Experiences of Nursing and Midwifery Faculty and Students of Remote Teaching and Learning: Qualitative Evidence Syntheses

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Experiences of Nursing and Midwifery Faculty and Students of Remote Teaching and Learning: Qualitative Evidence Syntheses

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Article Info	Abstract
	In March 2020 most universities internationally were forced to provide education remotely due to university closures secondary to the COVID-19 pandemic. This rapid transfer to online delivery of educational programmes-initiated challenges for students and faculty. Synthesizing qualitative research on nursing and midwifery faculty and student experiences of remote teaching and learning provides a rich insight into how technology supports teaching theory and practice. To systematically synthesize nursing students and nursing faculty's experiences of online, blended or distance teaching or learning during the COVID-19 pandemic. Two distinct qualitative evidence syntheses were undertaken, one to systematically synthesise nursing and midwifery faculty experiences of online teaching and the other to systematically synthesise student nurses' online learning experiences. Both were guided by the 'best fit' framework approach. The Cochrane Effective Practice and Organisation of Care reporting guidelines guided both reviews. Findings from both reviews were triangulated. Seventeen qualitative and five mixed-method studies were included in this 'best fit' framework synthesis using Chickering and Gamson's Seven Principles for Good Practice in Undergraduate Education reporting on experiences of 248 nursing and midwifery faculty and 376 undergraduate nursing students. Students and faculty highlighted the importance of teachers' social presence through effective communication and interpersonal relationships. Clinical placement exposure within the clinical environment was deemed imperative by students and faculty. Faculty require professional development and managerial support to effectively incorporate the use of online technologies to support students and their education. Similarities and differences between students' and faculty's experiences of online teaching and learning are reported. Online content can be developed into efficient, high-quality learner-centred education within blended undergraduate nursing programmes incorporating essential face-to-face and practical components.

Introduction

Online teaching and learning involve communication between educators and students using electronic technology to deliver, support and enhance teaching and learning from a distance (Durmaz et al., 2012). From the early days

of online education, educators and scholars have been exploring ways to develop teaching and learning environments, where students can successfully pursue educational goals and feel welcome, safe, encouraged, motivated, and engaged with the subject matter (Jones et al., 2020). Over the last ten years, online teaching and learning using digital tools in higher education has advanced rapidly (Bramer, 2020; Langegard et al., 2021, Huai et al., 2024, Wu, 2024) and is available at undergraduate, master, and doctoral levels (De Oliviera et al., 2017, Honkavuo, 2020, Jones et al., 2020).

Many have found online teaching to improve content delivery in nursing education (Tavares et al., 2016, Bramer, 2020, Langegard et al., 2021). However, during the COVID-19 pandemic most universities internationally switched their pedagogical approach from on campus teaching and learning to teaching and learning online using digital tools for the first time within nursing programmes (Langegard et al., 2021, Jackson and Usher, 2022, Giltenane and Smith, 2023). This change constituted a major challenge for both nursing faculty and students highlighting positive and negative experiences (Jackson and Usher, 2022, Giltenane and Smith, 2023). Challenges included technology infrastructure, lack of technical support, a changed learning environment and more responsibility for workload (Carolan et al, 2020, Jackson and Usher, 2022, Giltenane and Smith, 2023).

Due to the minimum requirement for practical placement experience on nursing programmes, this posed further challenges for nursing students and faculty (Collado-Boira et al., 2020, Jackson et al., 2020). Student nurses rely on clinical placement exposure to become competent practitioners (Jackson et al., 2020) which was limited during COVID-19. Therefore, nursing educators were required to become flexible and innovative for students to meet clinical requirements of their programmes within an online teaching environment. Faculty included novel clinical experiences and adapted feedback accordingly (Jackson et al., 2020). Both faculty and students' experiences of using online teaching and learning platforms during COVID-19 pandemic require exploration to improve didactic strategies in nursing education.

The Review

Exploring the literature on students and faculty experiences of online teaching and learning will consider how technology supports teaching and learning theory and practice and will assist the design and delivery of effective online teaching and learning in future programmes. The findings from this review provide rich interpretations relating to the impact of online teaching and learning and enable a greater understanding of student and faculty experiences, views, beliefs and priorities (Flemming et al., 2019, 2021). While there is vast literature published on student and faculty experiences of online teaching and learning, this review looked at global research published since February 2020 during the COVID-19 pandemic to identify students and educators' adaptation to online teaching and learning.

Synthesising literature on nursing students and faculty experiences of online teaching and learning during the COVID-19 Pandemic could assist the design and delivery of effective online teaching in future programmes. It could identify the essential supports required and professional development needs of both faculty and students to improve teaching methodologies assisted by technology and create a flexible environment for students and faculty.

Even though most universities globally have returned to traditional face-to-face teaching in recent years (Ilankoon et al., 2022, Giltenane and Smith, 2023), it is worthwhile to consider the concerns shared to enhance nursing education and supports for students and educators. Lessons and skills learned during the COVID-19 pandemic should not be lost but advanced to improve content delivery across nursing and midwifery programmes (Giltenane and Smith, 2023) particularly as some aspects of educational content, delivery of materials can be more effective online (Tavares et al., 2016, Jones et al., 2020). Identifying students and faculty experiences could identify if investing in curriculum development to incorporate online pedagogical approaches may enhance nursing education globally.

Aim and Research Question

The aim of this review was to systematically synthesize nursing students and nursing and midwifery faculty experiences of online, blended or distance teaching or learning during the COVID-19 pandemic. The following research question guided this review: what are the experiences of student nurses and faculty with online teaching and learning during the COVID-19 pandemic.

Method

Qualitative Evidence Synthesis

Qualitative evidence synthesis (QES), '*is a type of systematic review that brings together the findings from primary qualitative research in a systematic way'* generating useful knowledge (Flemming and Noyes, 2021, p. 1). Primary qualitative studies are synthesised and more powerful explanations are made with the aim of developing new cumulative knowledge (Flemming et al., 2021, Noyes et al., 2022). In doing this, findings are identified that may not have been seen as important in a single qualitative study, and more powerful explanations are made (Carroll, 2017). QES is an umbrella term for all the different approaches associated with the systematic review of qualitative evidence. A QES may be conducted as a stand-alone review or as part of a larger mixed-methods review of complex interventions (Flemming et al., 2019, Flemming and Noyes, 2021, Noyes et al., 2022).

There are number of different types of QES and the type chosen depends on a number of factors (Booth et al., 2018, Noyes et al., 2019, Flemming et al., 2019). Some methods are designed primarily to develop findings at a descriptive level and provide relevant information to guide the development of policy and practice (Glenton et al., 2022). Methods such as meta-ethnography and theory building approaches to thematic synthesis have the capacity to develop new theory (Noyes et al., 2018, Flemming et al., 2019, Glenton et al., 2022).

Thematic synthesis, framework synthesis and meta-ethnography are the most common methods to produce syntheses (Glenton et al., 2022). Glenton et al. (2022) suggests that authors will typically find that they cannot select an appropriate synthesis method until the pool of available qualitative evidence has been thoroughly scoped. Following a thorough scope of relevant literature, the approach chosen for both QES was Best Fit Framework Synthesis (Carroll, 2017). Best Fit Framework Synthesis (BFFS) combines thematic synthesis with an applicable

framework to systematically organise data into an *a priori* conceptual framework (Carroll, 2017, Flemming and Noyes, 2021).

This review presents the triangulation of two distinct qualitative evidence syntheses guided by the BFFS approach to strengthen individual review findings (Patton, 2002, Golafshani, 2003). One systematically synthesised recent research on nursing and midwifery faculty experience of online teaching during the COVID-19 pandemic and the other systematically synthesised student nurses' experiences of online learning during COVID-19 pandemic (Giltenane and Dowling, 2023). Chickering and Gamson's (1987, p.2) Seven Principles for Good Practice in Undergraduate Education Framework guided both individual QES as this was a clear and fitting framework to apply to support both syntheses. Themes from the a *priori* framework were further revised for this triangulated review (see Table 1). The Cochrane Effective Practice and Organisation of Care reporting guidelines guided both reviews (Glenton et al., 2022).

Table 1. Chickering and Gamson's (1987, p.2) Seven Principles for Good Practice in Undergraduate Education Framework (adapted for each QES)

Themes for a *priori* Framework	Revised Themes following Best Fit Framework Synthesis Students' Experiences	Revised Themes following Best Fit Framework Synthesis Faculty Experiences	Revised Themes following Best Fit Framework Synthesis Triangulated Students' and Faculty Experiences
Encourages Contacts Between Students and Faculty	Encourages Contacts Between Students and Faculty	Encouragement of Student and Faculty Exchange	Contact Between Students and Faculty Lost Online
Develops Reciprocity and Cooperation Among Students	Develops Reciprocity and Cooperation Among Students	Development of Student Reciprocity and Quality Engagement	Develops Reciprocity and Cooperation Among Students
Uses Active Learning Techniques	Uses Active Learning Techniques	Encouragement of Active Learning	Attempted to Use Active Learning Techniques
Gives Prompt Feedback	Gives Prompt Feedback	Restricted Feedback	Feedback and Reassurance
Emphasis Time on Task	Emphasis Time on Task	Emphasis of Time on Task	Work-Life Balance
Communicates High Expectations	Communicates High Expectations	Communication of High Expectations	Managing Expectations
Respects Diverse Talents and Ways of Learning	Respects Diverse Talents and Ways of Learning	Respect for Diverse Talents and Ways of Learning	Blended Learning the Future of Nursing Programmes

Search Methods

Using the PEO (population, exposure, outcome) and PICo (Population, interest, context) frameworks, we identified the main concepts for the research questions and developed the search strategies for both syntheses. A systematic search of electronic databases was undertaken using databases identified in Table 2. The search strings for all databases is also presented in Table 1 and were adapted accordingly for each database. Recognised methods of qualitative data collection including interviews, focus groups and participant observation (Noyes et al., 2022) and rich data from open ended survey responses were included (Flemming et al., 2019, Noyes et al., 2022, Glenton et al. 2022).

Table 2. Search Strings, Databases and Inclusion Criteria

Student Experiences (2020-2021) Searching complete November 2021 PEO Framework	Faculty Experiences (2020-2023) Searching Complete May 2023 PICo Framework
Student Experience Search String	**Faculty Experience Search String**
"Online Learning" OR "Blended Learning" OR "Hybrid Learning" OR "Distance learning" OR "Self-Directed Learning" OR "Directed Learning" OR "Virtual Learning" AND "COVID-19" OR "Pandemic" OR "Coronavirus" OR "SARS-COV-2" AND "student nurs*" OR "undergraduate nurs*" OR "postgraduate nurs*" AND "experience" OR "view" OR "perspective" OR "perception" OR "attitude" AND "qualitative" OR "mixed method*" OR "focus group*" OR "interview*" OR "observation*" OR "phenomen*" OR "grounded theory*" OR "ethnograph*" OR "lifeworld" OR "conversation analysis" OR action research OR hermeneutic OR narrative OR content analysis OR colaizzi* OR "Heidegger" OR "van Manen" OR "Merleau Ponty" OR "Husserl" OR "questionnaire"	"COVID-19" OR "Pandemic" OR "Coronavirus" OR "SARS-COV-2" AND "Nurs* faculty" OR "midwifery faculty" OR "Nurs* lecturer" OR "Midwife Lecturer" OR "Nurs* University Teacher" OR "Midwife University Teacher" OR "Nurs* Tutor" OR "Midwife Tutor" AND "experience" OR "view" OR "perspective" OR "perception" OR "attitude" AND "qualitative" OR "mixed method*" OR "focus group*" OR "interview*" OR "observation*" OR "phenomen*" OR "grounded theory*" OR "ethnograph*" OR "lifeworld" OR "conversation analysis" OR action research OR hermeneutic OR narrative OR content analysis OR colaizzi* OR "Heidegger" OR "van Manen" OR "Husserl" OR "questionnaire"
Student Experience Databases	**Faculty Experience Databases**
• Cinahl • PubMed • Medline	• Academic Search Complete • AMED - The Allied and Complementary Medicine

Student Experiences (2020-2021) Searching complete November 2021 PEO Framework	Faculty Experiences (2020-2023) Searching Complete May 2023 PICo Framework
Student Experience Search String	**Faculty Experience Search String**
• Education Full Text (H.W. Wilson) • ERIC	Database • CINAHL Complete • ERIC • and MEDLINE with Full Text
Student Experience Inclusion Criteria	**Faculty Experience Inclusion Criteria**
• Studies in English. • Qualitative and/or mixed method studies (interviews, direct observation, focus groups, participation action research, grounded theory, phenomenology, ethnography, content analysis, thematic analysis, narrative analysis, generic qualitative studies) with primary data to include nursing students' experiences or perceptions of online learning, blended or distance learning during COVID-19 Pandemic • Studies published between February 2020 and November 2021	• Studies in English. • Qualitative and/or mixed method studies (interviews, direct observation, focus groups, participation action research, grounded theory, phenomenology, ethnography, content analysis, thematic analysis, narrative analysis, generic qualitative studies) with primary data to include nursing or midwifery faculty' experiences or perceptions of online teaching, blended or distance teaching during COVID-19 Pandemic. • Studies published between February 2020 and May 2023.

Search Outcomes, Screening and Inclusion Criteria

Across both QES, the initial searches generated 417 studies. As an additional search for systematic reviews (Piasecki et al., 2018) Google Scholar generated 113 studies. The results of the search strategies were saved in Endnote. Following removal of duplicates, 437 studies were uploaded to Rayyan, an online screening tool (Ouzanni et al., 2016). After two authors independently reviewed titles and abstracts, 47 studies were included for full-text screening. Two authors independently read the full texts and agreement was reached on excluding 24 studies and including 22 studies across both QES (see Figure 1 PRISMA Flow Diagram). One study (Smith et al., 2021) was included in both QES.
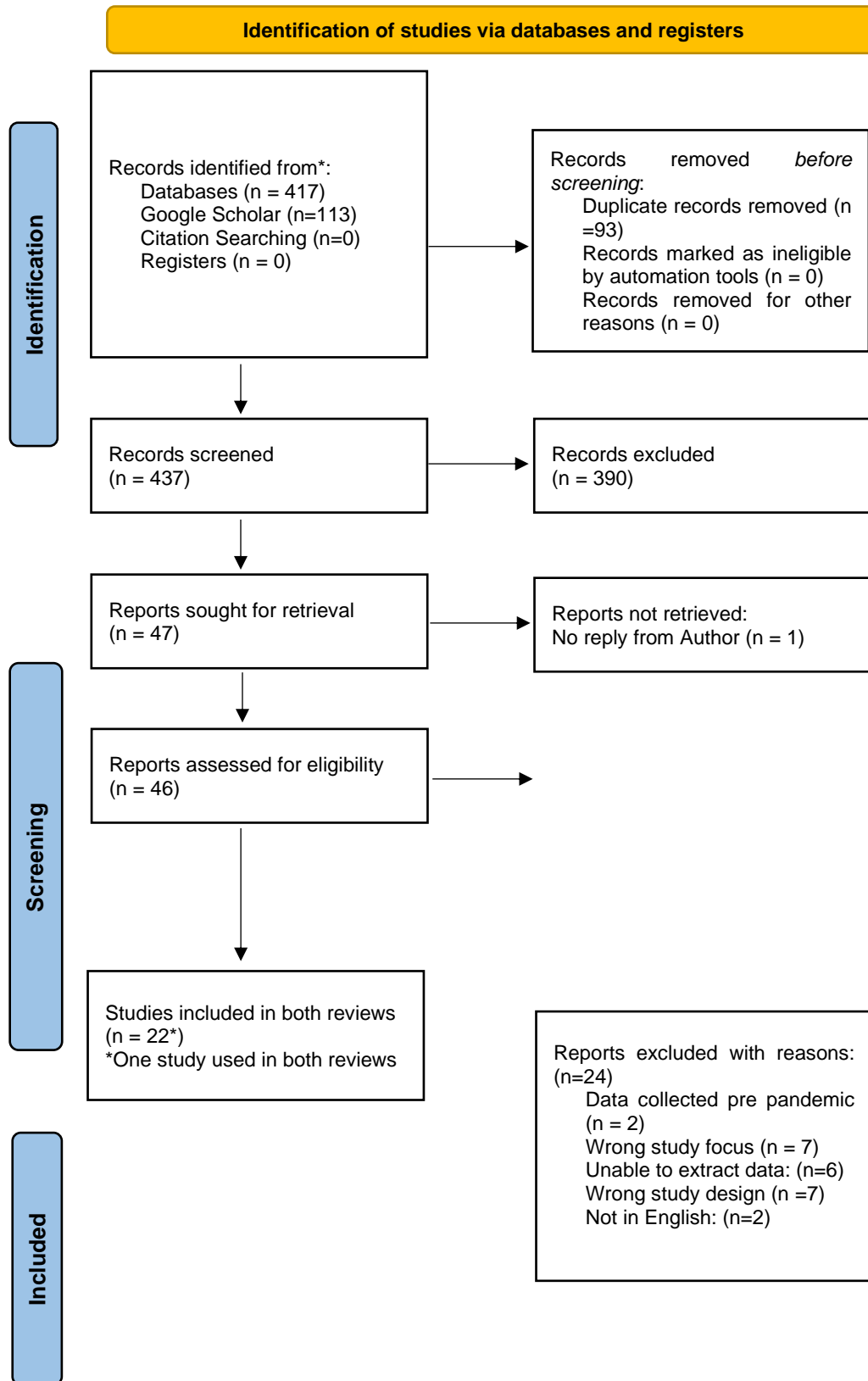
Figure 1. Combined PRISMA Flow Diagram

Appraisal Process, Data Extraction and Data Analysis

Data were imported and analysed thematically using NVivo software for qualitative data analysis. Twenty-two studies across both QES were imported and analysed. Line by line coding was conducted and themes organised within an a *priori* BFF Chickering and Gamson's (1987) Seven Principles for Good Practice in Undergraduate Education. Both authors independently extracted data. The findings consist of verbatim quotations from participants within the studies and researchers' understandings.

As is recommended as best practice to maintain the primary study data during the extraction and synthesis steps, detailed contextual and methodological information is reported in Table 4 (Characteristics of Included studies) (Noyes et al., 2019, Glenton et al., 2022). An assessment of methodological limitations was undertaken using the Assessment of Methodological Limitations-EPOC Guidelines (Modified Critical Appraisal Skills Programme (CASP) qualitative assessment tool) (CASP, 2018, Glenton et al., 2022) and presented in Table 2.

There were mainly no concerns with the included studies' validity, results, and relevance, however, researcher reflexivity was not apparent or unclear in 13 studies. There was insufficient evidence that ethical issues were considered in two studies (see Table 3). Omitting reflexivity reduced the quality rating of the study as reflexivity is a key requirement for qualitative empirical research (Flemming and Noyes, 2021). Assessment of confidence in the overall findings was undertaken using four criteria: methodological limitations, coherence, relevance, and adequacy as outlined in GRADE CERQual (Lewin et al., 2018) and were mainly ranked high confidence (see Table 4).

Table 3. Assessment of Methodological Limitations (Modified CASP)

Study ID	Was the Context Described?	Was the Sampling Strategy Appropriate and described?	Was the data collection strategy appropriate and described?	Was the Data Analysis appropriate and described?	Were the findings supported by evidence?	Is there evidence of Researcher reflexivity?	Have Ethical Issues been taken into Consideration?	Overall assessment of methodological Limitations
Choi et al 2022	Yes	Mostly	Yes	Yes	Yes	No	Yes	Moderate
Farsi et al 2021	Yes	Mostly	Yes	Yes	Yes	No	Yes	Moderate
Gazza 2022	Yes	Yes	Yes	Yes	Yes	Mostly	Yes	Minor
Hopkins et al 2022	Yes	Yes	Insufficient	Yes	Yes	No	Yes	Moderate
Iheduru-Anderson & Foley 2021	Yes	Yes	Yes	Yes	Yes	No	Yes	Minor to Moderate
Kunaviktikul et al 2022	Yes	Yes	Yes	Yes	Yes	No	Yes	Minor to Moderate
McKay et al 2022	Yes	Mostly	Yes	Yes	Yes	No	Yes	Moderate
Nabolsi et al	Yes	Mostly	Yes	Yes	Yes	Insufficient	Yes	Minor to

2021								Moderate
Sacco & Kelly 2021	Yes	Insufficient	Mostly	Yes	Yes	No	Yes	Moderate
Sarkar et al 2022	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Minor
Smith et al 2021*	Yes	No	Yes	Yes	Yes	Insufficient	Yes	Minor to Moderate
Watson et al 2023	Yes	Insufficient	Yes	Yes	Yes	No	Insufficient	Moderate to Severe
Aldridge and McQuagge 2021	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Minor
Bdair 2021	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Minor
Jimenez-Rodriquez et al 2020	Yes	Yes	Yes	Yes	Yes	Insufficient	Yes	Minor to Moderate
Kang et al 2021	Yes	Insufficient	Yes	Yes	Yes	Yes	Yes	Minor
Langegard et al 2021	Yes	Insufficient	Yes	Yes	Yes	Yes	Insufficient	Minor to Moderate
Mambwe and Tembo 2021	Yes	Insufficient	Yes	Yes	Yes	No	No	Moderate to Severe
Ramos-Morcillo et al 2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Minor
Ropero-Padilla et al 2021	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Minor
Suliman et al 2021	Yes	Yes	Yes	Yes	Yes	No	Yes	Minor to Moderate
Wallace et al 2021	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Minor
*included in both syntheses								

Table 4. Grade CERQual Confidence in Review Findings

Contact between Students and Faculty Lost Online			
Summary of review finding	**Studies contributing to the review finding**	**CERQual assessment of confidence in the evidence**	**Explanation of CERQual assessment**
Finding 1: Communication and interpersonal relationships essential for effective online teaching and learning	Aldridge and McQuagge, 2021, Bdair, 2021, Smith et al., 2021, Ramos-Morcillo et al., 2020, Gazza et al 2022, Hopkins et al., 2022, Iheduru-Anderson and Foley, 2021, Kunaviktikul et al., 2022, McKay et al., 2022, Nabolsi et al., 2021, Sarkar et al., 2022	High Confidence	No concerns regarding relevance, coherence or methodological limitations. Minor concerns regarding adequacy in one study (Hopkins et al., 2022).
Finding 2: Students identified that online learning	Bdair, 2021, Ramos-Morcillo et al., 2020, Smith et al., 2021 Hopkins et al.,	High Confidence	No concerns regarding relevance, coherence or

improved communication with faculty. However, Faculty described online teaching as inhibiting rapport between students and faculty.	2022, McKay et al., 2022, Nabolsi et al., 2021, Sarkar et al., 2022		methodological limitations. Minor concerns regarding adequacy in one study (Hopkins et al., 2022).
Finding 3: Human touch was seen as a means of motivation and engagement in online teaching and learning platforms. However, the interactive learning through body language and eye contact was reported to be lost online	Bdair, 2021, Smith et al. 2021, Wallace et al., 2021, Suliman et al., 2021, Ramos-Morcillo et al., 2020, Gazza 2022, Kunaviktikul et al., 2022, Sarkar et al., 2022, Nabolsi et al., 2021	High Confidence	No concerns regarding relevance, coherence, adequacy or methodological limitations.
Finding 4: Without clear instruction, a visible course structure and effective communication, stress for students can increase while learning online	Aldridge and McQuagge, 2021, Langegard et al., 2021, Sarkar et al., 2022	High Confidence	No concerns regarding relevance, coherence, adequacy or methodological limitations.
Develops Reciprocity and Cooperation among Students			
Summary of review finding	**Studies contributing to the review finding**	**CERQual assessment of confidence in the evidence**	**Explanation of CERQual assessment**
Finding 5: Students and faculty supported each other and learned together	Aldridge and McQuagge,et al., 2021, Wallace et al 2021, Farsi et al., 2021, Gazza 2022, Iheduru-Anderson and Foley, 2021, McKay et al., 2022, Sarkar et al., 2022	High Confidence	No concerns regarding relevance, coherence, adequacy or methodological limitations.
Finding 6: Online teaching and learning restricted motivation and was isolating for students and faculty. Faculty felt their ability to be creative was limited and hindered student motivation online	Aldridge and McQuagge, 2021, Bdair, 2021, Kang et al., 2021, Langegard et al., 2021, Suliman et al., 2021, Wallace et al., 2021, Hopkins et al., 2022, Sarkar et al., 2022, Choi et al., 2022, Iheduru-Anderson and Foley, 2021, Hopkins et al., 2022, Smith et al., 2021, Kunaviktikul et al., 2022.	High Confidence	No concerns regarding relevance or coherence. Minor concerns regarding adequacy in one study (Hopkins et al., 2022) and methodological limitations in one study (Langegard et al., 2021).
Finding 7: Online group work was identified by students as a good motivator where students were motivated to learn together in groups	Jimenez-Rodriguez et al., 2020, Kang et al., 2021, Langegard et al., 2021, Ropero-Padilla et al., 2021, Smith et al., 2021, Wallace et al., 2021.	High Confidence	No concerns regarding relevance or coherence. Minor concerns regarding adequacy in one study (Jimenez-Rodriguez et al., 2020) and methodological limitations in one study (Langegard et al., 2021).
Attempted to Use Active Learning Techniques			
Summary of review finding	**Studies contributing to the review finding**	**CERQual assessment of confidence in the**	**Explanation of CERQual assessment**

			evidence
Finding 8: Good active learning techniques improved motivation, concentration and engagement among students.	Gazza, 2022, Kunaviktikul et al., 2022, Sarkar et al., 2022, Smith et al., 2021, McKay et al., 2022, Aldridge and McQuagge, 2021, Bdair, 2021, Jimenez-Rodriguez et al., 2020, Kang et al., 2021, Langegard et al., 2021, Ropero-Padilla et al., 2021, Smith et al., 2021, Suliman et al., 2021, Wallace et al., 2021	High Confidence	No concerns regarding relevance or coherence. Minor concerns regarding adequacy in one study (Jimenez-Rodriguez et al., 2020) and methodological limitations in one study (Langegard et al., 2021).
Finding 9: Faculty challenged themselves to incorporate active learning to achieve student engagement and meet student expectations	Gazza, 2022, Kunaviktikul et al., 2022, Sarkar et al., 2022, Smith et al., 2021, McKay et al., 2022 Aldridge and McQuagge, 2021, Jimenez-Rodriguez et al., 2021, Kang et al., 2021, Ropero-Padilla et al., 2021, Wallace et al., 2021, Iheduru-Anderson and Foley 2021,	High Confidence	No concerns regarding relevance, coherence or methodological limitations. Minor concerns regarding adequacy in one study (Jimenez-Rodriguez et al., 2020).
Finding 10: When little planning or innovation is incorporated by the educator, students complained of lack of motivation, lack of attention and difficulty learning.	Bdair, 2021, Ramos-Morcillo et al., 2020, Ropero-Padilla et al., 2021, Wallace et al., 2021, Choi et al., 2022, Sarkar et al., 2022	High Confidence	No concerns regarding relevance, coherence, adequacy or methodological limitations.
Feedback and Reassurance			
Summary of review finding	**Studies contributing to the review finding**	**CERQual assessment of confidence in the evidence**	**Explanation of CERQual assessment**
Finding 11: Attention from faculty and availability of faculty was reported as being limited due to online teaching and learning	Bdair, 2021, Ramos-Morcillo et al., 2020, Ropero-Padilla et al., 2021 Wallace et al., 2021, Smith et al., 2021	High Confidence	No concerns regarding relevance, coherence, adequacy or methodological limitations.
Finding 12: Educators were committed to student learning and incorporated timely constructive feedback for students	Aldridge and McQuagge, 2021, Jimenez-Rodriquez et al., 2020, Iheduru-Anderson and Foley 2021, Sarkar et al., 2022, Smith et al., 2021	High Confidence	No concerns regarding relevance, coherence or methodological limitations. Minor concerns regarding adequacy in one study (Jimenez-Rodriguez et al., 2020).
Finding 13: Faculty found it very difficult to provide appropriate clinical practice feedback and reassurance to students given the lack of clinical exposure.	Ramos-Morcillo et al., 2020, Smith et al., 2021, Suliman et al., 2021, McKay et al., 2022, Iheduru-Anderson and Foley, 2021, Nabolsi et al., 2021	High Confidence	No concerns regarding relevance, coherence, adequacy or methodological limitations.
Work-life Balance			
Summary of review finding	**Studies contributing to the review finding**	**CERQual assessment of confidence in the**	**Explanation of CERQual assessment**

			evidence
Finding 14: Online learning allowed for greater flexibility, increased technological skill development, increased student's knowledge, made information more readily available and allowed students to study in different ways and at their own pace.	Bdair, 2021, Langegard et al., 2021, Mambwe and Tembo, 2021, Smith et al., 2021, Suliman et al., 2021, Wallace et al., 2021, Kang et al., 2021, Ropero-Padilla et al., 2021	High Confidence	No concerns regarding adequacy, relevance or coherence. Minor concerns regarding methodological limitations in two studies (Langegard et al., 2021, Mambwe and Tembo, 2021).
Finding 15: Faculty complained about a lack of work-life balance.	Choi et al., 2022, Iheduru-Anderson and Foley, 2021, Sacco and Kelly, 2021, Farsi et al., 2021, Gazza 2022, Nabolsi et al., 2021, McKay et al., 2022, Hopkins et al., 2022, Kunaviktikul et al., 2022	High Confidence	No concerns regarding relevance, coherence or methodological limitations. Minor concerns regarding adequacy in two studies (Hopkins et al., 2022, Sacco and Kelly, 2021).
Finding 16: Faculty were unprepared to transition from traditional face-to-face teaching to online delivery.	Choi et al., 2022, Iheduru-Anderson and Foley, 2021, Sacco and Kelly, 2021, Farsi et al., 2021, Gazza 2022, Nabolsi et al., 2021, McKay et al., 2022, Hopkins et al., 2022, Kunaviktikul et al., 2022, Bdair, 2021, Mambwe and Tembo, 2021, Ropero-Padilla et al., 2021, Ramos-Morcillo et al., 2021, Smith et al., 2021, Suliman et al., 2021, Wallace et al., 2021.	High Confidence	No concerns regarding relevance or coherence. Minor concerns regarding adequacy in two studies (Hopkins et al., 2022, Sacco and Kelly, 2021) and methodological limitations in one study (Mambwe and Tembo, 2021)
Finding 17: Resources and support from information technologists and management were required for successful online teaching and learning.	Choi et al., 2022, Gazza, 2022, Iheduru-Anderson and Foley, 2021, McKay et al., 2022, Nabolsi et al., 2021, Farsi et al., 2021, Sarkar et al., 2022, Smith et al., 2021, Suliman et al., 2021	High Confidence	No concerns regarding relevance, coherence, adequacy or methodological limitations.
Managing Expectations			
Summary of review finding	**Studies contributing to the review finding**	**CERQual assessment of confidence in the evidence**	**Explanation of CERQual assessment**
Finding 18: During the transition to online learning, both faculty and students had high expectations of themselves.	Ramos-Morcillo et al., 2020, Aldridge and McQuagge, 2021, Langegard et al., 2021, Choi et al., 2022, Hopkins et al., 2022, Iheduru-Anderson and Foley, 2021, McKay et al., 2022, Smith et al., 2021, Nabolsi et al., 2022, Bdair, 2021, Suliman et al., 2021, Wallace et al., 2021	High Confidence	No concerns regarding relevance or coherence. Minor concerns regarding adequacy in one study (Hopkins et al., 2022) and methodological limitations in one study (Langegard et al., 2021).
Finding 19: Students remained centre of the teaching and learning process during online teaching and	Bdair, 2021, Langegard et al., 2021, Suliman et al., 2021, Wallace et al., 2021, Iheduru-Anderson and Foley, 2021, McKay et al., 2022, Smith et al.,	High Confidence	No concerns regarding relevance or coherence. Minor concerns regarding adequacy in one study (Sacco and Kelly, 2021) and

learning	2021, Nabolsi et al., 2021, Sacco and Kelly, 2021, Watson et al., 2023		methodological limitations in two studies (Langegard et al., 2021, Watson et al., 2023).
Finding 20: Faculty needed to manage student expectations of them to maintain boundaries	Iheduru-Anderson and Foley, 2021, McKay et al., 2022, Smith et al., 2021, Nabolsi et al., 2021, Sacco and Kelly, 2021, Watson et al., 2023	High Confidence	No concerns regarding relevance or coherence. Minor concerns regarding adequacy in one study (Sacco and Kelly, 2021) and methodological limitations in one study (Watson et al., 2023).
Finding 21: Effective communication is imperative so students can fully understand what is expected of them	Smith et al., 2021, McKay et al., 2022	Moderate Confidence	Some concerns in adequacy due to limited richness and quality of data.

Blended Learning the Future of Nursing Programmes			
Summary of review finding	**Studies contributing to the review finding**	**CERQual assessment of confidence in the evidence**	**Explanation of CERQual assessment**
Finding 22: Students and faculty became competent in teaching and learning online over time.	Choi et al., 2022, Hopkins et al., 2022, McKay et al., 2022, Watson et al., 2023, Bdair, 2021, Jimenez-Rodriguez et al., 2020, Ramos-Morcillo et al., 2020, Ropero-Padilla et al., 2021, Suliman et al., 2021, Wallace et al., 2021, Iheduru-Anderson and Foley, 2021	High Confidence	No concerns regarding relevance or coherence. Minor concerns regarding adequacy in two studies (Hopkins et al., 2022, Jimenez-Rodriguez et al., 2020) and metholological limitations in one study (Watson et al., 2023)
Finding 23: Faculty did their best to accommodate students varying learning abilities which was appreciated by students	Farsi et al., 2021, Iheduru-Anderson and Foley, 2021, Sacco and Kelly, 2021, McKay et al., 2022, Sarkar et al., 2022, Aldridge and McQuagge, 2021, Bdair, 2021, Jimenez-Rodriguez et al., 2020, Kang et al., 2021, Langegard et al., 2021, Mambwe and Tembo, 2021, Ramos-Morcillo et al., 2021, Ropero-Padilla et al., 2021, Smith et al., 2021, Suliman et al., 2021, Wallace et al., 2021	High Confidence	No concerns regarding relevance or coherence. Minor concerns regarding adequacy in two studies (Jimenez-Rodriguez et al., 2020, Sacco and Kelly, 2021) and metholological limitations in two studies (Langegard et al., 2021, Mambwe and Tembo, 2021)
Finding 24: A preferred hybrid model of teaching and learning illuminated where clinical placement and real-life exposure to patients were identified as essential components	Farsi et al., 2021, Iheduru-Anderson and Foley, 2021, Sacco and Kelly, 2021, McKay et al., 2022, Sarkar et al., 2022, Aldridge and McQuagge, 2021, Bdair, 2021, Jimenez-Rodriguez et al., 2020, Kang et al., 2021, Langegard et al., 2021, Mambwe and Tembo, 2021, Ramos-Morcillo et al., 2021, Ropero-Padilla et al., 2021, Smith et al., 2021, Suliman et al., 2021, Wallace et al., 2021, Nabolsi et al., 2021, Choi et al., 2022, Hopkins et al., 2022, Gazza, 2022, Kunaviktikul et al., 2022, Watson et al., 2023, Kang et al., 2021	High Confidence	No concerns regarding relevance or coherence. Minor concerns regarding adequacy in four studies (Hopkins et al., 2022, Jimenez-Rodriguez et al., 2020, Mambwe and Tembo, 2021, Sacco and Kelly, 2021) and metholological limitations in three studies (Langegard et al., 2021, Mambwe and Tembo, 2021, Watson et al., 2023)

Reflexivity Statement

A reflexive stance was maintained throughout all stages of the review process from the selection of studies to data synthesis as is recommended for QES (Haigh and Withell, 2020, Flemming and Noyes, 2021, Glenton et al., 2022). Both authors are experienced nurse educators and have experience in undertaking qualitative evidence syntheses. Both authors are registered nurses with experience of teaching online during the COVID-19 pandemic. Discussion took place throughout the process including selecting the study sample, agreeing on the 'best fit' framework, and analysing and synthesising the findings. MG also has experience of online learning during the COVID-19 pandemic. Based on shared and individual experiences (as clinicians, academics, researchers and students), the findings of this review reveal a combination of organisational, professional and individual factors influencing online teaching and learning. Authors were mindful of presuppositions to minimise the risk of biasing the analysis or the interpretation of the findings. A reflexive journal was kept throughout the review process documenting and reflecting on progress and decisions made.

Results

Overview of Included Papers

Across both reviews, 17 qualitative studies and five mixed method studies were included, reporting on 376 students' experiences of online learning and 248 nursing and midwifery faculty experiences of online teaching during the COVID-19 Pandemic. Rich qualitative data were captured in the mixed method studies included (Flemming et al., 2019). Nine studies were undertaken in the USA, three in Spain, two in Korea and Jordan with the remaining in Saudi Arabia (n=1), Sweden (n=1), Zambia (n=1), Iran (n=1), Australia (n=1) and one study included participants from five countries in Southeast Asia. Three studies (Choi et al., 2022, Farsi et al., 2021, Ropero-Padilla et al., 2021) carried out in person interviews, one study provided the option of online or in person interviews (Smith et al., 2021), three studies collected data over the telephone (Gazza, 2022, Iheduru-Anderson and Foley, 2021, Bdair, 2021), one via photovoice (Kunaviktikul et al., 2022) and three used open-ended survey responses (Hopkins et al., 2022, Sacco and Kelly, 2021, Jimenez-Rodriguez et al., 2020). All other data were collected online (n=11) (McKay et al., 2022, Nabolsi et al., 2021, Sarkar et al., 2022, Watson et al., 2023, Aldridge and McQuagge, 2021, Kang et al., 2021, Langegard et al., 2021, Suliman et al., 2021, Wallace et al., 2021, Mambwe and Tembo, 2021, Ramos-Morcillo et al., 2021). Study characteristics are outlined in Table 5.

Table 5. Study Characteristics for Both Syntheses

Characteristics of Included Studies (Students)				n=11
Author/Year /Country	**Design/Method**	**Sample**	**Analysis**	**Study Focus**
Aldridge and McQuagge 2021 USA	Phenomenological individual interviews (Online)	8 undergraduate nursing students Snowball sampling	Thematic Analysis Braun and Clark 6 step	The lived experience of undergraduate nursing students learning psychomotor skills during the COVID-19 Pandemic
Bdair 2021 Saudi Arabia	Descriptive phenomenological Semi-structured	10 undergraduate nursing students 10 faculty (not	Thematic analysis Spielberg 3 step	Nursing students' and faculty members' perspectives/lived experience of online learning

	interviews (Telephone)	included in synthesis) Purposive sampling		during COVID-19. (Advantages, challenges and recommendations)
Jimenez-Rodrıguez et al. 2020 Spain	Mixed method (satisfaction questionnaire and qualitative open ended interview questions)	48 nursing students	Thematic analysis on qualitative data	Nursing students satisfaction and experience of video conferencing during COVID-19
Kang et al. 2021 Korea	Qualitative study using three focus group interviews (Online)	14 undergraduate nursing students (Recruitment Not specified)	Content Analysis	Nursing students' experience of online peer tutoring based on the Goal–Reality–Options–Will (GROW) model.
Langegard et al. 2021 Sweden	Qualitative and quantitative Qualitative-2 Focus group interviews (Online)	9 Undergraduate Nursing students (Recruitment Not specified)	Qualitative content analysis	Describe and evaluate nursing students' experiences of the pedagogical transition from traditional campus based learning to distance learning using digital tools.
Mambwe and Tembo 2021 Zambia	Cross-sectional Qualitative study 6 focus group interviews (Online)	60 3rd year and 4th year nursing students (Recruitment Not specified)	Thematic coding analysis	Exploring nursing students' experiences of e-learning as they pursued Midwifery Course during the pandemic.
Ramos-Morcillo et al. 2020 Spain	Qualitative study Semi-structured interviews (Online)	32 bachelors and masters nursing students Maximum variation sampling and snowball sampling	Inductive thematic analysis	Discover the learning experiences and the expectations about the changes in education, in light of the abrupt change from face-to-face to e-learning education, of nursing students during COVID-19 pandemic (1st Month online)
Ropero-Padilla et al. 2021 Spain	Qualitative study using 16 focus group semi structured interviews (In Person)	149 2nd and 3rd year undergraduate nursing students Convenience sampling	Content analysis	Explore nursing students' experiences and perceptions of the use of game elements in two full-nursing subjects using a blended-learning teaching strategy.
Smith et al. 2021 USA	Qualitative descriptive design (2 Faculty, 3 Student) Focus Group Interviews (In Person and Online)	17 Undergraduate, Masters and Doctoral Student nurses 15 faculty (Not included in synthesis) Purposive sampling	Thematic Content Analysis	This study examined perceptions of online teaching effectiveness from nursing faculty and student perspectives.
Suliman et al. 2021 Jordan	Descriptive qualitative guided by a phenomenological approach 2 focus groups (Online)	18 Undergraduate nursing students Purposive sampling	Content analysis	To investigate the experiences of undergraduate nursing students during their first uses of OL to increase the understanding of their encountered opportunities and challenges.
Wallace et al. 2021 USA	Descriptive Qualitative using phenomenological approach Semi-structured	11 undergraduate nursing students Purposive sampling	Colazzi's Phenomenological reduction	Explore prelicensure nursing students' experiences of the transition to remote learning during the Spring 2020 semester.

interviews (Online)

Characteristics of Included Studies (Faculty)				n=12
Author/ Year/ Country	**Design/Method**	**Sample**	**Analysis**	**Study Focus**
Choi et al 2022 Korea	Qualitative study Focus group interviews (In person)	19 Nursing Professors	Thematic Analysis Braun and Clarke	Laboratory and clinical teaching experiences of nursing professors during the COVID-19 pandemic.
Farsi et al 2021 Iran	Qualitative Study Semi Structured Interviews (In Person)	6 Nursing Administrators and Professors 7 Nursing Students (only faculty data extracted)	Conventional Content Analysis Graneheim and Lundman method	To explain the impact of the COVID-19 pandemic on nursing education from administrators, educators, and students' perspectives.
Gazza 2022 USA	Hermeneutic Phenomenological Approach Individual Interviews (Telephone)	14 Academic Nurse Educators	Data, in the form of transcribed interviews, were analyzed using Barritt et al.'s (1984) five-step process	To uncover the experience of being a full-time academic nurse educator (ANE) in a baccalaureate or higher degree nursing program during the COVID-19 pandemic.
Hopkins et al 2022 USA	A qualitative descriptive design Open ended survey	11 nursing faculty	Content Analysis	The purpose of this study was to explore faculty teaching experiences as they transitioned to a virtual Doctor of Nursing Practice residency.
Iheduru-Anderson & Foley 2021 USA	Descriptive Phenomenology Telephone webex interviews	41 Nursing Faculty	Inductive Thematic Analysis	To explore the experiences of associate degree nurse faculty who transitioned to online teaching during the early months of the COVID-19 pandemic
Kunaviktikul et al 2022 South East Asia	Descriptive Qualitative Design Photovoice	52 students (only faculty data extracted) 28 Nursing faculty	Thematic Analysis	To explore the experiences of nursing students and faculty members as related to online education during the COVID-19 pandemic.
McKay et al 2022 USA	Qualitative Descriptive Semi Structured interviews (Online)	19 Nursing Faculty	Conventional Content Analysis	To describe the experiences of baccalaureate nursing clinical faculty transitioning from in-person clinical teaching to emergency remote clinical teaching during the COVID-19 pandemic
Nabolsi et al 2021 Jordan	Qualitative descriptive design guided by a phenomenological approach Focus Groups (Online)	15 Nursing Faculty	Qualitative analysis, using Colaizzi's method	The purpose of this study is to explore the first experience of nursing faculty members with online distant education (ODE) within the context of COVID-19 national curfew.
Sacco & Kelly 2021 USA	Mixed Method-Survey	49 Faculty Responses to open	Thematic analysis of the responses to the	To describe nursing faculty experiences during the COVID-19

	One open-ended question at the end of the survey	ended question	open-ended question was conducted using the Braun and Clarke (2006) methodology.	pandemic
Sarkar et al 2022 Australia	Mixed Methods Survey and Focus Groups and Individual Interviews (Online)	Data included 476 surveys and seven focus group interviews with 26 students, and 95 surveys and 17 individual interviews with educators.	Qual data: Ritchie and Spencer's (34) five-stage framework analysis.	This paper explored healthcare students' and educators' adaptability experiences to remote education
Smith et al 2021 USA	Qualitative Descriptive Focus Groups (In Person and Online)	15 Faculty 17 Students	Thematic content analysis guided by The Seven Principles of Effective Teaching (Chickering & Gamson, 1987)	To explore perceived characteristics of teaching effectiveness in online education among university college of nursing faculty and students.
Watson et al 2023 USA	Mixed Methods Survey Open Responses and Focus Groups (Online)	14 Faculty in total (7 Faculty Focus Groups) 104 students	Grounded theory content analysis for open survey responses and focus group data- Triangulation of data	The purpose of this study was to determine pre-licensure baccalaureate nursing student and nursing faculty perceptions of the effectiveness of various online teaching modalities.

Analytic Themes

Contact Between Students and Faculty Lost Online

Both students and faculty described communication and interpersonal relationships between students and faculty as essential for effective online teaching and learning (Aldridge and McQuagge, 2021, Bdair, 2021, Smith et al., 2021, Ramos-Morcillo et al., 2020, Gazza et al 2022, Hopkins et al., 2022, Iheduru-Anderson and Foley, 2021, Kunaviktikul et al., 2022, McKay et al., 2022, Nabolsi et al., 2021, Sarkar et al., 2022). Some contradictions were seen across studies in relation to online communication quality. Students identified that online learning improved communication with faculty (Bdair, 2021, Ramos-Morcillo et al., 2020, Smith et al., 2021), while faculty described online teaching as inhibiting rapport between students and faculty (Hopkins et al., 2022, McKay et al., 2022, Nabolsi et al., 2021, Sarkar et al., 2022). Students appreciated timely and personal communication with faculty as described by one student: *'reaching out at intervals with a human touch'* (Student, USA, Smith et al., 2021). While this human touch was seen as a means of motivation and engagement in online teaching and learning platforms (Smith et al., 2021, Ramos-Morcillo et al., 2020, Wallace et al., 2021), faculty believed human touch was lost online:

> *"We lost the role model in online teaching…Students gain not only knowledge in the face-to-face classes but also attitudes, discipline, teamwork, and morals. Students and teachers exchange thoughts, worries and fears. The online teaching lacks the human touch and caring. We were talking to a laptop screen."*
> (Faculty, Jordan, Nabolsi et al., 2021)

Both students and faculty reported a lack of interaction between students and faculty (Bdair, 2021, Smith et al. 2021, Wallace et al., 2021, Suliman et al., 2021, Gazza 2022, Kunaviktikul et al., 2022, Sarkar et al., 2022). The interactive learning through body language and eye contact was reported to be lost online (Bdair, 2021, Ramos-Morcillo et al., 2020, Wallace et al., 2021). The following quotes highlight the difficulty of online communication:

'*discussion, reflection, learning from others, camaraderie and interpersonal relations are lost in online classes*' (Student USA, Smith et al., 2021)

"*…students need to have the basic knowledge and skills…online teaching cannot replace the face-to-face teaching, especially in nursing practice*" (Faculty, Southeast Asia, Kunaviktikul et al., 2022)

'*I just really miss the live interaction with the students…you just can't have the same interactions with the students over Zoom…I enjoy seeing them. I enjoy sitting and talking with them."* (Faculty, USA, Gazza, 2022)

Other students have reported that without clear instruction, a visible course structure and effective communication, stress for students can increase while learning online (Aldridge and McQuagge, 2021, Langegard et al., 2021). Student stress was conveyed by faculty due to the limited interaction:

"*(…) It is I guess, more difficult to keep up with students who maybe you are a little be concerned about, and that comes back to the body language, how they're interacting with their teammates and things like that. I felt like that was, I was a bit more removed from that."* (Faculty, Australia, Sarkar et al., 2022)

Develops Reciprocity and Cooperation among Students

During the emergency situation both students and faculty reported supporting each other and learning together (Aldridge and McQuagge,et al., 2021, Wallace et al 2021, Farsi et al., 2021, Gazza 2022, Iheduru-Anderson and Foley, 2021, McKay et al., 2022, Sarkar et al., 2022):

"*[…] I was helpless. I didn't know how to access the e-learning platform until my colleagues helped me step by step […]"* (Student, Jordan, Suliman et al., 2021)

"*I mean the collaborative relationships between faculty, it was great, I think, it brought out the best of us…,"* (Faculty, USA, Iheduru-Anderson and Foley, 2021)

"*I think there's been a lot of resource sharing. … I think that's been a definite positive people being willing to say, yeah, sure, have a look at my Moodle site, take what you need."* (Faculty, Australia, Sarkar et al., 2022)

However, both students and faculty identified that online teaching and learning restricted motivation and was

isolating (Aldridge and McQuagge, 2021, Bdair, 2021, Kang et al., 2021, Langegard et al., 2021, Suliman et al., 2021, Wallace et al., 2021). Faculty felt that students were less likely to take online education seriously (Hopkins et al., 2022, Kunaviktikul et al., 2022, Sarkar et al., 2022):

> *'I did feel helpless. I had little motivation for learning, and I suffered from depression in other quality of life domains.'* (Student, Korea, Kang et al., 2021)

> *"I think from a teacher's perspective, I find it very difficult because you can't, you're not getting any feedback from students. And if they're not turning their cameras on or they're not engaging, it's very hard. So you're chatting to this screen and you're not getting anything back*." (Faculty, Australia, Sarkar et al., 2022)

The use of online group work was identified by students as a good motivator where students were motivated to learn together in groups (Jimenez-Rodriguez et al., 2020, Kang et al., 2021, Langegard et al., 2021, Ropero-Padilla et al., 2021, Smith et al., 2021, Wallace et al., 2021). However, faculty felt their ability to be creative was limited and thus hindered student motivation online (Choi et al., 2022, Iheduru-Anderson and Foley, 2021, Sarkar et al., 2022, Hopkins et al., 2022, Smith et al., 2021, Kunaviktikul et al., 2022).

> *"There was so much guilt, stress, and anxiety. I have never taught online or even taken a class online, so I felt like I was failing the students somehow."* (Faculty, USA, Iheduru-Anderson and Foley, 2021)

Attempted to use Active Learning Techniques

Both students and faculty identified good active learning techniques as a way of improving motivation, concentration and engagement among students (Gazza, 2022, Kunaviktikul et al., 2022, Sarkar et al., 2022, Smith et al., 2021, McKay et al., 2022, Aldridge and McQuagge, 2021, Bdair, 2021, Jimenez-Rodriguez et al., 2020, Kang et al., 2021, Langegard et al., 2021, Ropero-Padilla et al., 2021, Smith et al., 2021, Suliman et al., 2021, Wallace et al., 2021). Despite limited online teaching experience, faculty challenged themselves to incorporate active learning to achieve student engagement (Gazza, 2022, Kunaviktikul et al., 2022, Sarkar et al., 2022, Smith et al., 2021, McKay et al., 2022):

> *"(...) you want to see students learn, you want to challenge yourself in the way that you deliver content and get students involved and interactive. ... I think the intrinsic interest is really important*." (Faculty, Australia, Sarkar et al., 2022)

When little planning or innovation is incorporated by the educator, students complained of lack of motivation, lack of attention and difficulty learning (Bdair, 2021, Ramos-Morcillo et al., 2020, Ropero-Padilla et al., 2021, Wallace et al., 2021, Choi et al., 2022, Sarkar et al., 2022):

> *'Most classes consisted of three hours of sitting and listening to someone talk while doing nothing. It*

was tedious and repetitive' (Student, Spain, Ropero-Padilla et al., 2021)

"I think I just carried out an absurd practice with a dummy on the screen. Unsurprisingly, I received feedback from the students that it was very disappointing" (Faculty, Korea, Choi et al., 2022).

Students reported innovative teaching techniques such as virtual simulations, simulated consultations, learning through gamification, discussion boards, teamwork using breakout rooms or online huddles, video chats, and video blogs to be much more effective, motivating, engaging, interactive, interesting, and fun, meaning skills were learned in a practical way (Aldridge and McQuagge, 2021, Jimenez-Rodriguez et al., 2021, Kang et al., 2021, Ropero-Padilla et al., 2021, Wallace et al., 2021, Smith et al., 2021, Kang et al., 2021, Ropero-Padilla et al., 2021, Smith et al., 2021). Faculty did there best to meet student expectations and incorporate active learning techniques (Gazza, 2022, Iheduru-Anderson and Foley 2021, Sarkar et al., 2022, Smith et al., 2021).

"I sat and figured it out…[I] run some mock meetings with family and friends so it is a zero stress environment…it becomes important to give a perception to the attendees that you actually know what you're doing." (Faculty, USA, Gazza, 2022)

Feedback and Reassurance

Some students reported late or lack of feedback in relation to their assignments and identified *'grades being a significant motivator'* (Author, USA, Smith et al., 2021). Attention from faculty and availability of faculty was also reported as being limited due to online learning (Bdair, 2021, Ramos-Morcillo et al., 2020, Ropero-Padilla et al., 2021 Wallace et al., 2021, Smith et al., 2021):

'[I] wasn't able to go to talk to my professors and after class, it felt like the professors were already so busy trying to plan for the next lesson. And sometimes they just wouldn't respond to our emails when we had questions.' (Student, USA, Wallace et al., 2021).

On the contrary, students and faculty reported that educators were committed to student learning and incorporated timely constructive feedback for students (Aldridge and McQuagge, 2021, Jimenez-Rodriquez et al., 2020). Faculty put in extra effort to gain students' trust and to make sure that the students were supported (Iheduru-Anderson and Foley 2021, Sarkar et al., 2022, Smith et al., 2021):

'I think back to the class last semester where the professor, half-way through the week, would comment on each of our discussion strings and post questions which made us think a little deeper. I respected that she was engaged and actually forced you to pay attention.' (Student, USA, Smith et al., 2021)

"Being kind and supportive to the students was really my priority, I know it was stressful for everyone, but many of the students were vulnerable in many ways. Nursing education is stressful without the added stress of navigating everything online without much support." (Faculty, USA, Iheduru-Anderson and

Foley, 2021)

> *"I know I am being effective when I finally get the students to trust me enough to be willing to come forward and say, 'I am having this issue and what do I do next?"* (Faculty, USA, Smith et al., 2021)

However, educator engagement through feedback in all aspects of the programme not just the academic side '*was identified as a key component of teaching effectiveness'* (Smith et al., 2021, p. 790). Students longed for feedback and reassurance from educators in relation to competency and evaluation of practical skills (Aldridge and McQuagge, 2021, Ramos-Morcillo et al., 2020, Smith et al., 2021, Suliman et al., 2021):

> '*I'm afraid of having bad training and that the work exchange says that this year's promotion from the University of Granada do not have the competences necessary'* (Student, Spain, Ramos-Morcillo et al., 2020)

While faculty were vested in student success and were "*not going to allow them to fail after coming so far*" (Faculty, USA, Iheduru-Anderson and Foley, 2021) they found it very difficult to provide appropriate clinical practice feedback to students given the lack of clinical exposure. Faculty were unable to '*observe*' students' clinical practice and found online teaching of clinical skills a limitation of nursing education during the COVID-19 pandemic (McKay et al., 2022, Iheduru-Anderson and Foley, 2021, Nabolsi et al., 2021):

> "*Being able to observe students in clinical practice is, I mean, much of what you use to evaluate them is based on your observations, how they interact with patients. How they interact with one another, how they interact with the staff so you didn't have? I did not have that. I had to depend on what they wrote in their logs and the conversations I had with them, so I think that that is somewhat of a disadvantage when you're doing this kind of clinical experience. (...)"* (Faculty, USA, McKay et al 2022)

Work-life Balance

Students overwhelmingly identified that online learning allowed for greater flexibility, increased technological skill development, increased their knowledge, made information more readily available and allowed students to study in different ways and at their own pace. Elimination of commuting time allowed for a more work-life balance and more time to study for students (Bdair, 2021, Langegard et al., 2021, Mambwe and Tembo, 2021, Smith et al., 2021, Suliman et al., 2021, Wallace et al., 2021, Kang et al., 2021, Ropero-Padilla et al., 2021):

> '*It's really flexible, I can log-on and work at my own pace. In the beginning I was a little sceptical, but now I feel that I learn a lot through online. I think it's really effective for the adult learner. We are adults, we have work, family, and school. We can log in at whatever time, day or night. I really like the options online learning provides.*' (Student, USA, Smith et al., 2021)

Meanwhile faculty complained of a lack of work-life balance (Choi et al., 2022, Iheduru-Anderson and Foley,

2021, Sacco and Kelly, 2021, Farsi et al., 2021, Gazza 2022, Nabolsi et al., 2021, McKay et al., 2022, Hopkins et al., 2022, Kunaviktikul et al., 2022). Faculty described personal and work life as 'borderless' (Kunaviktikul et al., 2022) and exhausting (Iheduru-Anderson and Foley, 2021, Sacco and Kelly, 2021):

> *"I have taught for over 15 years in nursing education, but the last four months have all but burned me out. It has become an obsession because you never seem to get away from the work, and there is no balance. I am up at 6 am and still at it at 9 pm. Students are stressed and need more reassurance. I just don't have much more to give. I am retiring at the end of this."* (Faculty, USA, Iheduru-Anderson and Foley, 2021)

Both students and faculty acknowledged that faculty were unprepared to transition from traditional face-to-face teaching to online delivery. While faculty spent countless hours accommodating students for effective online teaching without the appropriate knowledge or technology to support their efforts (Choi et al., 2022, Iheduru-Anderson and Foley, 2021, Sacco and Kelly, 2021, Farsi et al., 2021, Gazza 2022, Nabolsi et al., 2021, McKay et al., 2022, Hopkins et al., 2022, Kunaviktikul et al., 2022), students felt that they wasted their time because of the inconsistent use of online platforms across faculty (Bdair, 2021, Mambwe and Tembo, 2021, Ropero-Padilla et al., 2021, Ramos-Morcillo et al., 2021, Smith et al., 2021, Suliman et al., 2021, Wallace et al., 2021). Faculty admitted it was a case of *"trial and error. When a new strategy was unsuccessful, We [the faculty] had to come up with another idea."* (Faculty, USA, Gazza, 2022).

Students recommended being consistent with platform use across modules (Smith et al., 2021, Suliman et al., 2021). Both students and faculty identified requiring resources and support from Information Technology and management so they could spend less time *'figuring it out'* (Choi et al., 2022, Gazza, 2022, Iheduru-Anderson and Foley, 2021, McKay et al., 2022, Nabolsi et al., 2021, Farsi et al., 2021, Sarkar et al., 2022 Smith et al., 2021, Suliman et al., 2021):

> *"I had to learn the technical skills of e-learning by myself, it took me long hours of hard work, day, and night to prepare the lessons and search for resources like videos on YouTube and upload to Moodle [Virtual Learning Environment]. I was physically and mentally drained."* (Faculty, Jordan, Nabolsi et al., 2021)

> *"I think management support is of utmost importance. We need to have unity of command in decision-making, and we are also in need of support. If decisions are made, they can be implemented, provided that there are upstream orders. As a whole, the support by managers and commanders always matters."* (Faculty, Iran, Farsi et al., 2021)

> *'I had to find ways to be creative, to learn how to do a lot of the nursing tasks. And so my creativity expanded. I made my own tools. I made my own Foley catheters... I taught classes with a few of my peers. So after we do our classes we get together and do our own classes to make sure that we got everything out of the lecture.'* (Student, USA, Wallace et al., 2021)

Managing Expectations

During the transition to online teaching and learning, both faculty and students had high expectations of themselves (Ramos-Morcillo et al., 2020, Aldridge and McQuagge, 2021, Langegard et al., 2021, Choi et al., 2022, Hopkins et al., 2022, Iheduru-Anderson and Foley, 2021, McKay et al., 2022, Smith et al., 2021, Nabolsi et al., 2022). Students became self-directed independent learners, faculty were determined to succeed which enhanced their creativity and developed their thinking and problem-solving skills (Bdair, 2021, Langegard et al., 2021, Ramos-Morcillo et al., 2020, Suliman et al., 2021, Wallace et al., 2021, Choi et al., 2022, Hopkins et al., 2022, Iheduru-Anderson and Foley, 2021, McKay et al., 2022, Smith et al., 2021, Nabolsi et al., 2022):

> *'It just...was hard. I felt like I had to teach myself most of the semester... It was just very overwhelming and we...a lot of us struggled with that, especially. Um, so yeah, I had to make use of a lot of my own resources, um [...] because the lecture just wasn't sufficient enough in my opinion.'* (Student, USA, Aldridge and McQuagge, 2021)

> *"This experience was a response to a crisis we faced as faculty, our determination to succeed was our motivation to overcome obstacles and fulfil our expected roles as teachers, counsellors and supporters of our students even if it was on the expense of our personal and family time."* (Faculty, Jordan, Nabolsi et al., 2021)

While it was evident from both faculty and student perspectives that the student remained centre of the teaching and learning process (Bdair, 2021, Langegard et al., 2021, Suliman et al., 2021, Wallace et al., 2021) faculty also needed to manage student expectations of them to maintain boundaries (Iheduru-Anderson and Foley, 2021, McKay et al., 2022, Smith et al., 2021, Nabolsi et al., 2021, Sacco and Kelly, 2021, Watson et al., 2023):

> *"I had to make sure that the students understand that I cannot be available to them at all hours of the day and week. It was not fair to me."* (Faculty, USA, Iheduru-Anderson and Foley, 2021)

> *(...) my students needed continuous support, but I was tired of the number of calls and messages, with no time boundaries, I received calls at night that I had to deal with in such crisis, it was exhausting to me."* (Faculty, Jordan, Nabolsi et al., 2021)

Students perceived assignment overload in the online environment (Bdair, 2021, Smith et al., 2021, Wallace et al., 2021) and a lack of communication and coordination among educators (Suliman et al., 2021, Wallace et al., 2021). Students highlighted that effective communication is imperative so they fully understand what is expected of them (Smith et al., 2021). Being explicit about expectations and being flexible and understanding as an educator were also acknowledged as a means of decreasing student anxiety (Smith et al., 2021, McKay et al., 2022):

> *"I think, you know, being flexible and understanding that there are certain things...that can happen and, you know, [being] understanding about it."* (Faculty, USA, McKay et al., 2022)

"*anxiety is present in students at all levels…if the course expectations are clear, students do not feel like you are going to spring something on them that they weren't expecting…clear expectations are so important for decreasing anxiety.*" (Faculty, USA, Smith et al., 2021)

Blended Learning the future of Nursing Programmes

Both students and faculty identified that they were navigating unchartered territory online. However, over time faculty and students became competent in teaching and learning online (Choi et al., 2022, Hopkins et al., 2022, McKay et al., 2022, Watson et al., 2023, Bdair, 2021, Jimenez-Rodriguez et al., 2020, Ramos-Morcillo et al., 2020, Ropero-Padilla et al., 2021, Suliman et al., 2021, Wallace et al., 2021, Iheduru-Anderson and Foley, 2021). The online skills learned were identified as useful skills for future nursing practice and education:

'Due to this health emergency situation, teleconferencing with a patient now serves as an experience for the future' (Student, Spain, Jimenez-Rodriguez et al., 2020)

"*(...) it was an opportunity to enhance my expertise and confidence in online teaching and will integrate it in my courses in the future.*" (Faculty, Jordan, Nabolsi et al., 2021).

"*(...) I feel that this is going to make me a better instructor because I am going to use all of the tricks in my bag that I have learned.*" (Faculty, USA, Watson et al., 2023)

Even though faculty were learning by doing through trial and error, they did their best to accommodate students varying learning abilities and adapted well to teaching online (Farsi et al., 2021, Iheduru-Anderson and Foley, 2021, Sacco and Kelly, 2021, McKay et al., 2022, Sarkar et al., 2022). Students acknowledged and appreciated that faculty used different media to accommodate their learning abilities (Aldridge and McQuagge, 2021, Bdair, 2021, Jimenez-Rodriguez et al., 2020, Kang et al., 2021, Langegard et al., 2021, Mambwe and Tembo, 2021, Ramos-Morcillo et al., 2021, Ropero-Padilla et al., 2021, Smith et al., 2021, Suliman et al., 2021, Wallace et al., 2021):

"*I learned a lot of new things. I had never heard about Google forms before this crisis, but I learned very quickly. I used it to create evolving case studies to augment the clinical learning for the students.*" (Faculty, USA, Iheduru-Anderson and Foley, 2021)

"*Change happens all the time and how to adapt change… is such an integral part of managing this whole situation in all aspects of our lives, not just in teaching.*" (Faculty, Australia, Sarkar et al., 2022)

'*It's really flexible, I can log-on and work at my own pace. In the beginning I was a little sceptical, but now I feel that I learn a lot through online. I think it's really effective for the adult learner. We are adults, we have work, family, and school. We can log in at whatever time, day or night. I really like the options online learning provides.*' (Student, USA, Smith et al., 2021)

While using online platforms was seen as a better and more flexible way of teaching and learning (Ropero-Padilla et al., 2021, Suliman et al., 2021), preferences differed among participants across all studies and a preferred hybrid model of teaching and learning illuminated:

> *'It is good to listen to the lecture and watch videos, but we prefer to have face-to-face discussions'* (Student, Jordan, Suliman et al., 2021).

> *"I am really grateful that we have this technology (...) in some ways I think we had better discussions. We were able to cover more topics and concepts in content in different scenarios in the online experience, but of course then they missed the actual thing."* (Faculty, USA, McKay et al., 2022)

A consistent theme that emerged across all studies was that online teaching and learning was not sufficient for students to learn practical hands-on skills. Clinical placement and real-life exposure to patients were identified as essential components to become a competent nurse (Nabolsi et al., 2021, Iheduru-Anderson and Foley, 2021, Aldridge and McQuagge, 2021, Wallace et al., 2021):

> *'(…) "oh, this is practice" but it's not. It's clicking on a button to introduce yourself or to take the blood pressure and there's no emphasis on skills in my opinion.'* (Student, USA, Aldridge and McQuagge, 2021)

> *'It really makes a difference to be in-person and hands-on with nursing classes… it's one thing to recite the steps of doing something, but it's different when you're actually doing it and it felt very hard and stressful to know that I wasn't able to practice it fully.'* (Student, USA, Wallace et al., 2021)

> *"The core of nursing curriculum is clinical practice that prepares nursing students to their future career. Developing nursing competencies requires hands-on-training that is difficult to accomplish virtually."* (Faculty, Jordan, Nabolsi et al., 2021)

Discussion

This review presents what is known about nursing students and faculty experiences of online teaching and learning during the COVID-19 pandemic. Findings from two distinct QES have been triangulated to strengthen the findings of each. One QES synthesised the experiences of students and the other the experiences of faculty. Students and faculty experiences of online teaching and learning were during an emergency remote response to a global pandemic, and many had limited or no previous experience of online teaching or learning.

While there were mixed experiences of effective online communication between students and faculty, our review highlighted that communication and interpersonal relationships are essential for effective online teaching and learning so that students gain feedback and understand what is expected of them. Many others agree that effective communication and interpersonal relationships are essential for effective online teaching and learning (Mills et

al., 2016, Tavares et al., 2016, Jones et al., 2020, Shorey et al., 2022). However, our review identified that faculty felt that online teaching inhibited rapport and communication with students, while many students found communication had improved online. Our review demonstrated that faculty were available, supportive, understanding and flexible. Post et al. (2017) and Jones et al. (2020) both identified that meaningful interactions between students and faculty include faculty's online presence, engagement, flexible approaches to learning, availability, course organization, opportunity to get feedback about courses from students, arranging for additional student learning opportunities, exhibiting flexibility and understanding of life issues, providing timely responses, seeing students in person, providing detailed feedback, and conveying a desire for students to be successful. Mills *et al.* (2016) further suggests that online communication is an excellent medium for social interaction.

A key finding of our triangulated QES was that both students and faculty felt that online teaching and learning was isolating and restricted motivation. However, group work was identified as a good motivator where students learned together. Mills et al. (2016) identified that small group teamwork encourages participation and rapport. Evidence suggests that well-designed online or blended learning programmes using digital tools that support interaction and teamwork is imperative for student engagement and offsets isolation (Mills et al., 2016, Tavares et al., 2016, Jones et al., 2020, Shorey et al., 2022). Faculty in our review challenged themselves to incorporate active learning to achieve student engagement and meet student expectations. Our review highlights that where good active learning techniques were implemented (or attempted) it improved motivation, concentration and engagement among students. Others have identified that courses need to be engaging and can be transformed into effective and efficient high-quality student-centred education*,* once students and faculty are furnished with supports and training in the use of online platforms (Carolan et al., 2020, Jones et al., 2020, Leidl et al., 2020, Berga et al., 2021, Kang et al., 2021, Shorey et al., 2022 Huai et al., 2024).

Our review identified that students remained the centre of the teaching and learning process and faculty went over and beyond to support them. Annand (2011, p. 49), whose research is in the field of distance education, suggests that it is the teacher's actions and attitudes, and subject structure that is "the best prescription for effective online learning." Annand (2011) and Jones et al. (2020) identify that it is the caring nature of lecturers and the role modelling that is key for successful student outcomes. The professional identity of nurses is closely connected to the concept of caring, as such it is necessary for nursing students to observe caring behaviours in their educational environment (Beck, 2001). Jones et al. (2020) also specify that one way that nursing students learn the behaviours consistent with professional nursing practice is through role modelling. Faculty who role model caring behaviour contribute to the positive formation of future health professionals (Jones et al., 2020). Sitzman (2019) agrees and suggests that to successfully progress with online education in nursing programmes, faculty must respect, protect and model core caring values while teaching online. However, Jones et al. (2020) found that nursing faculty who may be confident conveying caring behaviours in the traditional classroom and in the clinical environment where they are able to engage and interact with students in person can be less certain that these caring behaviours translate to the online teaching environment.

Furthermore, our review found that caring behaviours was reciprocal as both groups supported each other and themselves through the transition to online teaching and learning. Jones et al. (2020) specified that students are

expected to reciprocate faculty caring and take responsibility for their own learning and behaviours. Online caring behaviours is displayed when mutual trust and respect are present and both students and faculty want to help each other succeed (Jones et al., 2020) which was evident in our review.

While our triangulated review highlighted that students and faculty were not prepared to transition to online teaching and learning platforms and did so through trial and error without the appropriate managerial and information technology supports, students and faculty became competent teaching and learning online over time. Many challenges were identified, however, both parties enjoyed the flexibility and identified that some components were better online which is not unique to this review (Hall et al., 2012, Jones et al., 2020, Leidl et al., 2020, Berga et al., 2021, Ilankoon et al., 2022, Shorey et al., 2022). Despite the challenges of online teaching and learning that illuminated within this synthesis, online education has proven to be an effective teaching and learning strategy in the training of nurses (Tavares et al., 2016, Jones et al., 2020 Huai et al., 2024, Wu, 2024) and thus should be nourished within Nursing and Midwifery programmes. A very recent systematic review and meta-analysis carried out by Huai (2024) and colleagues identified that many online teaching methods can effectively enhance students' learning satisfaction and improve knowledge in comparison to traditional teaching methods. Many authors suggest that as online programmes for nursing education continue to grow, nursing faculty must develop strategies for engaging with and supporting students in this form of distance learning (Bramer, 2020, Jones et al., 2020, Langegard et al., 2021).

However, and not surprisingly, both students and faculty in our review strongly highlight that clinical placement and in-person skills training are essential components of nursing training which has also been highlighted by others (Shorey et al., 2022, Thirsk et al., 2023). While online teaching can improve and complement traditional teaching and favours the production and exchange of knowledge, as well as stimulating autonomy (Tavares et al., 2016), a preferred hybrid model of teaching and learning illuminated combining practical, traditional and a mix of online teaching methods to accommodate student learning styles which has also been highlighted by many others (Ilankoon et al., 2022, Shorey et al., 2022, Usher et al., 2022, Thirsk et al., 2023). Many have suggested that by incorporating the best components to deliver the content leads to improved student engagement than online learning solely (Tavares et al., 2016, Jones et al., 2020, Leidl et al., 2020, Shorey et al., 2022, Usher et al., 2022, Thirsk et al., 2023).

Our review together with others (Tavares et al., 2016, Carolan et al., 2020, Jones et al., 2020, Giltenane and Dowling, 2023) have suggested that to be successful within online platforms, transitioning to online teaching and learning requires organizational support. There is an opportunity to transform undergraduate nursing curricula, which requires collaboration among Higher Educational Institutions, Clinical Practice Partners and Regulatory Bodies (Carolan et al., 2020, Giltenane and Smith, 2023, Giltenane and Dowling, 2023). This can be achieved by drawing on the lessons learned from emergency remote teaching and traditional teaching to plan and organise teaching and learning effectively (Salmon, 2013, Laurillard et al., 2018, Fawns et al., 2019, Hodges et al., 2020, Moore et al., 2021, Giltenane and Smith, 2023, Huai et al., 2024).

Successfully incorporating online content delivery to curriculum requires organised planning and execution using

an effective framework (Tavares et al., 2016, Jones et al., 2020, De Oliveira et al., 2017). Giltenane and Dowling (2023) suggest an adaptation of a 'Blending with Purpose: The Multimodal Model' (see Figure 2) (Picciano, 2009, Picciano, 2017) '*blending the objectives, activities, and approaches within multiple modalities might be most effective for, and appeal to, a wide range of students*' (Picciano, 2017, p. 178). The key consideration is that pedagogy informs the teaching method that will best support student learning (Picciano, 2017). Giltenane and Dowling (2023) incorporate training, logistical, resource and teacher considerations (see Figure 2) for undergraduate nursing programmes '*where pedagogical objectives and activities drive the approaches, including online technology*' (Picciano, 2017, p. 178). This will support leaders in nursing education to incorporate key considerations for successful planning and implementation in nursing education.
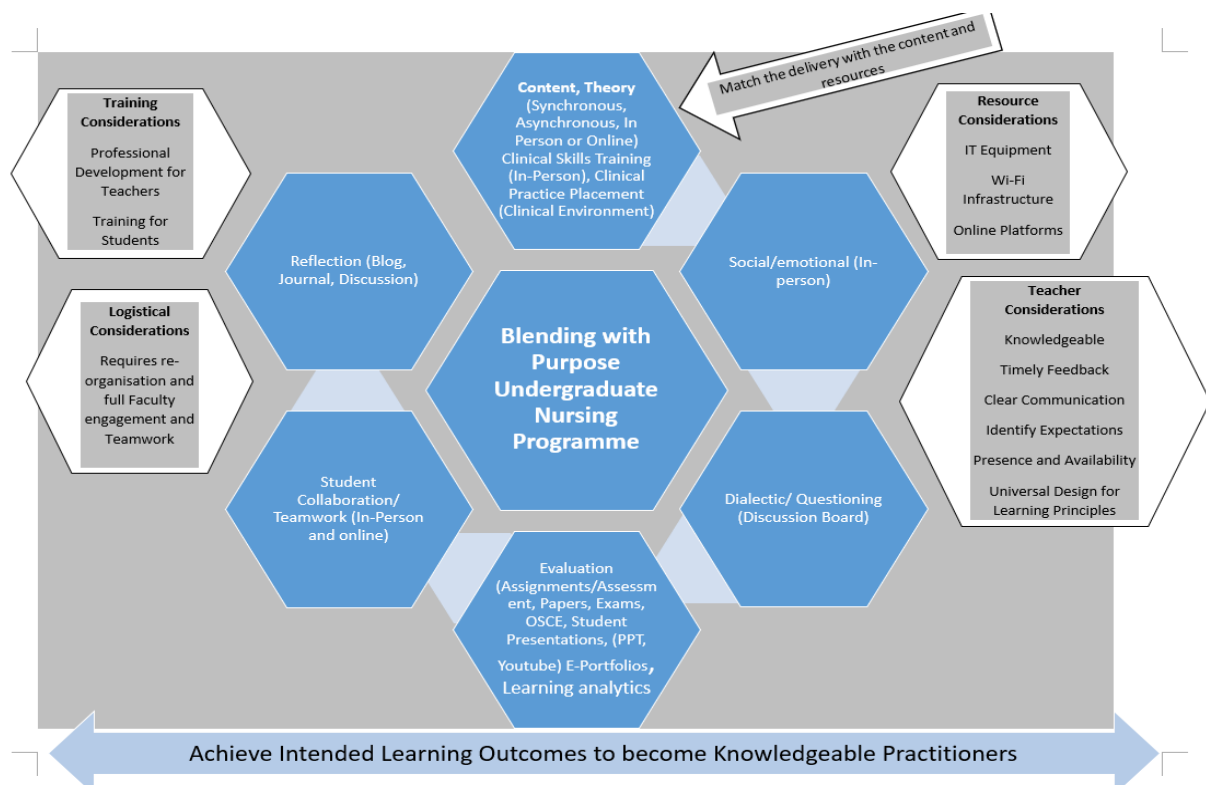

Figure 2. Blending with Purpose: The Multimodal Model for Undergraduate Nursing Programmes with Considerations (Giltenane and Dowling, 2023)

Conclusion

This triangulated QES using BFFS highlights views of both students and faculty in relation to their experiences of online teaching and learning during the COVID-19 pandemic. Through triangulation of heterogenous views and experiences findings are strengthened more so than the individual homogenous QES. Views of both students and faculty were confirmed in most circumstances. Many advantages and challenges of online teaching and learning were identified by both faculty and students. Theory content and group work can be effectively and efficiently taught online but must be engaging and creative using consistent approaches across faculty. Clinical placement was deemed a priority and in person hands on practical skills training was also identified by both groups as imperative for the success of nursing programmes. A preferred hybrid model of teaching and learning

illuminated ensuring the pedagogy supported the teaching approach. Organisational support, training and resources are required for both students and faculty to continue a hybrid model of teaching and learning. Implementation of the 'Blending with Purpose: The Multimodal Model with considerations' (Giltenane and Dowling, 2023) could be an effective framework to guide organisations ensuring the pedagogy guides the teaching approach.

Recommendations

Over four years since the World Health Organisation (2020) declared COVID-19 a pandemic, it would be interesting to gather the experiences of students and faculty now, some of which may have no experience of 'pre COVID' undergraduate nursing programme exposure. It would also be interesting to explore the pedagogical approaches currently being undertaken in universities globally within nursing programmes and explore the reasons for returning to traditional classroom-based teaching and learning or continuing a hybrid approach. Pilot Implementation of the multimodal framework may illuminate additional requirements for universities, students and faculty.

Notes

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