as indicated by the N&M lecturer participants in this study, share a reliance on cumulative knowledge, multi-layered frameworks and conceptual thinking, characteristics that are often difficult to convey in ways that sustain student interest and participation.

This raises a critical pedagogical question about how such modules can be redesigned to balance cognitive rigour with student engagement. What strategies, whether in-person, digital or blended modalities, can be employed to support deeper understanding, reframe abstract content in ways that feel relevant and meaningful to students' future clinical roles? One possible approach, already highlighted earlier on in this study, is the intentional integration of digital

learning features such as video commentaries, illustrative videos and collaborative discussion forums that enable real-world case studies, problem-based learning scenarios or simulations, that bridge the theoretical with practical understanding. These digital learning features could provide both N&M lecturers and students with a more immersive and engaging learning experience. There is therefore a need for curriculum adjustment focused on student support and student-centred pedagogy that fosters interactive learning to address module-specific challenges.

8.2.3 Strategic Lessons Learnt Amidst the Challenges

Gamification, which involves the use of gaming concepts like earning badges or stars for engaging with specific virtual content, is another strategy that could address the concerns of theoretically complex subjects. This study's findings indicate that gamification could facilitate student engagement in synchronous and asynchronous online sessions as well as in blended modalities. Nursing and Midwifery lecturer participants suggested incorporating game-like elements, such as digital completion badges for completing various aspects of the module within the Moodle platform to enhance student engagement. They observed that these features offer more than superficial rewards; rather, they significantly motivated students to engage actively during synchronous and asynchronous sessions. This aligns with the findings from the studies of Frenk et al. (2022), Halem et al. (2022) and JISC (2021), which collectively underscored the positive impact of gamification on student engagement, especially in DLS.

According to these lecturer participants, the gamified features resonate with students by offering a sense of achievement, structure and progression, factors that are significantly crucial in DLS, where the absence of face-to-face interaction has been shown to weaken motivation. The prospect of earning badges or unlocking new levels, however modest, taps into intrinsic and extrinsic motivation drivers highlighted in Kruli et al. (2024). It can potentially transform

routing learning activities into more engaging and goal-oriented experiences, which makes DLS feel more interactive and less isolating, thus attaining what Merzel (2023) described as transformative pedagogy. This approach underscores a possible significant pedagogical shift in how student engagement is understood in N&M education and how students navigate their learning path. Instead of seeing gamification as a mere option or some superficial extra feature of DLS, it may be more appropriate to frame it as a key component within a broader commitment to student-centred and digitally responsive transformative pedagogy. In the context of N&M education, where the curriculum often blends theory with practical application (NMC, 2024), game-like elements can be intentionally integrated into it to reflect real-world challenges, thus incorporating student-centred activities recommended by Freeman et al. (2014) as crucial for student engagement and achieving learning outcomes.

Despite the challenges that come with teaching in DLS, N&M lecturer participants advocated for combining several teaching modalities, such as integrating Moodle, MS Teams, or classroom lectures with online simulations or Mentimeter, Padlet, or Quizziz, or relevant multimedia, to facilitate student engagement and create an inclusive environment that ensures effectiveness. This is consistent with the assertion of several scholars who maintained that using several digital learning features like chat functions, multimedia tools, and supplementary learning platforms along with synchronous videoconferencing could potentially enhance student engagement (Adeoye et al., 2020; Frenk et al., 2022; JISC, 2023; Lamb et al., 2021). These features foster dynamic and active learning but may require technological competency from lecturers. Its student-centred modality ensures that students are not just spectators in the learning space but active participators.

While this study underscores the significance of DLS features such as chat functions, Padlet, Mentimeter, and breakout rooms in fostering student engagement and eliciting responses, it

also highlights that some lecturers have adopted strategies, such as temporarily disabling the chat box, muting students microphone and disabling the video camera, to maintain student focus during lectures. These N&M lecturers noted that students become preoccupied with the activities in the chat space or the pictorial ambience and audio interference from their peers to the extent that they are unable to focus on the lecturer's teaching. This practice suggests the necessity of carefully evaluating the appropriateness and suitability of specific digital tools and platforms as integral components of lesson planning before lecture delivery. This observation aligns with the perspectives of several scholars who emphasise the importance of a well-structured and intentional approach to integrating technology within educational practices (Benabdallah & Bourgault, 2021; Chick et al., 2020; Crick et al., 2020; Hodges et al., 2020; Jimoyiannis et al., 2020; Martens et al., 2020; Okoye et al., 2021). Consequently, the deliberate selection of digital tools must be considered a fundamental aspect of pedagogical planning to enhance their effectiveness in the learning environment.

Some of the N&M lecturers in this study contend that online teaching introduces a significant barrier to meaningful interactions between students and lecturers. Some used the word "robot" to illustrate the dehumanising effect of the impersonal and non-engaging nature of online lectures. The hermeneutic interpretation of their phenomenological encounters underscores the detrimental impact of the lack of interaction in DLS on the lecturer's motivation and effectiveness, leading to a mechanical and detached teaching style. They emphasised that reduced visual perception that occurs in DLS prevents students from understanding the lecturer's person and teaching style, which impacts the overall outcome of the educational activity. This finding is consistent with that of several other scholars, who stated that the lack of face-to-face interaction hinders the optimum benefits of T&L online (Alsayed et al., 2020; Dhir et al., 2017).

The subject of interactions within DLS has become a matter of debate among researchers and lecturers (Wallace et al., 2021). This is because of the pivotal role that social interactions play in knowledge exchange in the higher education context (Maciag, 2018). Although substantial evidence demonstrates that DLS allow social interaction, which is one of the key elements of T&L, the findings of this study highlight challenges that online learning may introduce to social interactions among students and lecturers. This suggests that the intricate dynamics of learning interaction essential for learning may not be fully replicable in the current digital learning platforms, hence the need to adapt the design of digital platforms to better integrate interactive features.

According to N&M lecturer participants, prioritising a ‘humanistic approach’ to the use of teaching technology is crucial for fostering interaction and reducing the social disadvantages of DLS. An example of this is that lecturers should avoid teaching with one tone or voice, not just reading through the slide. This is corroborated by many scholars who argue that the use of monotone when teaching can lead to disengagement (Derakhshan et al., 2021; Sadeghi, 2019). When teaching, tone and pitch are supposed to be appropriately varied based on the content of speech. In line with this, Falcon et al. (2023) noted that students may become more alert and attentive to online teaching sessions. Supporting N&M students to improve their confidence with using DLS, as well as teaching with the interactive elements, were also noted as ways to incorporate humanistic approaches to the use of DLS. When N&M students are specifically prepared to navigate digital platforms during module launch, they will become more confident, having a sense of responsibility towards their studies. The N&M lecturer participants’ use of the term ‘humanistic approach’ may be regarded as conjectural, but the inherent hermeneutic interpretation of this idea is relevant and applies to T&L in nursing and midwifery irrespective of the platform used to deliver lectures.

The main DLS adopted by the university for T&L activities since the onset of the COVID-19 pandemic was the MS Teams digital learning platform for synchronous learning and Moodle for asynchronous learning, which were used across the N&M schools. However, N&M lecturer participants found it difficult to teach on other platforms like Zoom. This kind of difficulty was noted in the work of Haleem et al. (2022), arguing that specific proficiency is developed through the continuous use of any particular DLS. However, that path to proficiency is marked by considerable complexity and challenges. According to the participants in this study, poor or unstable internet connections and limited digital literacy were challenges that significantly impede effective teaching in DLS. The metaphor, “It’s like a tug of war”, as used by one of the participants to describe their challenge with the use of digital learning technologies, offers valuable insight into the hermeneutic interpretation of their lived experience. This description encapsulates the struggle N&M lecturers face in balancing the technical demands of teaching in DLS.

It also underscores the tension between effective teaching and the technological constraints that affect student engagement during online sessions. This finding is consistent with the findings of several authors who highlighted several technological challenges, such as internet connection, Information Communication Technology (ICT) equipment, and digital skills, in addition to mobile phones, preventing lecturers from maximising online teaching (Adeoye et al., 2020; Etando et al., 2021; Islam, 2021; Lutfor et al., 2023; Mudenda et al., 2023). Poor digital literacy emerged as a significant technological barrier identified by N&M lecturers in this study, a concern frequently cited as a critical factor contributing to their difficulty in adapting N&M courses and their pedagogical approach to DLS (Bates, 2019; Garrison, 2017).

To mitigate the effect of low digital literacy on teaching effectiveness, N&M lecturer participants described their usual practice of openly informing students of their commitment to

continuous improvement at the start of their teaching. By acknowledging their own digital learning journey and articulating a clear commitment to continuous improvement, these lecturers intend to foster transparency, manage student expectations and build a foundation of mutual trust within the DLS. This approach, though modest, reflects a broader pedagogical and ethical orientation towards credibility and relational engagement in N&M education. This practice aligns with the findings of Holm (2024), who highlighted the significant contribution of digital literacy to effective online teaching. Nonetheless, instead of viewing digital literacy as a constant pre-requisite, the lecturer participants in this study framed it as a dynamic and evolving process in which both students and lecturers are engaged. By modelling vulnerability and a growth mindset, these lecturers not only humanise their digital teaching style but also implicitly invite students to a similar open and adaptive approach to engaging with DLS.

Moreover, this resonates with core professional codes of ethics for N&M, called ‘courage’ and ‘duty of candour’, as outlined by the N&M Council (NMC, 2022; Quick, 2022). In clinical practice, this principle requires nurses or midwives to be transparent with the patient when things go wrong, fostering trust, professional integrity and accountability. In the educational context, this same principle can be applied to the DLS, where admitting limitations or challenges in digital expertise is not a weakness but an ethical stance rooted in honesty and integrity. When digital literacy is approached with openness and ethical mindfulness, N&M lecturers are not only modelling professional values but also actively shaping a more compassionate and responsive digital learning culture. This approach also challenges the high expectations often associated with teaching in DLS, noted in Peck et al. (2025), advocating instead for a more relational, trust-based framework that prioritises continuous development and communication. As such, this represents a meaningful contribution to rethinking pedagogical leadership in digital education, especially in N&M, where trust, empathy and transparency are fundamental to both practice and education.

The need for flexibility and adaptability that allows creativity and innovation when designing DLS emerged as a unique perspective from N&M lecturers in this study. Adaptability and flexibility in the use of DLS for educational activities were also major concerns highlighted in several studies (Keane et al., 2023; Gopika and Rekha, 2023). To achieve this, regular student feedback and assessments should be integrated into the design and maintenance of these platforms, ensuring they effectively meet the needs of users. According to N&M lecturer participants, digital platforms should be made more user-friendly, visually engaging, simple and easy for both students and lecturers. They stated that digital platforms should be designed in ways that are relatable to the users, exemplified by intuitive icons and streamlined navigations that are less cumbersome, easy to use by anyone with basic computer skills and require less technical expertise.

Such enhancement would not only streamline the learning process but also provide significant benefits to visual learners, fostering inclusivity and better educational outcomes.

However, this intervention will require financial inputs from the university as these lecturers expressed their desire for the university to invest financially in digital or blended teaching modalities through appropriate investment in the design of DLS, purchase of technological infrastructures including licences for full access to auxiliary or assistive DLS that could be used to support or complement other teaching methods. This is consistent with the assertion of numerous researchers who collectively highlighted the importance of the design phase of digital platforms, noting that several factors must be considered when developing the platforms (Haleem et al., 2022; Hannes et al., 2024; JISC, 2024).

The promotion of student autonomy was among the strategic lessons learnt amidst the challenges faced with the use of DLS in this study. This is supported by Bramer (2020) and Smyth et al. (2012), who stated the potential of digital spaces to allow students autonomy over

their learning. However, participants in this study expressed concern over the degree to which students can be granted autonomy with their learning, suggesting the need for a balanced approach. This study offers more insight into this perspective by highlighting lecturers' desire for students' autonomy over their learning and the flexibility that digital spaces readily provide, while also raising concerns about the extent to which students should be allowed this autonomy. A carefully designed blend of these two teaching methods may be able to address this issue.

8.2.4 Concerns Relating to Institutional Support

Several N&M lecturer participants reflected on their experience of receiving varied levels of institutional support at BCU regarding the use of DLS. An example of such skills that they so desired to be supported with is uploading asynchronous learning materials on the Moodle platform. They were new to the use of DLS and expected to be shown around the platform to ensure efficiency and effectiveness. Even after they have used the digital learning platforms for some time, they still expressed dissatisfaction with their current level of competence. Some of them reported receiving little assistance from the university, while others indicated they received support from colleagues, particularly senior colleagues, to facilitate their adjustment to teaching online. However, the shift to digital education was marked by a sense of isolation, prompting some other lecturers to independently find ways to develop the skills needed to effectively teach online through social media networks, books and asking colleagues at another university. These accounts underscore not only the unevenness of institutional provision but also the resilience and initiatives of individual lecturers.

This finding echoes the observation of several other researchers, who reported that many teachers remain unfamiliar with the full scope and possibilities of online learning tools and do not receive enough support to use them. (Etando et al., 2021; Loureiro et al., 2021). The pedagogical potential of digital learning tools is still a developing area in the field, and both

lecturers and students need structured support to maximise its benefits. JISC (2020) acknowledged the important role of support received from colleagues to teach online. However, these studies and the present findings also reveal a deeper issue, the systemic undervaluing of digital pedagogical literacy as a core competency within higher education, especially in professional disciplines such as N&M.

These narratives raise important questions about the role of universities in fostering a culture of shared learning, mentorship and professional development in the digital age. While peer support clearly played a pivotal role, the reliance on informal networks also exposes a gap in institutional responsibility. There is a pressing need for universities, in addition to providing technical training, to also invest in ongoing pedagogical development that allows staff to engage meaningfully and confidently in DLS. This was also noted in the report of Finlay et al. (2022). By doing so, universities can help bridge the gap between technological access and pedagogical confidence, ensuring that the promise of digital education is matched by the preparedness of those tasked with delivering it.

The diversity in support received by N&M lecturers at BCU may also indicate the distinct phases of the COVID-19 pandemic, starting with the initial transition to DLS when the knowledge of online teaching was limited, requiring significant adaptation by lecturers. This differs from the post-COVID-19 period, where consistent use of digital platforms might have reduced the need for extensive support, reflecting an evolving adaptation process over time. Ultimately, the experiences shared by these lecturers illuminate the human dimension of digital transformation in N&M education, one that is shaped as much by relationships, initiative, and professional identity as it is by technology and policies.

Conversely, some N&M lecturers in this study disclosed that they continued to receive support even after the lifting of the final national restrictions in June 2021, at the time when the

university adopted a blended mode of teaching. They, however, noted that on several occasions, their challenges remained unsolved despite the intervention of the university. For example, despite receiving support to resolve technical difficulties related to accessing some digital learning platforms and navigating through MS Teams for synchronous teaching, a lecturer described how the access issue remained unresolved. Consequently, during an online lecture, he found himself navigating the platform in a state of confusion, repeatedly circling the same actions in search of a solution, a struggle that became apparent to his students. As opposed to the initial finding, which indicates that lecturers often relied on support from sources beyond the university's provision, these results suggest a persistent imbalance in support even after the COVID-19 pandemic, when the university transitioned to a blended mode of learning. This observation aligns with existing literature, which highlights that some UK HEIS received minimal institutional support for some aspects of digital teaching (JISC, 2020; Rapanta et al., 2021). There remains a critical need for specific support to enable lecturers to effectively adapt to digital teaching pedagogies.

The N&M lecturer participants in this research expressed their desire to be supported through initial training and ongoing professional development to equip them with the skills needed to optimise the use of digital learning platforms. In addition, they noted the importance of having more than one lecturer in online sessions to support the students and the other lecturer. This is so that while one lecturer teaches, the other one monitors the students through the digital features that facilitate engagement. This aligns with the assertion of scholars who underscore the critical role of providing adequate support for lecturers in DLS to optimise digital or blended teaching modalities (Foronda & Lippincott, 2014; Nikoonezhad & Zamani, 2014; Wallace et al., 2021).

The establishment of a virtual community of inquiry emerged in this study as a strategy to foster mutual support and respond to social and pedagogical challenges among lecturers within DLS. According to the N&M lecturer participants, they implemented a virtual support network using MS Teams, an initiative that served not only as a space for resolving technical and pedagogical issues but also as a forum for emotional and professional support. The online group, accessible to all teaching staff, included a general chat box for spontaneous questions and a weekly virtual meeting where staff could check on each other, share insights and offer encouragement. The structure was informal, yet purposeful, providing a sense of community and shared responsibility amidst the isolation often associated with remote teaching.

Similarly, the same model was set up for students via WhatsApp, where they could receive information and share updates. Although the platforms differed, the purpose remained the same: to build a learning ecosystem where both educators and students felt connected, informed and supported. These lecturers called this group a support strategy, not just a logistical means for communication, but affective spaces designed to counter the fragmentation of digital education. This is consistent with the broader literature on community of inquiry, especially the work of Garrison (2017a), which emphasises the importance of community of inquiry in fostering meaningful social, affective, and cognitive experience. Similarly, Rawal (2025) highlighted the role of community building in remote education as a mechanism to mitigate the psychological effects of social isolation.

The humanistic side to this initiative is worthy of note. At their core, these virtual communities were expressions of care, where lecturers and students reached out to one another in unfamiliar territory, reaffirming their shared purpose. They could potentially flatten hierarchies, blur institutional boundaries and encourage a collective sense of adaptability. Rather than waiting for formal directives or institutional solutions, N&M lecturers co-created a responsive and

evolving infrastructure rooted in trust, collaboration and empathy. Nonetheless, the emergence of these virtual communities of inquiry raises further questions. While their contribution was laudable and undoubtedly valuable, they are largely a grassroots intervention. This initiative provides more than just a means of communication, but a belonging, reassurance and practical framework for navigating the demands of DLS, representing a crucial dimension of pedagogical resilience in the evolving landscape of digital education. If institutions are to fully realise the potential of DLS, they must move beyond mere provision of technical support towards cultivating a culture where relational, co-constructed approaches to T&L are recognised and structurally supported.

Diverse forms of attitudes were expressed by N&M lecturers in this study towards the use of DLS. While most of them expressed a strong preference for the classroom mode of lecture delivery, as also seen in the extant literature (Halem et al., 2022; Mudenda et al., 2023; Scherer et al., 2021), they still acknowledged the uniqueness and benefits of DLS, advocating for their retention within educational practice. This choice of classroom-based teaching could be due to the lecturer's resistance to change and the absence of physical interaction during online lectures, as indicated by the result of this study. A similar observation was highlighted by scholars who identified lecturers' resistance to change as one of the barriers to the adoption of digital spaces for T&L (Acharjya & Das, 2022; Marks & Thomas, 2021; Tortorella et al., 2021). According to N&M lecturer participants, acknowledging the benefits of DLS, despite their preference for classroom-based learning, may explain the strong inclination towards the adoption of the blended mode of teaching. This blended mode of teaching consistently garners strong support because it combines the two teaching modalities so that lecturers can teach in the classroom and still retain the advantages of DLS (Boys, 2016; Imran et al., 2023; Lamb et al., 2022; Nordquist & Lang, 2015; Raes, 2021).

The perspectives of N&M lecturers in this study suggest the individualistic pattern of phenomenological encounters for both lecturers and students, noting that no two experiences in DLS are exactly the same. For instance, one lecturer expressed fear over potentially being expendable due to the university's adoption of DLS, citing the potential of reusing his recorded lectures without needing further input from him. Some other participants extended this concern, highlighting not only the risk of redundancy but also the possible danger of recycling outdated instructional content without incorporating recent advancements in the field. Several authors have asserted that DLS provide the opportunity for individualised teaching (Barker et al., 2013; Barratt, 2010; Bramer, 2020; Smyth et al., 2012), suggestive of an individualised experience, which was highlighted in this study. This finding is noteworthy, as no known existing study has explicitly highlighted the possibility of DLS rendering lecturers redundant.

8.3 Transitioning within and Beyond the COVID-19 Context

This theme thoroughly analyses the experiences of N&M lecturers at the point of transitioning in the context COVID-19 pandemic. It highlights the unique occurrences that characterised the various phases of the COVID-19 pandemic, offering valuable insights into lecturers' experiences during and after the pandemic.

8.3.1 During COVID-19 Pandemic

Digital learning spaces effectively bridged the gaps created by the national restrictions and social distancing during the COVID-19 pandemic through their ability to allow flexibility and remove the barriers of space, time, and distance. According to the N&M lecturers in this study, these advantages extended into the post-COVID era with other benefits, including cost-effectiveness, reduction of carbon emissions and elimination of physical space constraints within the university campuses. The cost-effectiveness of DLS extends beyond the cost of

commuting to the campus on public transport into buying fuel and paying for parking charges for car owners, a benefit also reported by Foronda and Lippincott (2014). This benefit is not just limited to lecturers but also applicable to students who travel from a distance to attend classroom lectures on campus. Some researchers have emphasised the enhanced ease and flexibility that comes with teaching in DLS (MacNeill & Beetham, 2023; Rapanta et al., 2021; Scherer et al., 2021), which is consistent with this study's findings. It is safe to state that the central interest for lecturers using DLS during and after the COVID-19 pandemic includes space, flexibility, time, cost-effectiveness, environmental benefits, adaptable learning solutions, and diverse engagement modalities. This suggests the integral role of these components in reshaping N&M educational accessibility and engagement beyond the COVID-19 pandemic.

During the COVID-19 pandemic, N&M lecturer participants were mandated to transition from conventional classroom lectures into online modalities, which they considered challenging. These impacts span across the teaching process, assessment and the impact on both the students and lecturers. Initially, they did not like the idea of teaching in DLS but gradually embraced it when they realised there were no other alternatives. While some of these lecturers adjusted well, others found the transition to online teaching during the COVID-19 pandemic overwhelming due to the limited preparation time and support, an observation consistent with the report of Rapanta et al. (2021). Many of these lecturers used several words such as 'sudden', 'stressful', 'depressing', and 'incredibly stressful' to describe their transitioning experience and its impact on how they teach. Consequently, the impact of the pandemic extends beyond educational activities into the mental state and well-being of N&M lecturers. Many of them described how they felt depressed and isolated owing to the impact of the national restrictions during the COVID-19 pandemic. This perception aligns with the report of researchers who highlighted the demanding and rigorous nature of the UK lecturer's transition from classroom

to online learning (Hamer & Smith, 2021). The scope of the current study did not consider lecturers' experiences with digital teaching outside the target university. Lecturer participants were required to have held their position at the target university for at least two years before data collection, which commenced in late 2022, to ensure they had substantial experience teaching in DLS during and after the COVID-19 pandemic. This is particularly important for capturing authentic lecturers' experiences and providing credible insights into their perspectives on the pedagogical use of DLS during and after the pandemic.

More insight into the COVID-19 experience was also highlighted in the study. N&M lecturers were required to drastically change from paper-based to online lectures and assignments within a very short timeframe. They were given only two weeks to convert all paper-based instructional content, as well as assessments, to electronic versions that are accessible online. This re-emphasises the struggles of N&M lecturers with adapting teaching methods to online modalities, an observation echoed by a Swedish study conducted by Långegård et al. (2021). Some lecturers in this study used the metaphor "getting thrown out and left to struggle" to capture their experience of coping with this quick transition during the pandemic. The hermeneutic interpretation of their experience encapsulates the sense of abruptness and lack of structured support in adapting to digital teaching during the pandemic. It reveals the gap in institutional support frameworks to address the technical and pedagogical needs of lecturers at the point of transition to DLS. Some authors support this assertion, noting that the shift to online learning during the pandemic was fraught with challenges, suggestive of a greater need for support just beyond the transition phase (Almarzooq et al., 2020; Långegård et al., 2021; Soni, 2020).

At the onset of the COVID-19 pandemic, N&M lecturers in this study explored several digital teaching platforms, including MS Teams, H5P, O-Matic, and Sway document. Their trials were

not limited to using DLS as tools for teaching but as strategies to reduce the social disadvantages of digital learning. A substantial body of evidence has identified several digital learning platforms that witnessed extensive use at the onset of the COVID-19 pandemic, including Microsoft (MS) Teams, Google Meet, Zoom, Skype, Bamboo learning, Google Classroom, DOCEBO, WIZIQ, Adobe Captivate, Blackboard Collaborate and Elucidate (Adeoye et al., 2020; Adesuyi et al., 2023; Molla, 2020). In this study, MS Teams emerged as the principal space for synchronous sessions despite initial trials with other DLS. The urgent need to sustain educational activities remotely during the COVID-19 pandemic triggered this widespread exploration of diverse DLS among the participants, an observation also reported in García-Morales et al. (2021).

Initially experimental, BCU gradually adopted MS Teams and Moodle as the primary digital teaching platforms for synchronous and asynchronous online lectures, respectively, amid the pandemic and beyond. One of the N&M lecturer participants used the metaphor “a knee-jerk reaction” to describe this particular response at the onset of the COVID-19 pandemic. The hermeneutic interpretation of this aspect of their experience reveals the immediate instinctive response of lecturers driven by fear and uncertainty amid rapidly evolving circumstances and widespread confusion. Apart from trying out digital learning platforms, these lecturers also implemented several strategies to optimise the T&L experience in DLS. According to them, some of these adaptations that worked included the introduction of frequent breaks during lectures for students to step away from the screen for 10-15 minutes and weekly catch-up meetings designed to support lecturers and students in managing the challenges of the COVID-19 national restrictions. These strategies collectively offer practical responses to the concerns raised by Coad et al. (2023), potentially addressing the existing gaps and informing the ongoing inquiry into strategies for effectively leveraging DLS to support N&M education.

Another concern that the transition to DLS during the COVID-19 pandemic brought to light was several pedagogical tensions, one of which was the perceived loss of non-verbal communication, a fundamental element of effective teaching. The N&M lecturer participants expressed concern about their inability to read students' facial expressions, body language and level of participation during synchronous online sessions. They attributed this limitation to the structural design of DLS platforms like MS Teams, which they perceive could not adequately transmit the nuanced cues that typically guide in-person teaching. Nonetheless, this perspective invites a deeper hermeneutic interrogation of the experience of N&M lecturers. Is the concern truly a technological shortfall, or might it also reflect an epistemological shift lecturers have struggled to embrace, particularly the need to reconceptualise what it means to understand communication cues in DLS? Rather than seeing DLS as a defective mirror of the physical classroom, it may be more productive to view it as a unique communicative learning space that requires new interpretive strategies. The difficulty may not just be limited to the inabilities of DLS but also the persistence of face-to-face pedagogical expectations being transposed into digital modalities. Some researchers who share this sentiment highlighted the difficulty lecturers encounter in interpreting non-verbal communication cues such as posture and facial expressions in DLS as opposed to during in-person classroom sessions (Asgari-Tapeh & Darvishpour, 2024; Gopika & Rekha, 2023).

To address this limitation, N&M lecturers in this study adopted pragmatic strategies such as the use of breakout rooms on MS Teams. Observing that these spaces are smaller and intimate, they mimic aspects of in-person interactions to enhance student engagement. However, they noted that this approach sometimes fell short, hindering effective interaction and communication, particularly due to the high number of N&M students in an online session, a condition that was not considered in other researchers' reports. What emerges here is the need to rethink digital teaching as its own pedagogical mode rather than a substitute for classroom

modality. To maximise the potential of DLS, there must be a paradigm shift in how lecturers understand engagement, communication, and presence. In the absence of non-verbal cues, N&M lecturers must develop a broader and well-defined strategy to judge the virtual room, such as monitoring the chat dynamics, reaction emojis, interpreting silence, or the type of questions students ask.

8.3.2 Beyond COVID-19 Pandemic

After the COVID-19 pandemic, the transition back to classroom teaching mirrored some of the complexities experienced during the pandemic. The result indicates that while the N&M lecturer participants appreciated the return to in-person interactions with the students and colleagues, there were mixed reactions precipitated by concerns over losing the good features of digital teaching and resuming time-consuming commutes. One of the lecturer participants captured this ambivalence with the metaphor “getting off a bike and getting back on like you never got off”. This suggests these lecturers’ perceptions of the unrealistic expectation on them at the point of this transition back to in-person classroom teaching modalities. The hermeneutic interpretation of their narration reveals the abrupt return to pre-pandemic routines, with additional precautions like wearing masks, which was considered stressful and apprehensive. This is consistent with the assertion of several researchers in the field. For instance, there is a consensus within the extant literature that a return to normalcy post-COVID-19 is fraught with challenges, highlighting similar concerns noted in this study (Ashour et al., 2021; Jandric et al., 2020; Peters et al., 2020; Roy, 2020).

Despite these challenges, DLS presents several opportunities with the potential to transform N&M education, as highlighted also in several academic discussions (Ashour et al., 2021; Hamer & Smith, 2021; Peters et al., 2020). According to N&M lecturers in this research, DLS present unique benefits, which they desire to retain as they transition back to classroom

teaching post-pandemic. While many of these benefits have been explored extensively within the COVID-19 context in this study and within the extant literature, this perspective highlights the more enduring transformation and a gradual shift in the lecturer's attitudes. At first, DLS were adopted out of necessity, then it became a site of pedagogical trials and discoveries. Over time, familiarity gave rise to genuine interest, with many lecturers expressing a preference for DLS to the extent that, after the pandemic, they desired a way to retain its unique benefits. This evolving perspective appears to underpin a growing interest in blended learning modalities, which combine the richness of in-person teaching with the adaptability and ease of DLS. There is therefore a pressing need to develop an efficient and effective framework that can integrate the strengths of DLS to support learning across both online and classroom-based modalities.

While various benefits associated with teaching in DLS have been emphasised in this research, adopting digital learning has imposed extra workloads on lecturers in the post-pandemic period, encroaching on time that might otherwise be spent with family. Lecturers now complain of not being about to draw a line of demarcation between work time and home time because activities that typically end after closing hours on campus now encroach into personal and family life. The N&M lecturers in this study stated that they now take home all forms of work-related assignments due to the enhanced capacity provided by DLS to respond to the situation at any location. This finding is consistent with Unal and Dulay's (2022) assertion that the transition to remote work has blurred the boundaries between work and personal life in the post-pandemic period, potentially disrupting work-life balance. Similarly, several authors have observed a rise in the workloads of educators after the pandemic, emphasising the need for adequate staffing to manage these demands (Aiken et al., 2021; Frenk et al., 2022; Rotenstein et al., 2022).

In addition, time constraints due to these heavy workloads prevented many of these lecturers from maximising opportunities to attend training sessions designed by the university to

improve their digital teaching competencies. However, this rise in workload has not been directly attributed to the use of DLS for educational activities within the extant literature, instead, it has been generally linked with the COVID-19 pandemic. While JISC (2021) noted a change in working practices among lecturers due to the pandemic, JISC's (2023) report on the post-pandemic experience of lecturers across the UK HEIs failed to identify the impact of these changes on lecturers' broader activities, particularly regarding work-life balance. Instead, it emphasised the capacity of digital teaching to reduce educators' workload by allowing course delivery to a larger group of students.

This study, while recognising the capability of DLS in removing the barrier of time, space and distance for a streamlined course delivery, also presents the unique voices of N&M lecturers within BCU, noting an increase in workload that increasingly intrudes upon personal life in the post-pandemic era. This has necessitated that N&M lectures work from home, adapting to the use of various tools and technologies required for remote educational activities, thus extending their professional responsibilities beyond conventional working hours. Given the dynamic and evolving nature of DLS, the university must create an enabling environment for professional development, and lecturers should be receptive to new concepts and inventive methods to efficiently use DLS. Diverse pedagogical methods should be explored to accommodate various learning preferences and enhance student active participation.

As the COVID-19 restrictions eased, a significant portion of practice-based learning modules continued to be delivered in DLS, partly due to scheduling convenience. Practical sessions, constituting up to half of the curriculum, were not prioritised in comparison to theoretical teaching. This experience reflects the gradual shift to a blended mode of teaching, with more lectures remaining online than in-person delivery following the sustained period of remote teaching. These findings suggest the challenges of maintaining an effective balance between

theoretical and practical components while transitioning back from digital to classroom teaching. A participant described this evolving digital landscape as “a bit of a mixed bag,”. This reflects the uncoordinated integration of new features on DLS like Moodle and MS Teams, mainly during the pandemic and in-person post-COVID. This expression underscores both the advantages and complexities associated with incorporating these diverse educational approaches. Botturi (2021) shared this sentiment by highlighting the push to integrate online tools with in-person teaching to develop a flexible, blended approach, which they argue was poorly understood or not fully implemented. This study’s finding suggests that appropriate integration of online and classroom modes of teaching could provide a balanced solution to accommodate the diverse preferences for lecture delivery modes among lecturers, thus leveraging the strengths of both methods.

Several authors’ assertion aligns with these findings; they demonstrated that the blended teaching method is more beneficial than classroom teaching, promoting distance learning and extending educational opportunities beyond the confines of the university’s physical space (Dziuban et al., 2018; Mudenda et al., 2023; Finlay et al., 2022; Singh et al., 2021). This enables N&M students to engage in continuous learning regardless of the location. Frenk et al. (2022) demonstrated the use of synchronous and asynchronous approaches to deliver medical-related courses via digital platforms. However, the perspectives of N&M lecturers in this research reveal the challenges of aligning the complexities involved in blending synchronous with asynchronous educational approaches within the post-COVID-19 context. This same concern was noted in recent national reports within UK HEIs (JISC, 2023; Quality Assurance Agency for Higher Education, QAA, 2022). The hermeneutic interpretation of N&M lecturer’s experience offers insight into the evolving digital landscape, which suggests a learning curve in adapting to new features introduced to digital platforms along with the classroom approach. Given the recency of the transition from the COVID-19 restrictions at the time of data

collection, lecturers were likely still refining their digital teaching competencies. This finding reflects the need for strategic frameworks to optimise the blend of synchronous and asynchronous teaching modalities in blended learning, which is essential for advancing pedagogical methods in today's fast-paced technological age.

The perspective of N&M lecturer participants in this research indicated that a blended provision could address the challenges associated with the increasing nursing student population alongside limited T&L spaces. Several important factors for determining the proportion of blending online with classroom teaching were identified, including student feedback, cost implications, and the perspective of the module/course team. Consistent with this finding, numerous authors have highlighted the importance of student perception and other stakeholders in designing a blended education program (Hofmann, 2018; Janes et al., 2023; Moraes, 2023; Ulah et al., 2023).

Some N&M lecturers in this study suggested that practical sessions or subjects that require hands-on engagement and reflective accounts, or subjects with sensitive content, are better delivered face-to-face, giving room for one-to-one counselling as needed. While raising concerns about the suitability of conducting skill-based sessions online, Brendan et al. (2022) reported positive outcomes for students when DLS was used to deliver a nursing skill like suturing, as part of a blended learning approach among midwives. This caution is very important and corroborates the findings of this study because not every practical nursing and midwifery skill is suitable for online delivery. The Participants in this study were firm about the limitations of DLS in addressing the requirements of skill-based sessions, which require active observation and participation.

Conversely, one of these lecturer participants maintained that any lecture delivered online could equally be delivered face-to-face when commenting on the blended teaching option. This

assertion can be interpreted in two ways. Firstly, the participant could mean that there is no justification for a blended approach to teaching. Secondly, it could mean there is no need to pay attention to specific conditions since all subjects can be delivered through any method. While the latter perspective aligns with studies by Aljanabi et al. (2024) and Brendan et al. (2022), the findings from this study further revealed the inherent challenges of replicating classroom teaching and its learning experiences in DLS. This suggests the need to consider specific contextual factors when adapting content for online delivery, demonstrating that a one-size-fits-all approach may not be enough.

8.4 Chapter Summary

This chapter discussed the findings relating to the experiences of N&M lecturers within the target population, comparing them with evidence from the extant literature.

Their experiences revealed significant challenges and opportunities. The major challenge identified was the difficulties in adapting teaching to digital platforms, with student engagement, internet stability and technological skills presenting as consistent obstacles. Modules considered to be complex, and abstract were highlighted as challenging regardless of the mode of delivery, suggesting the need for specific and interactive teaching strategies. There were also concerns about student autonomy, an increase in workloads, and the potential redundancy of lecturers due to recorded lectures, polarising the digital teaching landscape. The ‘robotic’ nature of conduct within DLS has a dehumanising effect, reducing interactions in online sessions, which compromises the richness of learning experiences.

Despite these setbacks, DLS have proven to be excellent in providing flexibility, continuity in educational activities and cost-effectiveness. Yet the sudden transition meted by the COVID-19 pandemic strained the lecturers, exposing the need for institutional support, technological

investment and professional development. Suggestions around pedagogical transformation and technological modifications were made. Pedagogical innovations such as gamification, blended learning, and student-centred planning emerged as promising solutions that could improve student engagement and foster inclusivity. Technological modifications in the design of digital learning platforms to ensure they are user-friendly, visually engaging and pedagogically friendly were considered necessary to ensure the effectiveness of digital or blended teaching programs.

The next chapter integrates the findings from the lecturer participants with those of the students, identifying commonalities and critical areas of understanding regarding DLS from the perspectives of N&M students and lecturers to articulate possible recommendations for enhancing their experience.

CHAPTER 9

ASSIMILATION OF FINDINGS

9.1 Chapter Introduction

The previous chapters specifically presented a discussion of findings from the lecturer and student participants within the context of prior literature evidence. In this chapter, I presented the assimilation of the perspectives from both N&M lecturers and students, presenting shared and distinct experiences that together provide a fuller, more nuanced understanding of their experiences within DLS.

This chapter used parallel narratives to create a critical lens to explore recurring concerns, specific needs and shared expectations. The intention extended beyond illuminating T&L complexities in digital environments to initiating practical insights that will enhance the development of more effective digital learning strategies. Through this critical and concise discussion, the chapter demonstrated that DLS experiences become vitally important when viewed as a co-constructed result from the interaction between N&M lecturers and students. The analysis drew on pertinent literature to complement the discussion.

The perspectives of N&M lecturers and students provided insights into the challenges, opportunities, and adaptive strategies involved in transitioning to digital education. Although the experiences of N&M lecturers and students differ from one person to the other, some common themes emerged across the two participant groups, revealing their shared experience with DLS. The key areas of analysis recurring in both groups include the challenges encountered in DLS, requiring adaptation strategies to navigate the evolving pedagogical landscape, the opportunities that DLS provides, and the shared sentiments of both the lecturers and students.

9.2 Challenges & Opportunities

The analysis of the perspective of N&M students and lecturers in this study revealed notable commonalities in the challenges they faced and the opportunities inherent in DLS. These challenges broadly fall into two categories: individual adaptation to T&L in digital spaces and adapting N&M courses to DLS. Despite these difficulties, participants' narratives signpost clear pathways of opportunities, including curricula transformation, pedagogical transformation, blended teaching modalities, and innovative and student-focused DLS. This shared theme critically unpacks the dual narratives of the challenges and opportunities not as opposing forces but as interconnected experiences that offer valuable insight for reimagining digital learning technology in N&M education.

Both participant groups reported experiencing a significantly challenging adaptation to online modalities. The students' adaptation concerns revolved around adjusting to modalities and challenges associated with learning online. Conversely, lecturers faced dual adaptation concerns: first is adapting to teaching in DLS and second, pedagogical adaptation of N&M courses to digital learning modalities. This burden reveals the complex dynamics of the shift from classroom to digital learning.

Nursing and midwifery student participants referred to DLS as a "new learning system", a term that embodied the steep learning curve they were mandated to navigate during their transition to digital education. Although lecturers did not use the exact phrase, they similarly noted the demanding nature of adaptation to teaching online and, at times, the disorienting impact. The student's idea of DLS being new was not because the learning method was entirely new, but because of their limited prior exposure to DLS. This perceived newness highlights the importance of a structured preparation for N&M students before commencing their training in DLS.

Although the broader literature confirms that DLS is not novel (Oxford Learning College, OLC, 2023; Vitoria et al., 2018), both N&M students' and lecturers' experiences in this study align with the existing evidence that the transition to DLS was stressful and demanding (Adeoye et al., 2020; Molla, 2020). This observation reflects the dissonance between the historical existence of DLS and the lived experiences of lecturers and students. It also underscores the emotional and cognitive demands placed on both lecturers and students in adapting to DLS. These shared challenges suggest the necessity of an institutional support structure, such as orientation programs and digital training, to ensure both groups are well prepared and well equipped to maximise their time T&L in digital environments.

For the N&M lecturers, their initial struggle was with the sudden transition to online learning during the pandemic, which required a complete shift from paper-based assessment or training to electronic or online modalities. They at first needed to adapt themselves to the online teaching modalities, which they considered stressful as they had not used them in the past. This led them to a lot of trial and error, accompanied by considerable confusion and uncertainty. This confusion among the lecturers was reflected in the students' experience, as they stated that they were "*being pushed and mucked around*", especially during their first year when they did not have sufficient preparation, making the experience overwhelming. This highlights the criticality of the first year in the academic trajectories of N&M students and implications for lecturers to ensure that these students are specifically prepared to learn in the university's stipulated learning platform.

These concerns extended even beyond the pandemic, particularly when the university began to re-integrate classroom-based teaching in a gradual and blended manner. Notably, the return to physical classrooms was characterised by a parallel sense of disorientation akin to the initial transition to DLS. This suggests that the central issue was not merely about adjusting to a

specific modality, but rather about navigating the pedagogical and emotional complexities of change. The majority of both N&M students and lecturers expressed a preference for in-person classroom learning modality. Nonetheless, their reflections also revealed a noticeable hesitation about losing the benefits they had come to value in their experience of DLS. The emerging appreciation of these benefits, such as increased flexibility, easy access to instructional content and alternative forms of interaction, most likely contributed to their openness towards blended learning approaches.

Although both N&M lecturers in this study expressed their preference for a blended approach to T&L, Jenkins (2021) recorded a strong backlash from students at the University of Manchester, regarding the adoption of a Blended learning modality that favoured more online sessions than classroom. This divergence highlighted the importance of balance and context when designing blended learning frameworks. While blended learning holds the promise for integrating the strengths of both digital and classroom methods, its success heavily lies with aligning design with the expectations and experience of N&M students and lecturers. This finding therefore underscores a growing recognition among N&M lecturers and students that future pedagogical strategies must be responsive, flexible and grounded in evidence, but equally sensitive to their lived experience of learning.

Beyond the concern of individually adjusting to T&L online, N&M lecturers in this research faced another challenge of adapting N&M courses to online learning spaces with the hope of achieving a similar classroom experience for the students. They were met with a lot of struggles in how to effectively teach online. This reflects the challenges of pedagogical transition as their teaching became more mechanical rather than creating memories and experiences. This particularly concerns the social aspect of learning, as Saleem et al. (2021) rightly pointed out that human development is socially situated, and knowledge is constructed through social

interactions with others. This then magnifies the concerns raised by lecturers about low student engagement with online content, when the courses were entirely online and now that it is being delivered through blended modalities.

A fundamental question that continues to shape this discussion on digital education is whether DLS can effectively foster the level and quality of social interaction required for meaningful T&L. While the broad literature affirms that online technologies like social media were able to maintain social interactions when physical contact is not possible (Etando et al., 2021; Leigh et al. 2020; Islam, 2021), this study's findings suggest that such forms of interaction may not fully replicate the immediacy and richness of face-to-face engagement, especially within the context of N&M education. The student participants described a sense of disconnection, with one stating that they felt like they were "*in a system yet outside the system*". This expression captures the emotional and cognitive distance that DLS can inadvertently create when the dynamics of interaction are not intentionally cultivated. It also brings to the fore the issue of belonging within the DLS, which Hall and Turner (2021) insisted is critical in any learning space. Lecturer participants mirrored these concerns, noting that the barriers to meaningful interactions find more expression in DLS, particularly due to the absence of non-verbal cues of communication, making it difficult to replicate classroom learning experiences online. These observations highlight a persistent contention between the potential of DLS, and the human needs embedded in pedagogical relationships.

Rather than positioning DLS as inherently weak or attempting to retrofit it into the mould of conventional classroom learning, a more productive approach is contingent upon reconceptualising what interactions and engagement mean within digital contexts. A majority of the two participant groups acknowledged the opportunities inherent in adopting DLS in N&M education. If DLS is distinct from the in-person classroom method, presenting with

unique opportunities, as established in earlier sections of this study, then it requires its own set of pedagogical strategies, ones that are purposefully designed to cultivate presence, community and mutual collaboration in virtual environments. This perspective calls for a paradigm shift from attempting to reproduce the classroom to re-interpreting DLS in ways that showcase their unique characteristics while still meeting the social and emotional needs of N&M students and lecturers.

Approaches such as gamification emerged in the study as a key transformative pedagogical strategy for addressing the social and emotional concerns of students in DLS. N&M lecturers have observed an increase in student engagement both during synchronous and asynchronous sessions when gamified elements are implemented in lecture delivery. This approach is student-centred and has the potential to transform the digital T&L experience. According to them, student engagement was usually unacceptably low on Moodle and MS Teams, even though the current digital platforms are unable to accurately measure true engagement. This is because students can just use a “click and go technique”, where they click next until the completion of a task and the Moodle system records it as engagement, while they can as well log on MS Teams live sessions, switch off their microphone and camera and proceed to do other things like shopping, and the system records it for them as engagement. Beyond intrinsic motivation, the joy of earning a new badge, getting a new avatar name, and proceeding to the next stage is highly motivating for N&M students in this study. This motivation to gain a virtual reward by reading online resources, completing assignments, engaging in discussion forums or participating in live sessions can positively impact engagement and the overall effectiveness, an observation supported by Halem et al. (2022).

Furthermore, the current clinical practice equipment that N&M students use on the hospital wards during their clinical practice incorporates digital technology; as such, the N&M lecturer

participants in this study advocated for a curricula transformation that integrates technology and pedagogical modifications to enhance student technological competencies. These transformative digital pedagogies are expected to be student-centred, one which puts the N&M student at their core. One of the ways to do this, as they described, is to embrace all kinds of digital technology that could potentially enhance T&L, including all the features of the current digital learning platforms adopted by the university. This aligns with the N&M students' desire for their lecturers to use all the features of DLS available and appropriate for their learning. Features such as the chat space, breakout rooms, a suitable virtual background, and recordings, available in MS Teams, if used appropriately, could contribute to giving N&M students a better learning experience. This observation was corroborated by several researchers, who collectively emphasised the need to leverage all features of DLS to ensure effectiveness (Bramer 2020; Mojarad et al., 2023). The chat space and breakout rooms could potentially facilitate student engagement through peer interaction, recording online lectures could improve retention and reflection, while a suitable virtual background creates a visually engaging platform that could positively influence their attention.

However, concerns were raised about using the recording function of DLS during synchronous sessions. On one hand, lecturers noted that when students consistently request recording during these sessions, they probably do not intend to actively participate in the live lectures. On the other hand, the students claimed that being able to revisit recorded lectures allows reflection and enhances their retention of the subject. While several authors have reported on the potential benefits of recording live lectures as well as the students' desire to have access to the recorded synchronous sessions (Bramer, 2020; Foronda & Lippincott, 2014; Gopika & Rekha, 2023; JISC, 2021; JISC, 2024; Pullan et al., 2022; Scamell & Hanley, 2017; Tapeh & Darvishpour, 2024), the broader literature lacks an exploration of the reasons why these students want the live sessions recorded and the lecturer's reservations about providing them.

This study reveals a notable tension between the preferences of N&M students and the lecturer's practices regarding the recording of live teaching sessions in DLS. The lecturers reported a more cautious approach, some reported recording only one-half of the live session, such as the question-and-answer part, to encourage attendance and engagement, while others would not record at all, expressing concerns that it may result in disengagement or reduced students' interest and commitment to attending and fully participating in synchronous sessions. In addition, a minority of the lecturers feared that they could become expendable if the university had access to their recorded live sessions and was able to recycle them to other student cohorts within the university. They expressed genuine concern about redundancy for themselves as well as the quality of education, which soon may be void of regular input from the lecturer in line with recent evidence.

This varied perspective is worthy of note and reflects a deeper pedagogical dilemma that extends beyond mere functionality. On one hand, the availability of recorded lectures aligns with the principle of inclusive and flexible learning through the incorporation of diverse learning needs and individual schedules. On the other hand, lecturers feared that recordings could result in passive learning behaviours or reduce student participation. This finding also underscores the complex nature of student engagement. While the delivery approach undoubtedly plays a major role, the result indicates that intrinsic motivation serves as a more significant factor affecting meaningful student engagement in DLS. The N&M student narratives in this study notably pointed to a period of significant engagement driven by personal interest and perceived relevance, regardless of whether a session was recorded.

Thus, lecturers should go beyond the two extreme choices of recording and instead employ recordings as part of an extensive pedagogical approach that integrates deliberate design with adaptive facilitation to meet N&M students' learning needs. This approach not only takes into

account the valid concerns of lecturers but also acknowledges students' demand for better autonomy and accessible learning paths. The challenge, therefore, is not entirely technological but pedagogical, requiring a focus on strategies that support engagement without compromising educational rigour or the depth of interaction.

The DLS adopted by BCU allows a synchronous lecture delivery on MS Teams and an asynchronous approach on Moodle. The N&M student participants in this study acknowledged the role of DLS in promoting autonomy, which they considered beneficial. These DLS allow them to determine the pace of their learning, as they are able to independently access instructional content on Moodle regardless of time and place. While some authors affirm the role of DLS in fostering autonomy and its impact on students' learning experience (Bramer, 2020; Smyth et al., 2012), the lecturers in this present study raised concerns over the extent to which students can be granted autonomy over how they learn. This concern is valid, especially because the data from this research affirms the central role of N&M students' personal discipline and intrinsic motivation in fostering student participation with digital learning activities. This observation suggests the need for a carefully designed blend of various teaching methods to maintain a balance between student autonomy and the lecturer's presence for appropriate academic oversight.

Most N&M students and lecturers in this study initially prefer to teach and learn in the classroom, despite their love for DLS. They do not want to learn entirely online and move away from classroom lectures, hence a consensus on a blended mode of learning. This aligns with Gaebel et al. (2021), who claimed that even if there is a successful shift towards blended and hybrid modes of learning, campus spaces would still be considered indispensable for teaching and learning. Despite their preference for the adoption of blended learning post-pandemic, students decried disproportionate delivery, complaining that more lectures were delivered

online than in the classroom. This aligns with the report of Jenkins (2021) and underscores the need to consider the proportionate blend of online with classroom lectures as vital to the success of blended modalities. Lecturers and students alike were only concerned about retaining the strengths of both modes of education in a blended modality.

While some participants advocated for an equal blend of teaching modalities, most highlighted the difficulty in determining the appropriate proportion due to the varying needs of each student cohort, the specific requirements of individual modules, and the situational demands inherent in such decisions. They equally suggested that student feedback, ideas from the module team and the nature of the subject should guide the pattern of blending. While both participant groups agreed that practical subjects that require hands-on practice can be delivered in person rather than in DLS, the overall combined perspective suggests the need to deliberately integrate digital learning features such as videos, collaborative discussion, in addition to a digital pedagogy that considers DLS as unique for an effective N&M education.

9.3 Sentiments

Data from both N&M students and lecturers in this study revealed significant overlaps in their emotional response and perceptions towards T&L in digital spaces. These shared sentiments provided more than a reflection of their individual lived experience. It illuminates our understanding about the deeper conceptions formed over the years by previous experience, knowledge and interaction with DLS. Recognising this observation is crucial, as they offer valuable insights not only into their DLS experience but also how both N&M lecturers and students have internalised or understood it. By capturing the hermeneutic interrogations that inform their encounter with DLS, this aspect of the study provides a concise and balanced narrative, necessary for implementing future interventions to optimise N&M digital education.

As a result, the implementation of pedagogical and curricula designs for digital education in N&M would be guided by the realities of those who directly engaged with them.

Some lecturers stated that it was depressing working remotely, especially during the COVID-19 pandemic, because most people around them lacked adequate understanding. Remote work disrupted learning conditions due to distractions from family members, which students noted in their experiences and highlighted that they also observed during video conferencing in the remote space of lecturers. This has implications for future learning since, post-pandemic, lecturers and students still need to teach and learn remotely occasionally in a blended provision, while some programs are still being delivered solely in a remote environment. The interplay between students' need for emotional support and lecturers' efforts to facilitate interaction underscores a critical concern in digital education. While the evolving DLS offer features to simulate classroom dynamics, as noted by Pullan et al. (2022), both lecturers and students agreed that these features are poorly integrated. Bridging this gap requires transformational pedagogical designs that consider DLS as a unique learning approach that leverages interactive tools to foster a healthy learning community. According to Mezirow (2008), a transformative pedagogy facilitates critical reflection on the inherent model of belief and reference among students. It enables the transformation of their pattern of understanding and problem-solving from various perspectives. With a purposeful design and application of DLS features, N&M students might be able to reflect and change the way they construct knowledge in a virtual environment.

Institutional support with technology was a matter of cogent importance reflected in the students' and lecturers' experiences, as digital literacy was highlighted as a vitally important skill needed to maximise the T&L experience for both participant groups. While students are expected to be prepared by the lecturers to learn about their university journey, particularly

during their first year at the university and to have continuous support, lecturers look to the university's administration for support. These demands were compounded by the COVID-19 pandemic, with many expectations from both parties, but a low level of support. The deficit in digital literacy demonstrated by lecturers was obvious to students, who also looked forward to them as role models and for support. This is similar to the claims of Wallace et al. (2021) that nursing students perceived that their educators were not accustomed to the use of digital platforms, resulting in delayed commencement or termination of scheduled lectures. One of the lecturer participants described their experience of the evolving digital learning technology with the metaphor "*It's a bit of a mixed bag*", This expression gives insight into the possible hermeneutic interpretation of their experience, reflecting their struggles with mastering the features of digital platforms to optimise teaching sessions. It is a mixed bag for N&M lecturers as well as the students because they struggle with understanding the functions of digital platform features, find it difficult to navigate through, receive limited institutional support and as such fall short of the full potential of DLS. It is, therefore, important to ensure that both students and lecturers receive appropriate support to learn in digital spaces.

Both groups questioned the efficacy of digital learning in achieving educational goals. Loureiro et al. (2021) agreed that moving away from the traditional classroom teaching mode presents a fundamental challenge and constraint on the effectiveness of digital learning. One particular concern for the lecturers was the inability to evaluate student engagement in synchronous and asynchronous sessions. For the Moodle platform, though the system documents engagement by recording the progression from one page to the other, it cannot state if the students really engaged with the content or not. Students on the other side noted that many of their colleagues do not participate in online lectures, as they have seen some log on to the live session to register their presence while they are actually on their way to the supermarket or post office. This concern is worthy of note, and so, it may be true, as argued by JISC (2020), that the main barrier

to effective digital learning is cultural rather than technological, reflecting difficulties in adjusting to the evolving culture of education and the broader university context in a digital age. However, these students also stated that this observation of disengagement is not just limited to online sessions, as they see their colleagues spending time on social media or shopping online while present in a classroom lecture. This underscores the pervasive nature of this concern across both T&L approaches. In the design of DLS and pedagogical development, there is a need to identify authentic ways to truly measure or monitor how student engage or interact throughout their time in a session in DLS.

While the experiences of the students in DLS were interwoven across the analysis, lecturers spent more time reflecting on their adaptation experiences during the COVID-19 pandemic and sharing their sentiments about their current encounters. For instance, one of the lecturers' descriptions of their transition experience with the metaphor: *"getting off a bike and getting back on like you never got off"*, reflects their collective experience. A deeper hermeneutic interpretation of their narratives highlights an unrealistic expectation from the faculty during and after the pandemic. These lecturers were required to 'get off' the classroom teaching during the pandemic and get back on as soon as it was over, an expectation that they perceived as unfair. The transition placed a lot of demands on them, including time and workload. This experience is one of the divergent findings unique to the lecturers.

There was no mention of the need to do extra work among the N&M students, but lecturers claimed extra workloads had been added to their work schedule. The adoption of DLS allowed them to work remotely on many occasions, which means jobs uncompleted in the office can be brought home for completion. This made it difficult for them to maintain the thin line between work time and personal life. This observation aligns with the assertion of Ünal and Dulay (2022) that the transition to remote work has eroded the delineation between work and personal

life, potentially undermining the balance between work and life. This transition requires lecturers to work from home and adapt to the tools and technologies used in distance learning, thus extending work activities beyond conventional working hours. This has not only disrupted their work-life balance but has also encroached on the time that could be invested in maximising training opportunities made available by the university to develop their competency. This is noteworthy because the 21st century is characterised by a lot of technological innovations such as AI and virtual reality (Akhter et al., 2024; Ross & Maynard, 2021). We, therefore, live in a technologically evolving world, necessitating ongoing discussions to ensure that the educational sector continues to maintain educational priorities in the face of a constantly changing technological landscape. Despite the benefits that come with the adoption of DLS in nursing and midwifery education, no challenge should be overlooked, even if they appear simple.

Both students and lecturers in this study agreed that DLS allow flexibility with T&L, ensuring ease and facilitating seamless communication among students and lecturers. Thus, breaking the barrier of distance, which implies that N&M students do not have to be physically present in a location to communicate or access learning. This perspective aligns with the extant literature (Hung et al., 2024; JISC, 2024; Zeng & Luo, 2024). However, some students complained of late responses from their lecturers, attributed to the non-specificity of the query email usually assigned to the module team. They argued that lecturers might not take student queries as a priority since anyone can respond to any of the queries. Some have waited for a very long time to get a response to their online queries. Many students prefer to come to campus to physically see the lecturers and get answers to their questions, even if they do not have specific lectures scheduled for that day. This calls for a critical assessment of the communication forum used to answer students' queries.

In addition to benefits like cost-effectiveness and reduction of carbon footprint, addressing the gap of time and space was part of the advantages of DLS, recurring across the participant group. With the current elevated demand for nurses and midwives (Department of Health and Social Care, 2023; Clews, 2022), UK universities need to train more nurses and midwives within their limited campus space. Digital spaces have shown much potential in breaking these barriers within the context of N&M education. BCU is one of the largest trainers of Nurses and midwives, and both lecturers and students attest to having up to 500 students attending lectures online at times when the large lecture hall is not available for use. In the advent of limited physical space, DLS can be effectively used as a major modality for T&L, especially when the conditions highlighted in this research are implemented.

9.4 Chapter Summary

This chapter presented intersecting challenges and opportunities in digital learning for N&M education. While lecturers and students acknowledged the unparalleled benefits of DLS, they also identified significant concerns that hinder student engagement and efficacy. A blended framework of teaching and learning, which integrates the strengths of digital and classroom modalities, and an intentionally designed digital pedagogy emerges as a potential intervention to address this gap.

The following chapter presents a summary and conclusion of the findings from this study as well as a reflection on my doctoral journey. It highlights the key contribution to the field and proposes recommendations for optimising digital education.

CHAPTER 10

CONCLUSION, RECOMMENDATIONS, AND REFLECTION

The findings from this research presented a compelling case that the experiences of nursing and midwifery (N&M) students and lecturers in digital learning environments are shaped by the challenges they face, their personal sentiments, and the potential opportunities that these spaces afford. These insights provide a foundation for developing structured recommendations to enhance the educational experiences of N&M students and lecturers in digital learning spaces (DLS). The three research objectives of this study were revisited as a framework for concluding this thesis and proposing recommendations.

10.1 Achieving Objective 1

To establish the current landscape of Digital T&L in the UK context for N&M education.

The literature review phase of this research was used to achieve this objective. A scoping literature review was initially conducted to identify the current conversations in the field and gaps in knowledge specific to the UK context. This was followed by an extensive literature review to explore the subject within a broader context. One of the key discoveries is the existence of DLS for a long time, despite not gaining wide recognition because of the pace of development of digital technology. While the extant literature demonstrates that DLS play a more prominent role in N&M education, significant tensions and unanswered questions about their effectiveness persist. A key conversation relates to the paradoxical relationship students have with digital autonomy.

Much of this literature was published before the COVID-19 pandemic and provides only limited insight into the post-pandemic educational changes. Nonetheless, there is a progressive increase in research in the field since the pandemic, yet much of this existing literature fails to represent the current development of DLS and its effects on higher education post-pandemic. Research on effective support types for students and lecturers engaging with DLS remains scarce despite universal acknowledgement of its importance. The synthesis of evidence from the broad literature provides the foundation for this inquiry to bridge important research gaps through an examination of the lived experiences of N&M students and lecturers to gain a detailed understanding of how digital learning environments can be enhanced for academic achievement and professional growth after the pandemic.

10.2 Achieving Objective 2

To explore the experiences of nursing and midwifery lecturers and students within digital teaching and learning spaces.

This study successfully achieved the second objective by investigating the lived experiences of both N&M lecturers and students during and after the transition to DLS, particularly amid the COVID-19 pandemic. This transition was noted to be in two phases: first, the transition from traditional classroom education to digital education at the onset of the COVID-19 pandemic. Second is the transition from entirely DLS back to the classroom or a blended educational approach. The findings highlighted distinct challenges, including the sudden nature of the transition, insufficient prior exposure to digital platforms for students, additional workload for lecturers disrupting work-life balance, low student engagement, social disconnection, and inadequate support and training. Despite these challenges, the study noted the benefits of DLS. Nearly all respondents expressed their desire to retain the unique features of DLS even if they are no longer in use. They include flexibility, cost-effectiveness, personalised interactions,

reducing carbon emissions, removing the barriers of distance, time and space, and creating opportunities for innovative teaching strategies.

The study identified two dimensions of adaptation that were critical to the experiences of N&M students, including adapting users to the learning system and adapting the N&M courses or curriculum to DLS. One of the common themes that emerged from the adaptation of N&M students and lecturers to DLS was the desire for adequate support to navigate difficult paths in online spaces. While previous studies such as Bramer (2020) noted that students and lecturers required support, they were not clear on the kind of support required. This study's findings identified support needs such as technological support and emotional support, which led lecturers to experiment with a community of inquiry for themselves and for the students. The need for training and time allowance to maximise this training was also identified. While the university provides training opportunities, it was difficult for lecturers to attend because of the heavy workload caused by staff shortage and the additional work precipitated by the adoption of DLS.

Adapting the N&M curriculum to digital spaces is crucial, considering the peculiarity of N&M courses, which require both theory and hands-on practice to satisfy the university's requirements and those of the N&M council. More adaptive strategies employed by the participants included leveraging gamification, digital tools that facilitate engagement and reflective learning, and asynchronous learning strategies. It has been over five years since the first COVID-19 restrictions, which caused the worldwide adoption of DLS. One would assume that adaptation would no longer be a concern. However, evidence has shown that we live in a time of a rapidly evolving technological landscape polarising every sphere of human endeavour. This suggests that even though the adaptation of users to DLS could improve over

time, the adaptation of N&M courses to digital spaces will require continuous actions to maintain effective education in a post-digital age.

10.2.1 Recommendations 1

Based on this study's data used to address the second objective, the following recommendations are made:

1. Provide an extensive and consistent structure for digital literacy training: The university needs to implement structured training programmes for lecturers and students, focusing on using digital tools effectively. A more concerted effort is required for students and new lecturers during their first year at the university, and then appropriate training throughout their university journey.

2. Design specific adaptation plans: Universities should create frameworks to support gradual transitions to any new digital learning technologies or new features added to the current digital platforms in use. Community of inquiry forums can also be more structured and standardised to cater for the specific needs of the students and lecturers.

3. Improve Digital Learning Spaces through user feedback mechanisms: Attention must be given to ease of accessibility, user friendliness and features favouring student engagement when designing digital platforms. Regular feedback should be encouraged from students and lecturers to optimise digital platform usability and adaptability.

10.3 Achieving Objective 3

To examine the dynamics of interactions among students, lecturers, and course content in digital spaces and analyse their influence on the teaching and learning process in nursing and midwifery education.

This objective was addressed by analysing how interactions in DLS influenced engagement, motivation, and the learning process. The study discovered a significant gap in replicating the social interactions of classroom settings within digital environments. Nursing and midwifery students highlighted feelings of isolation, boredom, and reduced motivation, while lecturers noted low student engagement and challenges in accurately assessing engagement during synchronous and asynchronous sessions. Both lecturers and students are used to teaching and learning in the classroom and hoped to have nearly the same experience, which did not work. Digital spaces are distinctive educational environments, very different from the classroom, which suggests that most effort might have been directed towards answering the wrong question. It was established that attention has been wrongly focused on experiencing T&L online exactly as it would be in classrooms. Both lecturers and students must learn to see and acknowledge the uniqueness of these learning environments to moderate their expectations. They must redefine digital pedagogy and its accompanying deliverables, like what and how to acknowledge student engagement in DLS.

Innovative tools such as chat functions, breakout rooms, audiovisual functions, gamification, multimedia content, and interactive digital spaces such as Padlet or Mentimeter were employed in synchronous and asynchronous sessions, though with mixed results. Gamification, integration of multimedia contents and use of interactive DLS such as Padlet to support the main synchronous session were shown to be the best features that produced better student engagement results in DLS, classroom or blended modalities. However, there must be a structured and deliberate approach towards incorporating the use of these features. This affirms that a more holistic approach to addressing the issue of learning interactions is crucial for optimising the digital learning experience for N&M students and lecturers. In addition to exploring digital features suitable for delivering certain specific modules to achieve learning outcomes, these efforts can be in conjunction with implementing pedagogical transformation.

Though grounded in evidence from the lived experience of N&M lecturers and students, it has the potential to address major gaps that are often considered as the weakness of DLS. Blended teaching or learning approach, for instance, integrates the strengths of classroom and online learning modalities, such as gamification, to facilitate student engagement.

10.3.1 Recommendations 2

1. Improve or develop more community-building tools: Although several interactive features such as chat space, breakout rooms, virtual forums or peer-led discussions already exist on digital platforms, there is a need for Information Technology (IT) specialists to continuously improve the design of these features to allow for better interaction that would positively impact the learning process. These features, including gamified elements that could trigger students' interest in the subject, should be integrated as part of the interactive elements of DLS. In addition, N&M academic staff need to carefully and intentionally select which particular feature suits their expectations for the planned lecture or session.

2. Design Interactive Lesson Plans: Lecturers should explore interactive methodologies like flipped classrooms, peer instruction, active learning, gamification and multimedia elements to enhance engagement and simulate real-life dynamics in DLS or blended provisions. For example, students can be provided with instructional materials on Moodle or other virtual platforms to study ahead of the main lectures. At the main lecture, which could either be in DLS or in a physical classroom, the lecturer can use peer instruction, gamification or multimedia content to elicit active engagement from students, based on what they have learnt from the reading. This would empower students and position them to interact and participate more in class activities. Various means of interaction, such as the chat space or use of Padlets, should be explored to ensure that students who are not yet confident to boldly interact would not be marginalised.

The effectiveness of this methodology, as well as the instructional materials, can be measured by examining students' level of engagement during the session. Furthermore, insights from this exercise may help illuminate the barriers faced by those who did not participate, providing a better understanding for more specific interventions.

3. Implement Engagement Tracking Metrics: Universities should adopt advanced analytics to accurately measure student participation and interaction in DLS. The current DLS platforms, both synchronous and asynchronous, fall short of this level of accuracy in identifying the actual degree of interaction or participation for online learning participants or students. At present, most mechanisms rely on quantifying the 'traffic' element of engagement in terms of how often users engage with the software. These are very crude mechanisms and do not really tell us much about user engagement. A better engagement tracking system should be able to monitor students' actual presence using the aggregate of parameters, such as speaking or student voice, movement or change in position, student video, use of emojis, requesting students to click an icon if they are still in the meeting, and contribution to the ongoing session. This should be monitored throughout the whole time for the online session. All of these parameters, as well as how long this occurred throughout the session, should be combined to generate a more realistic engagement metric for DLS. This will improve lecturers' presence and confidence in managing DLS.

4. Balancing Self-Directed Learning in Digital Spaces: With self-directed learning online, N&M students who feel alienated from the feel of a community or lack the sense of belonging may be able to see themselves as key stakeholders in the digital learning environment. While the current asynchronous provision of DLS allows independence for students regarding when and how they engage with instructional content, its effectiveness significantly depends on

students' intrinsic motivations to truly engage. Thus, autonomy must be balanced with proper monitoring or tracking of students' learning activities to avoid complacency or disengagement.

5. Further Research can Explore How Demographic Variables such as Gender and Age Influence Student's Social Interaction and Experience in DLS: Although gender was not used as a central lens for analysing the experience of N&M students and lecturers in this study, the narratives obtained especially from the female student participants subtly reflects the value of social interaction, shared learning and collaborative sense-making that shaped their experience in DLS. These patterns underscore the possible impact of N&M students' gender on how they perceive and solicit support, navigate challenging situations, and develop greater confidence in DLS. My analysis did not fully explore how age and gender differences influenced these experiences, and this is an area for potential richer exploration and contribution. Future research among N&M students could explore the influence of demographic indices such as age and gender on participation, confidence, interactive patterns, support-seeking behaviours and student engagement in DLS. This will not only complement the insights from this present study but will also enrich the understanding of diverse learner experiences in digital space.

10.4 Achieving Objective 4

To identify the key factors that enhance or hinder the effectiveness of digital teaching and learning in nursing and midwifery education, providing insights into best practices and potential areas for improvement.

Critical factors influencing digital learning efficacy that emerged from this study include institutional support, technological accessibility, workload challenges, and pedagogical strategies. A recurring theme was the imbalance in support for students and lecturers, with many lecturers citing increased workloads and a lack of dedicated time for professional

development. Students pointed to inequities in access to reliable internet and digital tools, delayed responses to queries, passive teaching styles, and lack of support or preparation during the first year and other phases of their study as significant barriers to effective learning.

10.4.1 Recommendations 3

1. Implement workload management policies: Although institutions provide training, many lecturers were unable to attend due to excessive workload. The university should implement equitable distribution of teaching responsibilities and allocate time for faculty training and development. More staff can be recruited with more flexible work patterns in line with the university's financial capability, to create time for professional development and a healthy work-life balance. A more cost-effective approach is to recruit some lecturers on a fixed-term contract or part-time basis, with a blended approach to work (in-person and remote). This will have a lesser financial impact, ease lecturers' workload, allow time for professional development and enhance overall efficiency and effectiveness of N&M education.

2. Improve access to technology: Universities should provide financial and logistical support to ensure students and lecturers have access to the necessary digital resources. This includes subscribing to necessary digital resources that can improve the lecturer's teaching and facilitate student engagement and comprehension. Lecturers should maintain a balance in the use of recording or other features of DLS by ensuring that these features are employed for a specific purpose rather than a default use.

3. Involving Students in Curricula Development: one of the themes that emerged from analysing the experience of N&M students and lecturers in digital spaces at BCU was the need for a transformative pedagogy, one that is student focused. A teaching approach that integrates the unique features and capabilities of DLS, such as gamification, blended approach, multimedia features, virtual chat and discussion forums, can transform how N&M students and

lecturers experience DLS. Students should be involved in curriculum development. Since they are at the centre of the outcomes of the curriculum, they should also be at the centre of the planning. This would position them as stakeholders in their learning journey, fostering reflection and being as responsible as the lecturers for how the teaching and learning process turned out.

4. Standardise blended learning frameworks: Many institutions now use the blended approach to deliver lectures, including BCU. However, evidence from this study suggests that it was just a step down from entirely online programs to classrooms after the COVID-19 restrictions. Nearly all lectures are now held in the classroom, while a few are delivered online. Comprehensive guidelines should be developed for blending synchronous and asynchronous teaching methods to optimise learning outcomes, as well as blending classrooms with online methods. While the COVID-19 pandemic is no longer a significant threat, the uncertainty of global/national/ecological emergencies demands a continuous development of educational structures to reflect preparation for these events. In addition, with the rate of technological growth, there is a need for a deliberate and continuous reconfiguration in the field to maintain educational priorities in the face of a rapidly evolving technological landscape. In a blended approach, practical sessions as well as theoretically complex subjects can be delivered in the classroom, while other subjects that easily attract student engagement can be delivered online. Lecturers must also consider other factors, such as feedback from N&M and the module team, to further develop the structure of blended educational approaches.

The proportion of blended must not be reduced to a unified and quantitative percentage split between online and classroom delivery. Instead, it must be a deliberate, module-specific plan that reflects the demands and nature of the topics. This would mean that some topics may be best delivered entirely online, with other elements like the assignment brief and exam in the

classroom. Others may require the reverse of an equal mix. Thus, ensuring that an effective blended learning modality is informed by pedagogical intent, the students' learning requirements, the module learning outcomes, and not just some random ratios.

10.5 Contribution to the Field

Several studies have been conducted on T&L in digital spaces following its widespread adoption during the COVID-19 pandemic. However, only a few focused on the unique experiences of N&M students and lecturers in this educational context. This focus is critical, as N&M training significantly differs from many other fields because of its dual emphasis on theoretical knowledge and professional application. Unlike other disciplines, the N&M curriculum integrates a substantial practical component and some theoretical aspects requiring hands-on demonstrations. Students are required to complete mandatory clinical placements in hospital or community settings as part of their course plan, underscoring the unique demands and challenges associated with delivering N&M education in digital spaces. Nurses are trained to provide care, which involves significant social interaction; however, teaching the principles of care in a highly mechanised or technology-driven environment poses unique challenges. This research contributes a distinctive perspective to the field by capturing both the individual accounts of lecturers and students as well as their shared experiences. By exploring the convergence and divergence of these viewpoints, this study offers an extensive analysis of the digital T&L experiences within nursing and midwifery education, offering valuable insights into the intersection of care-focused training and digital pedagogies.

The lived experience of both lecturer and student participants in this study revealed that despite the several benefits of DLS, the major concern lies in individual adaptation to these platforms for T&L and adapting N&M curricula to digital education modalities. The COVID-19 pandemic provided a pivotal context for this study, as DLS emerged as a critical strategy,

allowing the university to sustain educational activities amidst stringent measures such as national restrictions and social distancing. This study acknowledges that while the initial challenge of individual adjustment to DLS for N&M students and lecturers may diminish over time, the complexities of adapting N&M courses to digital spaces will likely persist. Hence, a need to leverage evidence from studies like this to address this critical gap and develop strategies for optimising N&M education in digital environments. Beyond the pandemic, the gradual return to classroom teaching and the implementation of blended learning, which some lecturers consider to be a good intermediary plan or a step down from fully online delivery, until the physical classrooms are fully reinstated. Conversely, some lecturers realised great potential in the blended learning modality, particularly in facilitating transformational pedagogy and posing as a sustainable approach that is likely to persist as a core component of educational delivery.

Previous experience of learning in digital spaces, level of preparation before use and continuous support, use of various digital features like recording, nature of the course and how lectures are delivered in DLS stood out as unique strategies positively influencing student engagement and effectiveness of digital learning based on N&M lecturer and students' perspectives. These factors, though central to this study, have not been fully explored in the extant literature. Lecturers are worried about low student engagement in digital and blended learning approaches. To address these issues, participants highlighted the importance of transforming pedagogical approaches, providing support and increasing financial investment. These strategies help to think of DLS as an educational approach distinct from the in-person classroom method and requiring its own conceptual supply and pedagogical structure instead of being a necessary substitute.

10.6 Strengths and Limitations

The scoping review of the study is limited in the sense that the search was restricted to N&M education within the UK higher education context. The intention for streamlining my search was to be able to gain a better understanding of digital learning in N&M education within the UK higher education, since my background review had explored a broader context of the literature. With hindsight, while I felt the rationale for my literature search was strong, I now recognise that several important articles published on DLS in nursing and midwifery outside the UK and in fields other than N&M within and outside the UK were omitted. These decisions, including the various review processes, might have influenced the final selection of articles and the result of this review. To limit the effect of these limitations, the search strategy, search result and every aspect of the scoping review were independently reviewed by a librarian and expert in the field. If I were to repeat this study, I would widen the scope of the search to include international research

My position as a staff member working in the same institution where the research was conducted positions me as an “insider” and might have introduced a measure of bias, particularly in data collection. While this positionality might have influenced how both students and lecturers at the university responded to the call for participation offered meaningful advantages. Familiarity with the institutional culture and educational practice prepared me to approach each interview with the needed sensitivity and contextual understanding that enabled me to appreciate their experiences.

I acknowledge that one of the possible consequences of this “insider effect” and “power dynamics” could have influenced the disproportionate distribution of the participants’ demographic profiles, particularly among the student participants, who included a higher proportion of younger participants and a slightly higher proportion of male students than is

typical in the UK nursing and midwifery context. However, these variations do not reduce the integrity of the findings; rather, they underscore the need to interpret the findings bearing in mind the context and acknowledging that transferability rests on how the readers judge its relevance to their own settings. Furthermore, the single-site nature of the study represents a deliberate methodological focus rather than just a limitation. Conducting the study in one university enabled richer and more coherent exploration of N&M students' and lecturers' experiences within a shared educational environment. Although a multiple-site study could have compared data across more than one site, broadening the findings, the depth afforded by this focused approach supports a nuanced and trustworthy account of the experiences of N&M lecturers and students in DLS.

Recruiting N&M students and lecturers relied on purposive sampling based on specific conditions; for instance, potential student participants must be in their second or third year of study, and the lecturer must have been teaching at the university in the last three years. I considered this part of the strength of this study because the participants who consented to be a part of the study had substantial experience with T&L in digital spaces at the time the study was conducted. This not only provides my study with valid and relevant data to help achieve my research objectives but also ensures the trustworthiness of the findings, which Creswell (2013) described as a part of the factors that determine credibility in qualitative studies.

Snowballing was also employed in addition to purposive sampling to recruit lecturers due to their very busy schedules, making them unavailable most of the time. The in-depth interviews were conducted online through the MS Teams platform, and the FGDs for both groups were held in person. There were no specific reasons for this arrangement except to ensure the participants are met at convenient times when they will be able to reflect and provide enough information about their digital T&L experience.

I consider a strength of my study to be the way I personally transcribed each audio recording. Transcribing the recordings made me grounded in the data, which is a key requirement for IPA. I read through it over and over again as I cleaned up each case and ensured the experience of individuals could be clearly reflected. I might not have done the best in presenting my findings, seeing that I needed to combine data from different data collection means as well as two different participants, and I could have done it better if I had only focused on a participant group or a data collection method. Conversely, this would have made my findings more shallow and not different from what is already presented in the literature.

I consider my dual role as a PhD student as well as a university staff member during the COVID-19 pandemic as a unique strength to explore this topic more deeply, since my intention was to understand the DLS experiences from the perspective of N&M students and lecturers. It was fulfilling to be able to conduct this rigorous study within the limited time, despite all its complexity and present a balanced perspective on what N&M students and lecturers pass through when T&L in digital spaces, with the hope that the findings would help improve the experience and outcomes for the participant group.

10.7 Reflecting on My Doctoral Journey

To thoroughly analyse the experiences gained during my PhD study and its implications for my future plans, this reflective writing will be guided by Driscoll's (2007) reflection model. According to Dewey (1933:9), reflection referred to the "active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusion to which it tends.". Dewey's description presents reflection as a process that facilitates learning from experiences and continues in a cycle over a period. This is consistent with the purpose of this discussion, to look back on the series of events that occurred during my PhD research, which has facilitated my development as a researcher and

academic. Walsh (2014) rightly captured this by stating that the goal of using this reflective skill is to start thinking about an incident, what could have been done, and what can be done if a similar event occurs again, the experience, and how lessons learned can be applied professionally.

Driscoll (2007) outlined three main aspects of the reflective practice model, including What, So what and Now what, structured within a seven-step cyclical process. “What” involves a description of the actual experience, “So what” entails analysing the experience, while “Now what” identifies action for improvement following description and analysis of the experience. This model promotes a systematic yet individualised involvement with practice, guiding individuals from reflection to transformation.

10.7.1 What? – Describing the Doctoral Experience

Driscoll (2007) advised that the first step to critical reflection is the description of actual experiences. While this process presents significant challenges for me, I am committed to documenting these experiences as concisely as possible.

- *Before the Beginning*

As I reflect on my journey through this academic trajectory, I realise it was a period of learning and taking responsibility for my development as a researcher in training. Having begun with basic knowledge and a desire to understand digital learning in N&M education, I led a team of young researchers under the Institute of Nursing Research Nigeria to carry out quantitative research titled “satisfaction and the perceived impact of virtual learning during COVID-19 restriction: A case study of an online nursing research conference”, which was published in an international journal at some point during my PhD (Adesuyi et al., 2023). The findings from that study demonstrated that the research as a subject, which nurses and midwives considered

difficult to understand, could be taught online. This provided me with insights into the field of digital education and triggered a desire to investigate a little deeper, knowing that much attention is given to this field due to its massive adoption during the pandemic. This served as a pivotal foundation for my intellectual journey, driving my determination to advance my knowledge and refine my expertise so that I can make original contributions to the field.

- *Postgraduate Certificate (PG Cert) in Research Practice*

Recognising existing limitations in my skills and expertise, I embarked on an intensive learning journey that involved extensive reading and participation in online training offered by various organisations. Then, I leveraged the PG Cert program in Research Practice, a foundational training provided by BCU for its doctoral students and academics at the beginning of their programs. This structured training not only deepened my understanding of research methodologies but also offered crucial insights into the demands and nuances of the doctoral journey, which aligns with my desire to understand what the doctoral journey entails. The PG Cert program at BCU allowed me to access stimulating lectures on navigating the PhD journey and valuable academic resources, including Wellington's (2012) article "Searching for doctorateness" and Poole's (2014) response titled "The rather elusive concept of doctorateness: a reaction to Wellington". These resources helped me to understand that the doctoral journey transcends the completion of a thesis or a mere contribution to knowledge; it is equally a transformative process centred on my personal and professional development as a PhD researcher. I then set myself on the stage of continuous self-improvement and skill development to enhance not only my research competencies but also the quality of my thesis. *Supervision and Doctoral Research College (DRC) Regular Training*

Throughout the program, I actively engaged in regular training sessions offered by the BCU Doctoral Research College, supplemented by external opportunities and regular supervision

meetings with my PhD supervisors, to deepen my understanding of research paradigms, methodologies, and methods relevant to my study. Having two highly knowledgeable supervisors from the field of nursing and education provided a well-rounded perspective on both my personal development and the progression of my thesis. Their support significantly contributed to my academic growth. This consistent drive for advancement enabled me to maximise the expertise and guidance of my highly knowledgeable supervision team, whose support significantly contributed to my academic growth and the evolution of my research journey. I had regular meetings with my supervisors, which were a cornerstone of my doctoral journey, as I eagerly anticipate these meetings as opportunities to glean from their profound expertise. These interactions were invaluable for my development as a researcher and offered crucial insights into various aspects of my study.

An unpleasant situation occurred a few months into my program when my director of studies left the university. This transition was at first unsettling, as I was already trying to build rapport and understand how to leverage the relationship effectively for my development. The University was very quick to find a replacement, but I was apprehensive about introducing my progress and my goals to the new director of studies. Despite these concerns, my fears were alleviated as the incoming director was quick to fit into his new role, demonstrating a seamless transition owing to his extensive expertise and prior experiences with postgraduate research students. Our supervision meetings were holistic, addressing not only my academic progress but also signposting me to units within the university for my overall well-being. This approach was invaluable, particularly in doctoral programs where independent learning and self-driven development are fundamental. My supervisors empowered me to take charge of my work while providing transparent and constructive feedback, which significantly enhanced my confidence and ability to refine my research and writing skills. My writings lacked coherence at first for a doctoral level of academic writing, but their thoughtful comments and guidance helped me

develop a clearer academic voice. Reflecting on this mentorship, I deeply appreciate the opportunity to benefit from their extensive knowledge and expertise, which greatly enriched my doctoral experience.

- *Teaching Assistant Experience*

The part-time teaching assistant role, integral to my PhD program, offered me a foundation for my preparation as a future academic. I was able to relate to lecturers and students, thus facilitating my understanding of academic dynamics within the adult nursing department. My first few months at the department were spent observing seasoned lecturers and gaining insight into effective teaching strategies, classroom management and innovative pedagogical approaches. With the support of an exceptionally inspiring line manager, I was involved in a wide range of departmental activities including lecture delivery, curriculum development, lesson planning, presentation preparation, marking and moderation. These experiences have not only enhanced my teaching skills and prepared me for a post-PhD academic career but have also allowed me to approach my doctoral research from a more balanced perspective. Embracing an interpretative paradigm, I adopted the view that both the researcher and the participants co-create knowledge. My dual role as a student and educator during the PhD provided a unique standpoint, enabling me to maintain balance and implement the IPA process of “bracketing (epoche)”. This approach ensured that biases were mitigated, allowing the analysis of participants’ experiences to remain individualised and free from interpretive overlap.

- *Background and Scoping Literature Review*

Before embarking on my research journey, I immersed myself in the field of digital education to familiarise myself with ongoing scholarly conversations and identify current developments. I conducted an extensive literature review to gain a broader global perspective on the

phenomenon, capturing diverse viewpoints. This engagement with the literature allowed me to contextualise the field and clarify my potential contribution to its development.

Further realising the criticality of this step to my competence as a novice researcher, I attended several training sessions on systematic review methodologies and consulted extensively with my supervisors. This foundation enabled me to undertake a scoping review to map the existing literature to uncover the gaps in knowledge and establish a framework for my study. My decision for a scoping literature review was because of its robust methodology and emphasis on extensively capturing research inputs rather than solely focusing on the methodological quality of potential articles, which ensures a broad understanding of the field.

As I prepared the protocol for the scoping review study, I conducted an initial search, which revealed a volume of research publications on T&L in digital spaces. This significant output appeared to be driven by the widespread adoption of digital platforms following the COVID-19 pandemic. To align with the focus of my intended research, I decided to streamline the literature search to the UK, given that my target population was situated within this region. However, I later regretted this decision as it proved to be a limitation because the findings from my scoping review were highly specific to the UK context and primarily relevant to my doctoral study, making it challenging to publish in journals with international coverage. Most of the responses I received from the international journals indicated that my scoping review would be more applicable to the UK or European context. I eventually had to set them aside to avoid diverting focus from my doctoral research. The gaps in knowledge identified through the scoping review formed the basis for shaping my research objectives, questions, and design.

Pilot Study

To confirm the feasibility and suitability of my intended research design and data collection method, I embarked on a pilot study among similar populations of interest. I knew that

answering my research question lies within a qualitative research design. My initial contemplation was to achieve the research objectives through a Grounded Theory (GT) approach. However, I did not intend to propose a theory; rather, I sought a systematic means to understand the experiences of N&M students and lecturers. The pilot study findings helped me to rethink my approach to this study. It also helped me to identify potential recruitment challenges, especially engaging lecturers who face demanding schedules. Anticipating these difficulties allowed me to develop specific solutions. This taught me about the critical role of pilot studies in enhancing the overall rigour and feasibility of research projects.

- *Methodology*

Huxley (1994:104-105) described how he was questioned by funders of his research about what he was doing. He responded by saying, “If I knew what I was doing, it wouldn’t be called research, would it?” This response was profound and captured the early phase of my doctoral research. My journey toward selecting an Interpretative Phenomenological Analysis (IPA) for this study was neither easy nor straightforward. Despite evaluating several methodologies, I sought a more systematic approach to exploring individual lived experiences and how this aligns with others’ perspectives. I initially thought a Grounded Theory method would be the most appropriate for me, but the pilot study phase exposed me to areas of weakness that could question the findings from my study. Firstly, I had no intention of proposing a theory to explain my participants’ experiences, which is the key output of GT research. I had also defied one of the key tenets of GT, which was to have no knowledge of the field before data collection, an idea that has been questioned by contemporary Grounded Theorists. I moved from GT to IPA because I found IPA the most appropriate methodology for achieving a comprehensive understanding of the participant experience of the phenomenon under study.

- *Data Collection*

My intent was to collect robust data most relevant to achieving my research objectives. I considered several data collection methods, including in-depth interviews, Focus Group Discussion (FGD) and observation. Based on several evidence, semi-structured in-depth interviews are considered to be the gold standard for data collection in an IPA study. Since part of my aim was to understand the collective experience of the participants, I recognised that FGD could elicit responses that otherwise may not surface in a one-to-one interview. Although the decision enriched the study, it also introduced additional complexities, particularly because of the intensive demands of IPA. Smaller sample sizes are typically recommended in IPA studies due to the analytical rigour, and integrating FGDs meant a higher sample size, thus increasing the workload. This decision was ultimately fulfilling, as my primary goal remained presenting a balanced and nuanced understanding of N&M students and lecturers' experiences with digital teaching and learning environments. The lessons learnt from my pilot study made my recruitment process easy.

- *Coding and Analysis of the Data*

I have already acknowledged my shortcomings regarding my limited research skills as a developing researcher. This was most evident in the coding and analysis process of my work, but Smith and Nizza's (2021) textbook on IPA studies was very instrumental in guiding me through this process. Coding is a key component of IPA because of its demand for epoche, a process of first approaching the analysis case by case without allowing the coding of one case to influence the other case. I must admit that this was the most difficult aspect of the analysis for me, being a novice researcher as Smith Nizza (2021) had rightly highlighted.

Bryman (2008) argued that a common challenge in qualitative research is that it rapidly generates large volumes of complex data, often in the form of interview transcripts and prose.

While I was happy with the richness and depth of the data gathered, the sheer volume was initially overwhelming. I stand by my decision to embrace digital coding and analysis of data, which contradicts the recommendation of Smith and Nizza (2021). The decision to use NVivo was justified by the need to streamline the process and efficiently manage the extensive dataset. Furthermore, I believe that the digital proficiency acquired through this approach is a transferable skill that will extend beyond the scope of this doctoral study.

10.7.2 So What? Analysing the Doctoral Experience

Driscoll (2007) argued that the “so what” stage is where an individual learns from their experiences by articulating why and how they occurred. While I might have provided a detailed explanation of my experiences in this reflection, addressing the underlying reasons behind those experiences requires a focused consideration. Some key factors that stood out to me in all the experiences include my identity as a novice researcher navigating the complex path of skill development through the various stages of my doctoral studies. My actions and decisions, including those that were less effective, played a significant role in advancing my research journey. Although I benefited from the guidance of my supervisors and insights from authoritative scholars in my field, I ultimately had to take ownership of my study, and the decisions made. This process reflects the intrinsic challenge and growth associated with building research competence in the context of doctoral education.

In addition, I learnt from this journey that research is shaped by the researcher rather than the researcher being solely defined by the research. This highlights the critical role of a researcher in driving the research process. I realised that the quality of my research output heavily depends on my continuous development as a researcher and the deliberate pursuit of knowledge and mentorship. True research, though grounded in systematic frameworks (Polit & Beck, 2018), thrives on navigating unique context-specific paths to achieve specific goals. This idea

resonates with Tesch (1990) and Tenny et al. (2022), who argued that research methodologies need not always adhere rigidly to established protocols. The key findings of my study, which highlight the need to modify digital pedagogies as well as the design of digital learning platforms to ensure effectiveness in online or blended approaches to learning, are lessons that I would not part ways with. My experience underscores the value of adaptation and flexibility, as evidenced by modifications made based on the lessons I learnt during the pilot study. Furthermore, these lessons emphasised the importance of preparation, preliminary studies and anticipation of contextual and logistical factors, such as academic calendars, to ensure the feasibility and success of studies like this.

10.7.3 Now What? Action Plans for Improvement

According to Akella (2010) and Driscoll (2007), the “now what” stage is an action phase in which the learner makes future plans to implement lessons learnt from the experience. Applying the insights from my doctoral journey to future endeavours as an academic and researcher would help me avoid possible pitfalls in future academic and research endeavours, enhancing the rigour and impact of my scholarly investigations. Upon completing this work, I aim to publish three to four academic papers in reputable journals, contributing original knowledge to the field of digital education in N&M. This objective aligns with the assertion of Lambert and Lambert (2014) that if the outcomes of a scholarly effort or research are not published, from the perspective of the professional or scientific community, they never took place. I hope that the findings of my study would be able to inspire lecturers and university administrators to implement the recommendations locally, thereby enhancing teaching and learning experiences for N&M students and lecturers.

Furthermore, I plan to expand the scope of my research to a broader scale across universities to generate more generalisable findings. Although I do not yet have a detailed plan, I envision

future studies exploring how digital education can improve health outcomes for patients and the public, thus extending the influence of my scholarly work. In these few years, I have acknowledged the importance of continuous learning and the need to further refine my research skills to remain relevant. As an academic, I intend to integrate the findings of this study into my teaching engagements, making sessions more engaging and creating memorable experiences for students, regardless of the mode of delivery, that I might attain to the personal effectiveness as well as research governance and organisation phase outlined in the Vitae Researcher Development Framework (2025). This experience has prepared me to approach teaching with greater confidence, thoughtfulness and reflection, ensuring that my doctoral journey not only contributes to scholarship but also enhances the practice of teaching. This perspective embodies a positive and forward-thinking approach, positioning me as a more confident and reflective researcher committed to meaningful academic and practical advancement.

10.8 Final Remarks

This study provides an extensive account of the experiences of N&M lecturers and students, presenting an in-depth exploration of the intersection between the two participant groups. By addressing the challenges of adaptation, interaction, and efficacy, the findings offer a roadmap for employing an entirely digital program or integrating DLS into a blended learning framework that meets the needs of both students and lecturers. Future research should expand on these findings on a large scale by piloting interventions and evaluating institutional policies or factors and pedagogical innovations aimed at optimising the digital education landscape in healthcare professions.

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APPENDIX

Appendix A – Ethical Approvals

Ethical Approval for Pilot Study



Faculty of Health, Education & Life Sciences Research Office
Seacole Building, 8 Westbourne Road
Birmingham
B15 3TN

HELS_Ethics@bcu.ac.uk

27/Sep/2022

Mr Emmanuel Adesuyi
emmanuel.adesuyi@mail.bcu.ac.uk

Dear Emmanuel ,

Re: Adesuyi /#10700 /sub3 /R(A) /2022 /Sep /HELS FAEC - Experience of Nursing and Midwifery Students and Lecturers with Teaching and Learning in Digital Spaces: A Qualitative Pilot Study

Thank you for your application and documentation regarding the above activity. I am pleased to take Chair's Action and approve this activity.

Provided that you are granted Permission of Access by relevant parties (meeting requirements as laid out by them), you may begin your activity.

I can also confirm that any person participating in the project is covered under the University's insurance arrangements.

Please note that ethics approval only covers your activity as it has been detailed in your ethics application. If you wish to make any changes to the activity, then you must submit an Amendment application for approval of the proposed changes.

Examples of changes include (but are not limited to) adding a new study site, a new method of participant recruitment, adding a new method of data collection and/or change of Project Lead.

Please also note that the Health, Education and Life Sciences Faculty Academic Ethics Committee should be notified of any serious adverse effects arising as a result of this activity.

If for any reason the Committee feels that the activity is no longer ethically sound, it reserves the right to withdraw its approval. In the unlikely event of issues arising which would lead to this, you will be consulted.

Keep a copy of this letter along with the corresponding application for your records as evidence of approval.

If you have any queries, please contact HELS_Ethics@bcu.ac.uk

If you would like to provide feedback on the ethics process, please complete the feedback form using [this link](#).

I wish you every success with your activity.

Yours Sincerely,

Professor Joanne Brooke

On behalf of the Health, Education and Life Sciences Faculty Academic Ethics Committee

Ethical Approval for Main Study



Faculty of Health, Education & Life Sciences Research Office
Seacole Building, 8 Westbourne Road
Birmingham
B15 3TN

HELS_Ethics@bcu.ac.uk

19/Jun/2023

Mr Emmanuel Adesuyi

emmanuel.adesuyi@mail.bcu.ac.uk

Dear Emmanuel ,

Re: Adesuyi /#11662 /sub3 /R(A) /2023 /Jun /HELS FAEC - Experience of Nursing and Midwifery Students and Lecturers with Teaching and Learning in Digital Spaces: A Qualitative Inquiry

Thank you for your application and documentation regarding the above activity. I am pleased to take Chair's Action and approve this activity.

Provided that you are granted Permission of Access by relevant parties (meeting requirements as laid out by them), you may begin your activity.

I can also confirm that any person participating in the project is covered under the University's insurance arrangements.

Please note that ethics approval only covers your activity as it has been detailed in your ethics application. If you wish to make any changes to the activity, then you must submit an Amendment application for approval of the proposed changes.

Examples of changes include (but are not limited to) adding a new study site, a new method of participant recruitment, adding a new method of data collection and/or change of Project Lead.

Please also note that the Health, Education and Life Sciences Faculty Academic Ethics Committee should be notified of any serious adverse effects arising as a result of this activity.

If for any reason the Committee feels that the activity is no longer ethically sound, it reserves the right to withdraw its approval. In the unlikely event of issues arising which would lead to this, you will be consulted.

Keep a copy of this letter along with the corresponding application for your records as evidence of approval.

If you have any queries, please contact HELS_Ethics@bcu.ac.uk

If you would like to provide feedback on the ethics process, please complete the feedback form using [this link](#).

I wish you every success with your activity.

Yours Sincerely,

Professor Joanne Brooke

On behalf of the Health, Education and Life Sciences Faculty Academic Ethics Committee

Appendix B - Permission to Commence Data Collection



Professor Maria Uther

Associate Dean
Research, Innovation and Enterprise
Faculty of Health, Education and Life Sciences
City South Campus
Westbourne Road
Birmingham
B15 3TN

maria.uth@bcu.ac.uk

26th June 2023

Emmanuel Adesuyi
Faculty of Health, Education and Life Sciences
Westbourne Road
Birmingham B15 3TN

Dear Emmanuel,

Re: Experience of Nursing and Midwifery Students and Lecturers with Teaching and Learning in Digital Spaces: A Qualitative Inquiry

Following receipt of your application to conduct research within the Faculty of Health, Education and Life Sciences at Birmingham City University, I am pleased to inform you that you have satisfied all the necessary requirements in relation to ethical approval and indemnity cover.

I am therefore able to grant you my formal permission to begin your research project from 10/07/2023. Your access to the Faculty will expire on 12/02/2024. If an extension is required, you must contact me to apply at least one month before the expiry date.

Maria Uther has been identified as your lead contact from within the Faculty of Health, Education and Life Sciences.

Yours Sincerely,

Maria Uther
Associate Dean, Research, Innovation and Enterprise
Faculty of Health, Education and Life Sciences

Appendix C – Interview Guides

Interview Guide for Lecturers



BIRMINGHAM CITY
University

BROAD INTERVIEW GUIDE FOR NURSING AND MIDWIFERY LECTURERS

RESEARCH TOPIC: Experience of Nursing and Midwifery Students and Lecturers with Teaching and Learning in Digital Spaces: A Qualitative Inquiry

Researcher introduction, Brief overview of the study using the consent statement to review the purpose of the study, time commitments, confidentiality, recording measures and verify eligibility.

1. Commence the interview (start recording) and collect some demographic data
 - a. Participant role: Lecturer []
 - b. Age:
 - c. Gender:
 - d. How long have you taught at BCU?
 - e. Speciality: Nursing [] Midwifery []
2. Questions
 - a. Tell me about the course you teach here at BCU and what kind of technology do you engage with when teaching on your course?
 - b. Are there particular digital platforms you prefer? And why?
 - c. Which do you prefer more, face-to-face teaching, teaching in digital spaces or both and why?
 - d. At the point of transitioning to COVID-19 and post-COVID-19, Were there challenges you encountered with teaching and learning?
 - How did you overcome those challenges?
 - e. Following your experience of making the transition from teaching online during COVID to the classroom; are there particular features or aspects of teaching online that you will identify as an advantage or something that you value?
 - f. Did you have to make any changes to your teaching when teaching your session online and what kind of changes?
 - g. How do digital spaces allow interactions during your teaching sessions?
 - h. Do you think there is enough support for teaching and learning in digital spaces?
 - i. From your experience, can you describe the conditions for effective digital teaching and learning?

Interview Guide for Students



BIRMINGHAM CITY
University

BROAD INTERVIEW GUIDE FOR NURSING AND MIDWIFERY STUDENTS

RESEARCH TOPIC: Experience of Nursing and Midwifery Students and Lecturers with Teaching and Learning in Digital Spaces: A Qualitative Inquiry

Researcher introduction, Brief overview of the study, using the consent statement to review the purpose of the study, time commitments, confidentiality, recording measures, and verify eligibility.

1. Commence interview (start recording) and collect a few **demographic data**
 - a. Participant role: Student []
 - b. Age:
 - c. Gender:
 - d. Level/year of Study in school
 - e. Speciality: Nursing [] Midwifery []
 - f. Ethnicity:
2. Questions
 - a. Tell me about your course here at BCU and what kind of technology do you engage with when learning on your course?
 - b. Are there particular digital platforms you prefer? And why?
 - c. Which do you prefer more, face-to -face teaching, teaching in digital spaces or both and why?
 - d. At the point of transitioning to COVID-19 and Post COVID-19, Were there challenges you encountered with learning?
 - How did you overcome those challenges?
 - e. Following your experience of making the transition from learning online during COVID to the classroom; are there particular features or aspect of learning online that you will identify as an advantage or something that you value?
 - f. Did you have to make any changes to you learn when learning your session online and what kind of changes?
 - g. How does digital spaces allow you to interact during your classes online?
 - h. Do you think there is enough support for teaching and learning in digital spaces?
 - i. From your experience, can you describe the conditions for an effective digital teaching and learning?

Appendix D – Participant Information Sheets

Participants' Information Sheet for Lecturers



BIRMINGHAM CITY
University

Participant Information Sheets (Lecturer Participants)

Study Title: Experience of Nursing and Midwifery Students and Lecturers with Teaching and Learning in Digital Spaces: A Qualitative Inquiry

Aims of Your Study: The aim of this study is to explore the experience of nursing and midwifery students and lecturers with teaching and learning in digital spaces with a focus on identifying ways in which it can be used to improve outcomes for student nurses, student midwives, and nurse educators, and complement face-to-face provision.

Research Questions

1. How do the student, lecturer and course content interactions in digital spaces occur and their influence on teaching and learning in nursing and midwifery education?
2. What are the experiences of nursing and midwifery lecturers and students with digital teaching and learning environments?
3. What are the factors that facilitate or deter the effectiveness of teaching and learning in digital spaces in nursing and midwifery education?

Invitation to Participate: The purpose of this information leaflet is to inform you about the project so that you can decide whether you want to take part.

You have been invited to participate in this study because you are a part of the population of interest in this research, and it is expected that you have had a minimum of three years' experience teaching at BCU School of Nursing and Midwifery, both digitally and face-to-face.

Voluntariness: No aspect of this study is mandatory; your participation is entirely voluntary, and you may refuse to participate or withdraw at any time. No compensation will be given for this study. You would be required to give your consent before participating in the study. In the event of online participation, verbal consent would be required of you before commencing the interview. You would be allowed to ask any questions bothering around this study and receive clarifications before giving your consent.

Data Collection After Informed Consent: You will be allowed to participate in one or more interviews, which will last for 15 – 60 minutes. Interviews would be voice recorded and kept in a secure server as per BCU policy to ensure confidentiality and that your data does not get into the public domain. You would need to state your availability for the interview within the stipulated period of the study. You may request a copy of the interview transcription.

Observation of the digital learning space will last for 15 - 60 minutes of teaching and learning activities.

Potential Benefits of Participation: It is hoped that the findings from this study will lead to the development of pedagogies that can be applied to faculties across the University to improve learning outcomes in digital spaces. However, there will be no cash or gift reward for respondents who agree to participate in this study.

Potential Risks of Participation: The method and process of data collection would not in any way pose danger or harm to the participants. It would not involve any treatment or invasive procedure. It is very unlikely that the interview questions would elicit any emotional response or distress on your part as a participant.

However, if you feel upset after having completed the study or find that some questions or aspects of the study triggered distress, talking with a qualified clinician may help. If you feel you would like assistance, please contact the University's support team on physical, psychological, and mental health issues through email at sa.wellbeing@bcu.ac.uk or call - 0121 331 5188. Participants are free to opt out of the study at any point of data collection.

Confidentiality: Confidentiality will be ensured throughout the process of data collection, management, storage, and analysis. BCU policy on holding and discarding data will be strictly adhered to in addition to the UK General Data Protection Regulation (GDPR). Respondents will not be required to supply sensitive personal data that could be used to identify them, except for the consent form, where your initials are needed. A coding system will be used to differentiate one respondent from another. During data transcription, analysis and interpretation, each participant will be labelled with a pseudonymous identifier, minimising every risk of data breach and confidentiality of the participants. Data obtained will be used solely for the purpose of this research.

Data protection: Respondents will not be required to supply sensitive personal data that could be used to identify them; rather, a coding system using a pseudonymous identifier will be used to differentiate one respondent from the other. BCU policy on holding and discarding data will be strictly adhered to in addition to the UK General Data Protection Regulation (GDPR). Complaints regarding data protection should be sent to the Data Protection Officer at informationmanagement@bcu.ac.uk or by writing to: The Data Protection Officer, Birmingham City University, 15 Bartholomew Row, Birmingham, B5 5JU.

Participants' Rights: No aspect of this study is mandatory; your participation is entirely voluntary, and you may refuse to participate or withdraw your data without prejudice before analysis of the data. To withdraw your data from the study, kindly send an email within 2 weeks of attending the interview detailing this request to the email address of the researcher or supervisor provided at the end of this information sheet. Withdrawing your data will no longer be possible after data analysis is completed, which is most likely 2 weeks after the interview. You have the right to anonymity and data protection, and this will be ensured throughout the study.

Funders: This is an academic study in partial fulfilment of a BCU-funded PhD.

Final Report: If you would like to receive a copy of the final report of this study (or a summary of the findings) when it is completed, please feel free to contact us.

Research Supervisors: Second Supervisor 1: Prof. Matthew O Leary
Director of Studies: Dr. Khalid Alnababtah

Contact of Director of Study: In case of any questions or concerns about the study, you may contact the director of studies in person of Dr Khalid Alnababtah – email: Kal.Alnababtah@bcu.ac.uk

Contacts in Case of Complaint: You may send your complaint to any of the email addresses: HELS_Ethics@bcu.ac.uk, or BCU_Ethics@bcu.ac.uk

Project Lead/Principal Investigator: **Name:** Emmanuel O. Adesuyi,
Level of Research: PhD Student
Email: emmanuel.adesuyi@mail.bcu.ac.uk

Details of Providing Informed Consent: If you were to attend a face-to-face interview, you would be required to sign a consent form before participating in the study. A verbal consent that will be recorded will be required of those attending the online interview.

***** Please keep a copy of this form for your future reference. Once again, thank you for your participation in this study! *****

Participants' Information Sheet for Students



BIRMINGHAM CITY
University

Participant Information Sheets (Student Participants)

Study Title: Experience of Nursing and Midwifery Students and Lecturers with Teaching and Learning in Digital Spaces: A Qualitative Inquiry

Aims of your Study: The aim of this study is to explore the experience of nursing and midwifery students and lecturers with teaching and learning in digital spaces with a focus on identifying ways in which it can be used to improve outcomes for student nurses, student midwives, and nurse educators, and complement face-to-face provision.

Research Questions:

1. How do the student, lecturer and course content interactions in digital spaces occur and their influence on teaching and learning in nursing and midwifery education?
2. What are the experiences of nursing and midwifery lecturers and students with digital teaching and learning environments?
3. What are the factors that facilitate or deter the effectiveness of teaching and learning in digital spaces in nursing and midwifery education?

An Invitation to Participate: The purpose of this information leaflet is to inform you about the project so that you can decide whether you want to take part.

You have been invited to participate in this study because you are a part of the population of interest in this research, and it is expected that you have had a minimum of one year of experience learning at the BCU School of Nursing and Midwifery, both digitally and face-to-face.

Voluntariness: No aspect of this study is mandatory; your participation is entirely voluntary, and you may refuse to participate or withdraw at any time. No compensation will be given for this study. You would be required to provide your consent before participating in the study. In the event of online participation, verbal consent would be required of you before commencing the interview. You would be allowed to ask any questions bothering around this study and receive clarifications before giving your consent.

Data Collection After Informed Consent: You will be allowed to join only one Focus Group Discussion (FGD) or in-depth interview, which will last for 15 - 60 minutes. The FGD will be featuring three to six (3-6) participants. Discussion would be voice recorded and kept in a

secure server as per BCU policy to ensure confidentiality and that your data does not get into the public domain. You would need to state your availability for the interview within the stipulated period of the study. You may request the transcript of the discussion.

Observation of a digital learning space will last for 15 - 60 minutes of teaching and learning activities on any of the nursing and midwifery modules.

Potential Benefits of Participation: It is hoped that the findings from this study will lead to the development of pedagogies that can be applied to faculties across the University to improve learning outcomes in digital spaces. However, there will be no cash or gift reward for respondents who agree to participate in this study.

Potential Risks of Participation: The method and process of data collection would not in any way pose danger or harm to the participants. It would not involve any treatment or invasive procedure. It is very unlikely that the interview questions would elicit any emotional response or distress on your part as a participant.

However, if you feel upset after having completed the study or find that some questions or aspects of the study triggered distress, talking with a qualified clinician may help. If you feel you would like assistance, please contact the University's support team on physical, psychological, and mental health issues through email at sa.wellbeing@bcu.ac.uk or call 0121 331 5188. Participants are free to opt out of the study at any point during data collection.

Confidentiality: Confidentiality will be ensured throughout the process of data collection, management, storage, and analysis. BCU policy on holding and discarding data will be strictly adhered to in addition to the UK General Data Protection Regulation (GDPR). Respondents will not be required to supply sensitive personal data that could be used to identify them; rather a coding system will be used to differentiate one respondent from the other. During data transcription, analysis and interpretation, each participant will be labelled with a pseudonymous identifier, minimising every risk of data breach and confidentiality of the participants. Data obtained will be used solely for the purpose of this research.

Data Protection: Respondents will not be required to supply sensitive personal data that could be used to identify them; rather, a coding system using a pseudonymous identifier will be used to differentiate one respondent from the other. BCU policy on holding and discarding data will be strictly adhered to in addition to the UK General Data Protection Regulation (GDPR). Complaints regarding data protection should be sent to the Data Protection Officer at informationmanagement@bcu.ac.uk or by writing to The Data Protection Officer, Birmingham City University, 15 Bartholomew Row, Birmingham, B5 5JU

Participants' Rights: No aspect of this study is mandatory; your participation is entirely voluntary, and you may refuse to participate or withdraw your data without prejudice before analysis of the data. To withdraw your data from the study, kindly send an email within 2 weeks of attending the interview detailing this request to the email address of the researcher or supervisor provided at the end of this information sheet. Withdrawing your data will no longer be possible after data analysis is completed, which is most likely 2 weeks after the interview. You have the right to anonymity and data protection, and this will be ensured throughout the study.

Funders: This is an academic study in partial fulfilment of a BCU-funded PhD.

Final Report: If you would like to receive a copy of the final report of this study (or a summary of the findings) when it is completed, please feel free to contact us.

Research Supervisors: Second Supervisor 1: Prof. Matthew O Leary
Director of Studies: Dr. Khalid Alnababtah

Contact of Director of Study: In case of any questions or concerns about the study, you may contact the director of studies in the person of Dr Khalid Alnababtah – email: Kal.Alnababtah@bcu.ac.uk

Contacts in Case of Complaint: You may send your complaint to any of the email addresses: HELS_Ethics@bcu.ac.uk, or BCU_Ethics@bcu.ac.uk

Project Lead/Principal Investigator: **Name:** Emmanuel O. Adesuyi,
 Level of Research: PhD Student
 Email: emmanuel.adesuyi@mail.bcu.ac.uk

Details of Providing Informed Consent: If you were to attend a face-to-face focus group discussion, you would be required to sign a consent form before participating in the study. A verbal consent that will be recorded will be required of those attending online focus groups.

***** Please keep a copy of this form for your future reference. Once again, thank you for your participation in this study! *****

Appendix E – Consent Forms

Consent Form for Lecturers



BIRMINGHAM CITY
University

Consent Form

Study Title: Experience of Nursing and Midwifery Students and Lecturers with Teaching and Learning in Digital Spaces: A Qualitative Inquiry

Summary of the Project: The aim of this study is to explore the experience of nursing and midwifery students and lecturers with teaching and learning in digital spaces with a focus on identifying ways in which it can be used to improve outcomes for student nurses, student midwives, and nurse educators, and complement face-to-face provision.

Statement About Voluntary Participation: No aspect of this study is mandatory; your participation is entirely voluntary, and you may refuse to participate or withdraw at any time without prejudice. You have the right to anonymity and data protection, and this will be ensured throughout the study.

An Invitation to Participate: The purpose of this information leaflet is to inform you about the project so that you can decide whether you want to take part.

Whether Participation is Voluntary: No aspect of this study is mandatory; your participation is entirely voluntary, and you may refuse to participate or withdraw at any time during the interview. No compensation will be given for this study. You would be required to give your consent before participating in the study. In the event of online participation, verbal consent would be required of you before commencing the interview. You would be allowed to ask any questions bothering around this study and receive clarifications before giving your consent.

Statement of Person Obtaining Informed Consent

I have fully explained this research to the respondent and given sufficient information, including potential risks and benefits, to enable the respondent to make an informed decision.

Date & Time

Initials

Statement of Person Giving Informed Consent

Kindly put your initials in the boxes at the end of each statement to indicate that you are giving your consent to participate in this study.

- | | |
|--|-----|
| a) I have read and understood the information sheet. | [] |
| b) I have had the opportunity to ask questions. | [] |

- c) I understand that participation in this study is entirely voluntary. []
- d) I agree to be interviewed []
- e) I agree for the interview to be recorded. []
- f) I understand that I have the right to withdraw at any stage of the study without prejudice. []
- g) I understand my right to anonymity/confidentiality []
- h) Date: Time:

Consent Form For Students



BIRMINGHAM CITY
University

Consent Forms

Study Title: Experience of Nursing and Midwifery Students and Lecturers with Teaching and Learning in Digital Spaces: A Qualitative Inquiry

Summary of the Project: The aim of this study is to explore the experience of nursing and midwifery students and lecturers with teaching and learning in digital spaces with a focus on identifying ways in which it can be used to improve outcomes for student nurses, student midwives, and nurse educators, and complement face-to-face provision.

Statement About Voluntary Participation: No aspect of this study is mandatory; your participation is entirely voluntary, and you may refuse to participate or withdraw at any time before the commencement of the in-depth interview or Focus Group Discussion (FGD) without prejudice. You have the right to anonymity and data protection, and this will be ensured throughout the study.

An Invitation to Participate: The purpose of this information leaflet is to inform you about the project so that you can decide whether you want to take part.

Whether Participation is Voluntary: No aspect of this study is mandatory; your participation is entirely voluntary, and you may refuse to participate or withdraw at any time before the commencement of the FGD. No compensation will be given for this study. You would be required to provide your consent before participating in the study. In the event of online participation, verbal consent would be required of you before commencing the interview. You would be allowed to ask any questions bothering around this study and receive clarifications before giving your consent.

Statement of Person Obtaining Informed Consent

I have fully explained this research to the respondent and given sufficient information, including potential risks and benefits, to enable the respondent to make an informed decision.

Date & Time

Initials

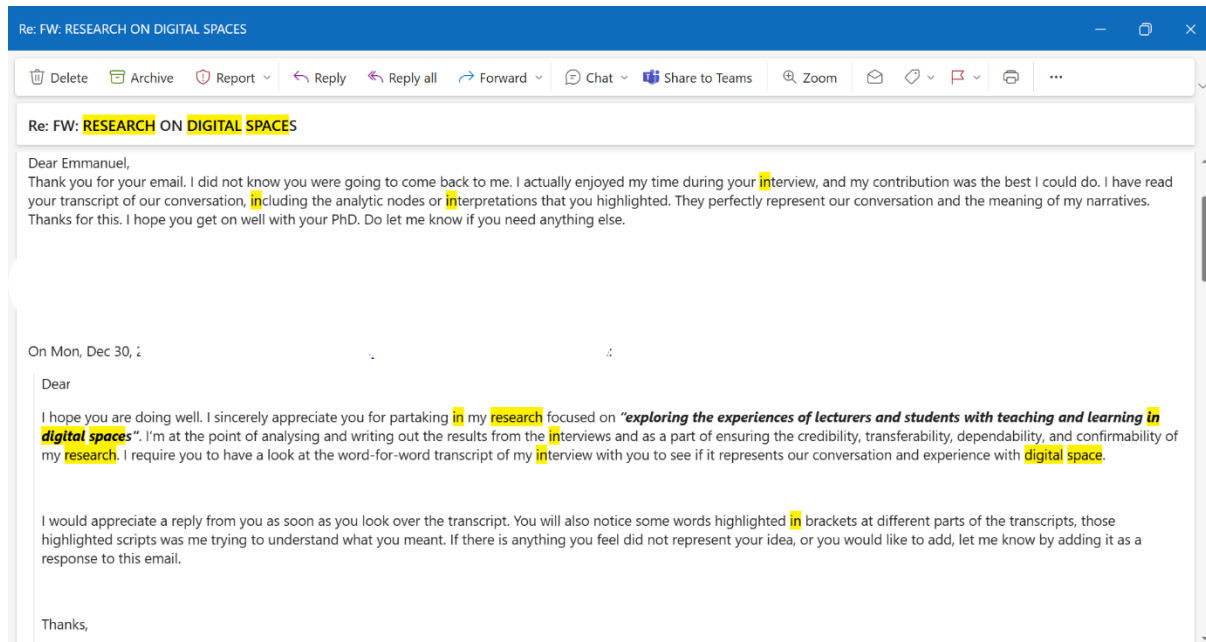
Statement of Person Giving Informed Consent

Kindly put your initials in the boxes at the end of each statement to indicate that you are giving your consent to participate in this study.

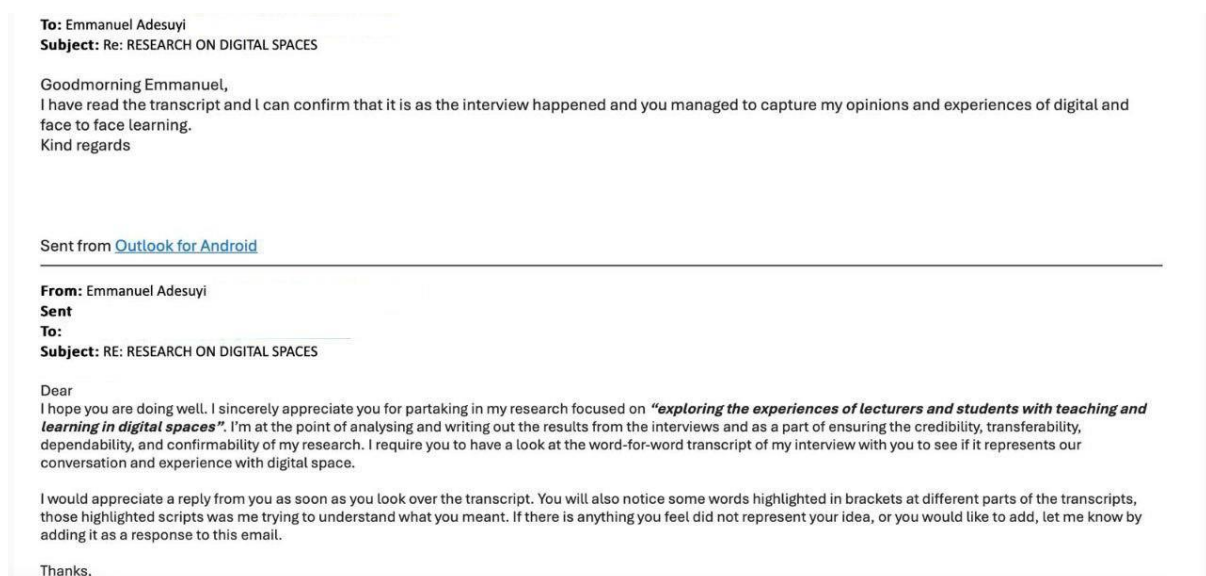
- i) I have read and understood the information sheet. []
- j) I have had the opportunity to ask questions. []
- k) I understand that participation in this study is entirely voluntary. []
- l) I agree to be interviewed []
- m) I agree for the interview to be recorded. []
- n) I understand that I have the right to withdraw at any stage of the study without prejudice. []
- o) I understand my right to anonymity/confidentiality []
- p) Date: Time:.....

Appendix F – Participants’ Verification

Confirmation of Transcription and Interpretation from Lecturer (Personal Data Redacted)



Confirmation of Transcription and Interpretation from Student (Personal Data Redacted)



Appendix G - Sample Transcript with Initial Noting

Sample Transcript 1 - (Student)

TRANSCRIPT

I

OK. That's fine. So the first issue I would like us to discuss about is this, would you like to tell me about the course that you learn here at BCU and what kind of technology you engage while learning?

CO

Ohh, well, actually the course I'm doing is nursing and specific to midwifery but you know, we are still together with our other colleagues from various specialities. We only get into our speciality later and during placement *[Describing the student's current course as Midwifery and what it looked like at the early days on campus]*.

Like I said in the introduction, though obviously the first two years so far, really we have been kind of common content of child nursing, mental health nursing, learning, disability nursing and midwifery so far where we are at the moment, it's kind of all combined. We have not gone yet into a specific field, so it's really what I'm going to eventually qualify as a midwife and probably maybe in the next year kind of learn specific course content specific to adult nursing, but at the moment it's all combined yet *[Further explanation on the arrangement or pattern of the various nursing training in the university]*. So the content, obviously we've been covering mainly well, it's been combined like face-to-face as well as MS Teams *[Describing the pattern of lecture delivery as mixed – blended, onsite with online lectures on MS Teams]*. To be fair, especially in our first year because we were kind of a slow introduction post-COVID, so it was the first year, uh, especially the first time, I think 80% of the course content was delivered online first. I mean online, on MS Teams *[says more than half of the courses in the first year around the end of COVID-19 were held online]* and to start with, I am a mum and quite a busy person, so it did suit me and I loved the flexibility as I actually enjoyed the flexibility that you could take my kids to school and come back and still not have to miss or get late for my lectures. So in that aspect, I kind of enjoyed it. *[Narrates her experience of flexibility as a mum studying nursing which reflects her love for digital space]*.

The other aspect really about MS Teams, you know, live lectures, it's good because it's as good as being in a classroom because the lecturer is there. So, you can still ask questions. It's like being in a classroom, but at home *[Feels learning online is as good as learning Onsite because of the lecturer's presence and getting quick answers to questions]*. So, I'm enjoying it *[Ongoing love for digital space?]*. First of all, the flexibility as well as the immediate feedback. So if I have questions that have not understood anything, *[Loves learning in digital spaces because of the flexibility and immediate*

Sample Transcript 2 (Lecturer)

TRANSCRIPT

I

So firstly, I would like you to talk about the course you teach here at BCU and the kind of technology that you engage in teaching.

CL 1:25

Previously.

OK, cool.

And so when I first started at BCU and in January 2020 and I taught 3rd year anatomy and Physiology module for the adult nursing students.

And so for that kind of the biggest technology that we kind of used was our exam because and obviously the impact of COVID meant that we had to move from a paper based exam to an online exam as well as kind of like moving all of our sessions online.

So I've used kind of exam software and supported students through using that exam software [Drastic change from paper-based to online exam – onsite to online lectures] and now I teach on the very first module of the first year of the nursing program [Teaching first year courses now]. So I teach to all four fields of nursing together and we kind of use technology and in the classroom and we use MS Teams and polls [Teaching all the nursing specialties which is a large class all at once] and then this year we've got asynchronous activities in our timetable. And so yeah, so using lots of different like Moodle related resources and things to support students in that [other new layers added to the space to support learning]. So a bit of a mixed bag [? Metaphor – to describe other new layers added to the space to support learning].

I 2:52

Yeah. Thank you so much. So, what was it like transitioning during the COVID-19? Moving totally online as opposed to the normal classroom teaching.

CL 3:06

Incredibly stressful [? unexpectedly stressful] and we were literally about two weeks away from starting our module and when the first lockdown happened. So we literally had

Appendix H - Extracts from the Field Note

3rd Nov

(a) - Senior Lecturer module co-ordinator.
(b) - Since 2008 (14 years)
In Adult

Prior to COVID - everything face to face.
Difficulty in switching to online during COVID * nervous

* Breakout room - advantages.
I prefer ms team to zoom. WhatsApp group works well as well

Interaction not very there
Gamification - in digital space

Tutorials better online, - The more the people in the room, the less they talk.
Research didn't work online - Teaching some students face to face and then transmitted online to some students.
Online works okay when you building on knowledge -

pedagogies

Interaction - Chat space - voice to the voiceless online
Equity

Self directed learning - like asking them to go and get some info.

blended learning

Factors - Discussion (online) Assignments/activities learning (classroom)
Group work/multi-professional learning (classroom)

riches/ly/prachab
ast classroom.

* Doing it from home.
* Breakout room.
* Smaller teaching.

learning how to engage students

Supports
Technology

not just some coming to teachers to use a gadget in

Factors Affecting
Create that connections with students first before going online - that connection will be there ~

Appendix I - Reflexive Notes

Sample Reflexive Note 1

Reflexive Notes 31/7/23

As I prepare for my first interview with a student participant, I don't know what I would meet but I acknowledge how my current idea could impact on my interviewing. I desire that the participant will determine the direction of the interview and my duty is just to ensure the information is accessible and the interview is well managed to maximise the limited time that the participants are willing to sacrifice. I have no current pre-monition that may impact on the interview - being the first in this main study.

Reflexive Note 8/8/23

Today, I am preparing for the second interview, which is with a lecturer participant. Now I already have an idea of some emerging concerns from the first interview and I am careful to avoid the influence of this previous interview on this next interview considering or applying the principles of 'epoche' or bracketing. I must acknowledge issues strong on my mind and put them down. In the previous interview, 'recording online lectures' was a crucial matter with students. I really want to understand from student and lecturer's perspective but according to the principles of IPA, I need to bracket this idea and allow this interview to flow in the direction it chooses. People's experience is individualistic and if no issue with recording is mentioned, I will take it this way.

Reflexive Note 11/8/23

This is another interview with a lecturer participant. It appears like 'recording lectures' is a burning issue that was naturally reflected in the previous interviews. Though I am curious, I would have to 'bracket' this to prevent being forceful with getting information from them thus actively influence

Reflexive Notes 2

the direction, which is against the tenets of IPA. From the previous interview, I'm excited about the many ways of teaching in digital spaces that lecturers have experimented. It would be good to hear more about this. But I am conscious about this notion of excitement and must bracket them and ensure that the interview of this coming participant bears their unique or distinct experience.

Reflexive Note 25/9/23

I am excited about the first Focus Group Discussion (FGD) in this main study. I am to meet with a number of students who signified interest in this study on campus. They are from different classes (varying year of study). My intention is to be able to collect data on shared experiences. I have a premonition 'in my heart'.

Appendix J – Case-by-Case Presentation of Emergent Themes

TABLE OF SUPER-ORDINATE AND SUB-ORDINATE THEMES FROM EACH STUDENT PARTICIPANT/CASE

CASE 0 - FOCUS GROUP DISCUSSION - [Chid, Female, started in 2022, Adult nursing, Black/African, 19 yrs], [Kay, Male, began in 2021, Children nursing, White British, 24 yrs], [Bee, Female, started in 2022, Midwifery, Black/African, 25 yrs], [Olly, Female, began in 2020, Adult nursing, Black, 22 yrs], and [Sally, Female, began in 2021, Midwifery, Asian, 30 yrs]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Benefits of Digital Spaces	<ul style="list-style-type: none"> - Ability to record online lectures. - Inclusive student engagement - Removing barriers to learning
2.	Effectiveness of Digital Learning Spaces	<ul style="list-style-type: none"> - Barriers to effectiveness online - Conditions for effectiveness
3.	Experiences	<ul style="list-style-type: none"> - Concerns with the social aspects of learning in digital spaces. - Online experience. - Peculiar experiences in the classroom to compare with online.
4.	Proposing Blended Learning	<ul style="list-style-type: none"> - Proportion of blending - Sentiments

CASE 1 – Sandy - Student Participant 1 - [began in 2022, Male, Adult nursing, Black/African, 22 yrs]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Blended Learning	<ul style="list-style-type: none"> - Confusing hybrid for blended learning. - Describing blended learning. - Pattern of mix/blending.
2.	Issues Related to Learning in Digital Spaces	<ul style="list-style-type: none"> - Distraction - IT related - Merit of digital spaces - Student related - Supports for learning
3.	Student Engagement	<ul style="list-style-type: none"> - Digital platforms facilitating student

		engagement. - Kind of lectures facilitating student engagement - Selective student engagement
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CASE 2 – Amy - Student Participant 2 – [began in 2022, Female, MSci Adult nursing, White British, 33 yrs]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Narrating Encounters in Digital Spaces	- Challenges of focusing during online lectures - Preparation and supports. - Studying nursing and midwifery in the university - Technology
2.	Recommendations for Effectiveness	- Blended provision - Lecturers' expertise and ability to manage digital learning spaces - Smaller class size online - Technology
3.	Student Engagement in Digital Spaces	- Deterrent - Facilitators - General idea
4.	Student Perception	- Benefits - Sentiments

CASE 3 – Pet - Student Participant 3 – [began in 2022, Male, Mental health nursing, European/Austrian, 45 yrs]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Digital Learning Struggles	- COVID-19 experiences - Forced into adapting to digital spaces. - Navigating through digital platforms - New to a new learning space
2.	Making Efforts Towards Effectiveness	- Influencing mindset overtime - Preparatory lectures to introduce student to online platforms. - Resilience to overcome the struggles. - Working with students'

		perspective
3.	Motivations to Improve on Digital Skills	<ul style="list-style-type: none"> - Family and friends' influence - Future relevance of digital spaces - Mastering the art of using computer gadgets - Spending less on transportation
4.	Perspectives on Learning Spaces	<ul style="list-style-type: none"> - Barriers to accepting digital learning spaces. - Preference of classroom lectures - Recommending blended learning

CASE 4 – Jo - Student Participant 4 – [began in 2020, Female, Midwifery, Asian, 39 yrs]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Challenges with Digital Learning	<ul style="list-style-type: none"> - University management - Personal to students - Social issues - Support
2.	Student Sentiments	<ul style="list-style-type: none"> - Comparing benefits - Personal preference - Training pattern
3.	Suggestions for Better Digital Learning Experience	<ul style="list-style-type: none"> - Allowing student autonomy - Lecturers' duty - Population of learners online per session - Student responsibility
4.	What Worked Online	<ul style="list-style-type: none"> - Adaptation online - Better online experience - Student engagement

CASE 5 – Amu - Student Participant 5 – [began in 2020, Female, Midwifery, Asian, 20 yrs]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Factors for a Successful Digital Learning	<ul style="list-style-type: none"> - Teacher-related factors - Using online recording feature
2.	General Experience with Digital Spaces	<ul style="list-style-type: none"> - Challenges - Digital learning platforms used in nursing and midwifery. - Good side - Students' sentiment

CASE 6 – Mel - Student Participant 6 – [began in 2022, Male, Mental health nursing, Black/African, 28 yrs]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Advantages and Disadvantages of Digital Learning	<ul style="list-style-type: none"> - Advantages - Disadvantages - Perception of advantages and disadvantage
2.	Blended Learning	<ul style="list-style-type: none"> - Financial benefit - General idea - Preparation - Proportion of blending
3.	Determinants of Effectiveness	<ul style="list-style-type: none"> - Facilitate engagement. - Student determination - Support - Using audiovisual features - Wants more time slots to learn online
4.	Sentiments	<ul style="list-style-type: none"> - Classroom - COVID-19 - Interaction online and classroom - MS Teams - Online - Socialisation

CASE 7 – Indra - Student Participant 7 – [began in 2021, Female, Midwifery, Asian, 25 yrs]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Benefits of Digital Learning Platforms	<ul style="list-style-type: none"> - Flexibility - Recording feature - Safety (COVID-19 context)
2.	Blended Learning	<ul style="list-style-type: none"> - General sentiments - Suggestions
3.	Concerns Around Digital Learning	<ul style="list-style-type: none"> - Concerns around MS Teams chat feature - Social downside - Students' Affect
4.	Recommendation for Successful Online Learning	<ul style="list-style-type: none"> - Personal discipline from students when learning online. - Prepare students to navigate online platform - Proper use and

		<p>management of features online that foster student engagement.</p> <ul style="list-style-type: none"> - Reducing student population during online lectures.
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CASE 8 – Lucy - Student Participant 8 – [began in 2021, Female, Midwifery, White British, 40 yrs]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Challenges and Benefits of Digital Learning Platforms	<ul style="list-style-type: none"> - Chat features. - Difficulty in addressing concerns with interaction online. - Enjoyable online experience due to lecturer's presence. - Dislike for online lectures
2.	Dissatisfaction with Online Lectures	<ul style="list-style-type: none"> - Distraction and poor management of digital learning space - Lack of concentration - Nearly all modules delivered online. - Poor social interaction - Waste of money
3.	Preference of Hybrid Mode of Learning	<ul style="list-style-type: none"> - Describing hybrid - Difficulty - Suggestion for hybrid
4.	Recommendation for Online Lectures	<ul style="list-style-type: none"> - Discourages long online lectures. - Recommends fewer students online per lectures. - Students and lecturers responsibility

CASE 9 – Steph - Student Participant 9 – [began in 2022, Female, Midwifery, White British, 27 yrs]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Concerns with Learning in Digital Spaces	<ul style="list-style-type: none"> - COVID-19 and Post COVID-19 issues - Distractions - Recording - Timing - Unsatisfactory choice of delivery mode

		<ul style="list-style-type: none"> - Unsatisfactory module choice for online delivery
2.	Dislike for Learning in Digital Spaces	<ul style="list-style-type: none"> - Financial reasons - Lack of social reasons - Narrating experience
3.	Recommendations	<ul style="list-style-type: none"> - Learning preference - Lecturer presence - Recording lectures - Students taking responsibility

CASE 10 – Sadia - Student Participant 10 – [began in 2021, Female, Adult nursing, Asian/Pakistani, 23 yrs]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Social Issues Related to Digital Learning	<ul style="list-style-type: none"> - Lack of the sense of belonging to a community - Separation from the real world
2.	Student Struggles	<ul style="list-style-type: none"> - Doubt and concerns. - Involuntary use of digital spaces - Lecturers fault - Price paid by a new digital learner. - Technology
3.	Students General Conception	<ul style="list-style-type: none"> - Enablers of resilience - Good experience - Preference
4.	Suggestions for Effectiveness Online	<ul style="list-style-type: none"> - Blended provision of delivery - Preparation and mastery - Seeking student contribution to designs of online learning

TABLE OF SUPER-ORDINATE AND SUB-ORDINATE THEMES FROM EACH LECTURER PARTICIPANT/CASE

CASE 0 - FOCUS GROUP DISCUSSION - [Sam, Female, Midwifery, taught for 4 years, Black/African, 44 year-old] [Jane, Female, Midwifery, taught for 3 years, White British, 47 year-old] [Brian, Male, Learning Disability, taught for 4 years, White British, 50 year-old] [Lee, Female, Adult nursing, taught for 3 years, Black, 39 year-old] [Gabi, Female, Jane, Adult nursing, taught for 6 years, Asian, 56 year-old]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Benefits of Digital Spaces	<ul style="list-style-type: none"> - Ability to record online lectures. - Inclusive student engagement - Removing barriers to learning
2.	Effectiveness of Digital Learning Spaces	<ul style="list-style-type: none"> - Barriers to effectiveness online - Conditions for effectiveness
3.	Experiences	<ul style="list-style-type: none"> - Concerns with the social aspects of learning in digital spaces. - Online experience. - Peculiar experiences in the classroom to compare with online.
4.	Proposing Blended Learning	<ul style="list-style-type: none"> - Proportion of blending - Sentiments

CASE 1 – Janny - [3 years in the university, Adult nursing, White British, Female, 43-year-old]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Experiences related to lecturers	<ul style="list-style-type: none"> - Adapting how lecturers teach in digital spaces. - Describing lecturer role in curriculum design of a module delivered solely online. - Justifying having more than one lecturer in an online teaching session.
2.	Experiences Relating to Students	<ul style="list-style-type: none"> - Describing the various student cohort - Guidance on how to maximize digital spaces - Self-directed module –

		<ul style="list-style-type: none"> - giving autonomy - Smaller student population and more than one lecture online - Student's need for a conducive environment
3.	Experiences relating to Technology	<ul style="list-style-type: none"> - Initial Confusion - No Support from Uni
4.	Supports Received to Teach in Digital Spaces	<ul style="list-style-type: none"> - Support from colleagues - Self support

CASE 2 – Clay – [20 years in the university, Adult nursing, White British, Female, 58-year-old]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	COVID-19 Transition	<ul style="list-style-type: none"> - Digital platforms for teaching - Transition experience to online teaching; - Transition experience back to the classroom:
2.	Preferences	<ul style="list-style-type: none"> - Classroom Teaching - Online Teaching - Blended Teaching
3.	Sentiments	<ul style="list-style-type: none"> - Perception about mode of teaching - Student engagement - Effectiveness of e-learning

CASE 3 – Kai – [20 years in the university, Mental health nursing, Asian, Female, 60-year-old]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Advantages of Teaching in Digital Spaces	<ul style="list-style-type: none"> - Time, place and space - Interaction - Cost of transportation - Fast communication and assessment - Recording
2.	Blended Mode of Teaching	<ul style="list-style-type: none"> - Preference of Blended teaching - Proportion of blending
3.	Challenges	<ul style="list-style-type: none"> - Technical challenges - Student engagement - Non-humanised teaching - Distraction
4.	COVID-19 Context	<ul style="list-style-type: none"> - Suddenness

		<ul style="list-style-type: none"> - High transition expectation - Post COVID-19 Transition
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CASE 4 – Jack – [8 years in the university, Mental health nursing, Black, Male, 38-year-old]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Student Engagement	<ul style="list-style-type: none"> - Strategies used - Strategies that did not work - Challenges
2.	Pre, During and Post-COVID-19	<ul style="list-style-type: none"> - During COVID-19 - Post COVID-19
3.	Advantages	<ul style="list-style-type: none"> - Removing the wall of time and space - Inclusivity - Student Autonomy - Recording
4.	Worries about Teaching in Digital Spaces	<ul style="list-style-type: none"> - Heavy workload - Poor student engagement - Inability to assess engagement - Achieving learning outcomes

CASE 5 – Ron – [6 years in the university, Learning disability, White British, Male, 44-year-old]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Experiences Relating to COVID-19 context	<ul style="list-style-type: none"> - During Pandemic - After Pandemic
2.	Concerns Around Teaching in Digital Spaces	<ul style="list-style-type: none"> - Student engagement - Mechanised Teaching - Digital Literacy
3.	Suggestions for Better Online Experiences	<ul style="list-style-type: none"> - Blended teaching - Student-centered teaching - Supports

CASE 6 – Sally – [3 years 8 months in the university, Adult nursing, Black/Africa, Female, 40-year-old]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Discoveries in Digital Spaces	<ul style="list-style-type: none"> - Advantages - Inclusive environment - Personalised Teaching - Reflective learning
2.	Sentiments	<ul style="list-style-type: none"> - Future perception

		<ul style="list-style-type: none"> - Skills needed - Preferences
3.	Student Engagement	<ul style="list-style-type: none"> - Poor student engagement - Inability to identify engagement - Tested strategies
4.	Barriers to Effective Digital Teaching	<ul style="list-style-type: none"> - Limited Support - Digital literacy - Personal interest and discipline
5.	COVID-19 Experiences	<ul style="list-style-type: none"> - Positive experiences - Negative experiences

CASE 7 – Paula – [16 years in the university, Midwifery, White British, Female, 57-year-old]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Benefits of Teaching in Digital Spaces	<ul style="list-style-type: none"> - Inclusivity - Personalised teaching - Quick support - Recording
2.	Blended Mode of Teaching	<ul style="list-style-type: none"> - Proposing Blended teaching - Modalities for blending
3.	Challenges	<ul style="list-style-type: none"> - Student Engagement - Distraction - IT - Lack of discipline
4.	Sentiments	<ul style="list-style-type: none"> - Preference - Classroom teaching - Online teaching - Blended teaching
5	COVID-19 – Context	<ul style="list-style-type: none"> - Pre-COVID - COVID experience - Post-COVID experience

CASE 8 – Sheila – [6 years in the university, Midwifery, White British, Female, 39-year-old]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Challenges of Teaching in Digital Spaces	<ul style="list-style-type: none"> - Student Engagement - Technology - Support
2.	Mode of Lecture Delivery	<ul style="list-style-type: none"> - Classroom - Online - Blended
3.	Recording Online Lectures	<ul style="list-style-type: none"> - Benefits

		- Challenges
4.	COVID-19 Pandemic	- COVID-19 Era - Post-COVID-19

CASE 9 – Lauren – [3 and half years in the university, Adult nursing, White British, Female, 29-year-old]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Learning Curve with Digital Spaces	- Suddenness in transition - Coping - Experimentation - Sentiments - Preferences
2.	Recommendations	- Blended Method - Teaching Style - Time and length of teaching

CASE 10 – Sandy – [3 and half years in the university, Adult nursing, Black/Africa, Female, 35-year-old]

S/N	Super-Ordinate Themes	Sub-Ordinate Themes
1.	Positive Experiences with Digital Spaces	- Sustaining Education - Reducing Carbon footprint - Inclusivity
2.	Unsatisfactory or Negative Experiences	- Student engagement - More work - Fear of replacement - IT issues
3.	Transitioning – COVID-19 Context	- Having no clue - Trial and error - Stressful and Challenging - Learning Curve
4.	Conditions for Effectiveness Online	- Blended Mode of Teaching - Improving Student Engagement - Supports