



# Nurse educators' suggestions for a digital educational resource suitable for undergraduate student nurses' placement studies: Qualitative empirical research

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## Abstract

**Aims:** To explore and describe nurse educators' suggestions regarding a digital educational resource addressing quality in placement studies for first-year student nurses in nursing homes.

**Design:** A qualitative, explorative, and descriptive research design.

**Methods:** Focus group interviews with eight nurse educators and individual interviews with six nurse educators. The interviews were audio-recorded and transcribed verbatim; subsequently, data were analysed in lines with content analysis as described by Graneheim and Lundman.

**Results:** The analysis revealed three main categories: 'Suggestions for a digital educational resource to strengthen and support nurse educators' role in follow-up students', 'Suggestions for a digital educational resource to complement and support interaction between stakeholders in placement', and 'Suggestions for a digital educational resource to facilitate student nurses' learning processes'. The categories were captured by the overarching theme, 'A digital educational resource facilitating interaction between stakeholders and students' learning processes'.

**Conclusion:** This study revealed nurse educators' suggestions regarding design elements, content, and use of a digital educational resource addressing placement studies for first-year student nurses' in nursing homes. Implications for the profession and/or patient care: Nurse educators should be involved in designing, developing, and implementing digital educational resources aiming to support student learning in nursing education placement studies.

**Impact:** This study explored nurse educators' suggestions for a digital educational resource. They suggested a digital educational resource to strengthen and support their role, support interaction between stakeholders, and facilitate student nurses' learning processes. Further, they suggested a digital educational resource to be used as a supplement rather than as a replacement for nurse educators' physical presence in placements.

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**Reporting method:** The Consolidated Criteria for Reporting Qualitative Research reporting guidelines were used.

No Patient or Public Contribution.

#### KEYWORDS

assessment, digital clinical pedagogy, digital educational resource, digital learning design, nurse education, placement learning, supervision, web-based learning

## 1 | INTRODUCTION

In Norway, nursing education is a three-year bachelor programme covering 180 credit points, and approximately half of bachelor's nursing programmes involve placement studies (Henriksen et al., 2020). In general, the first placement learning arena for student nurses is nursing homes (Husebø et al., 2018). The complex setting of student nurses' placement period (Dalsmo et al., 2022; Laugaland et al., 2021) is a situated learning arena wherein students are provided with real-life learning experiences that allow them to internalise knowledge and experiences with patients together with nurse educators (henceforth named educators), and registered nurse (RN) mentors (O'Brien & Battista, 2020). A supportive placement setting is crucial for student nurses to have an optimal learning experience (Cant et al., 2021; Dalsmo et al., 2022; Heinonen et al., 2019; Husebø et al., 2018; Laugaland et al., 2021).

However, the shortage of RN mentors is believed to strongly diminish educational quality in clinical placements (Mikkonen et al., 2022; Tehran et al., 2021). Likewise, the quality in placement studies is also challenged due to the shortage of educators (Jarosinski et al., 2022). Educators face complex demands, entailing them to apply diverse pedagogical approaches in multiple learning contexts such as classrooms, simulation training, placement contexts, supervision, mentoring, and assessment (Simmonds et al., 2020). Additionally, establishing and cultivating collaborative partnerships and initiating research or quality development projects in the clinical field is part of the educators' tasks (Cant et al., 2021), often resulting in de-prioritising supervision and support of students in their clinical placements, ultimately threatening the placement quality for students. Moreover, appropriate quality learning opportunities and quality in clinical placement supervision is often at stake (Helminen et al., 2017; Pitkänen et al., 2018; Saukkoriipi et al., 2020). Current realities in clinical placement entail that educators and other stakeholders have to do whatever possible to secure quality in students' placement studies.

The widespread and rapid development of technology and Internet has facilitated the availability and use of digital learning and teaching resources in nursing education (Chen et al., 2021; Gause et al., 2022; Wilson et al., 2022). Thus, a well-designed digital educational resource may act as an innovative educational approach facilitating personalised learning by use of appropriate technological resources (Gause et al., 2022; Regmi & Jones, 2020). Digital educational resources can be entered anytime and anywhere (Regmi

### What does this paper contribute to the wider global clinical community?

- It provides evidence-informed suggestions for a digital educational resource to support students' learning experiences during placement.
- Digital educational resources tailored for placement studies must be designed with key stakeholders, to meet students' educational needs.
- Digital educational resources should supplement learning in placement studies.

& Jones, 2020; Salmani et al., 2022), allowing learners and users to access them in real-time or according to their own schedules, entailing synchronous and asynchronous learning approaches (Gause et al., 2022). This flexibility is a core benefit of digital-based education (Regmi & Jones, 2020). Furthermore, digital educational resources can be self-paced and matched with individuals' learning needs and preparedness (Regmi & Jones, 2020).

Studies addressing digital educational resources have primarily aimed to facilitate learning in an academic setting, and few studies have explored how digital educational resources may facilitate and strengthen student nurses' placement learning (Chen et al., 2021; Gause et al., 2022; Wilson et al., 2022). The use of digital educational resources was found to supplement learning in placement studies by enabling more regular mentoring (Heinonen et al., 2019), and was suggested to enhance interaction with the stakeholders, student nurses, RN mentors, and educators (Laugaland et al., 2020; Wilson et al., 2022). A recent literature review from the students' perspectives by Wilson et al. (2022) reported that student nurses experienced the use of digital educational resources as valuable educational resources that improved their learning experiences during placement. Furthermore, students reported that the use of digital educational resources facilitated timely and efficient communication, improved student engagement, and provided relevant information and pedagogical material (Wilson et al., 2022). Several researchers (Laugaland et al., 2020; Nes et al., 2021), including Wilson et al. (2022), have emphasised the urgent need, as stated by educators, for a deeper understanding of digital educational resources addressing student nurses' placement studies. Thus, this study addresses these issues from the perspectives of educators.

## 2 | BACKGROUND

The quality of situated learning situations in nursing home studies is crucial for student nurses to ultimately achieve positive learning outcomes and develop clinical competence; thus, placement learning in nursing homes is irreplaceable when preparing students for their professional roles (Cant et al., 2021; Dalsmo et al., 2022; Frøiland et al., 2022; Laugaland et al., 2021). However, the quality of student nurses' learning in nursing homes is often found to be unsuitable due to the pedagogical approaches provided by educators (Husebø et al., 2018; Laugaland et al., 2021) and RN mentors (Frøiland et al., 2022; Husebø et al., 2018; Laugaland et al., 2021; Ravik et al., 2017; Rothwell et al., 2021). Due to a shortage of educators (Jarosinski et al., 2022), student nurses are frequently being supervised by hired RNs filling temporary roles as educators, and thus are neither qualified nor prepared to provide supervision tailored to students' formal and individual learning needs. Moreover, collaborative challenges between educators and RN mentors (Christiansen et al., 2021) and the frequent absence of educators in placement settings (Heinonen et al., 2019; Laugaland et al., 2021) represent barriers to students' learning. Further, students' inadequate preparation for the placement might be an obstacle to achieving their learning outcomes (Berhe & Gebretensaye, 2021). In contrast, efforts to develop supportive placement learning settings facilitate student nurses' improved learning satisfaction and competence in performing clinical skills, and in reducing their anxiety (Ravik et al., 2017; Wilson et al., 2022).

Thoughtful integration of technology in nursing education was demonstrated to broaden students' understanding and supported their development of clinical nursing and critical thinking skills (Egilsdottir et al., 2022). Furthermore, student nurses who were engaged in digital educational resources scored higher on satisfaction and academic achievement than those who did not (Chen et al., 2021). Currently, educators' perspectives on digital educational resources addressing placement studies are scarce (Laugaland et al., 2020; Nes et al., 2021; Wilson et al., 2022). However, several studies have suggested that educators should be involved in developing and implementing digital educational resources that address students' learning needs and abilities, and facilitating student supervision and learning during placement studies (Laugaland et al., 2020; Nes et al., 2021; Wilson et al., 2022). Thus, this study responds to these requests by addressing what constitutes a successful digital educational resource from the educators' perspectives with the following research question:

What characterises educators' suggestions regarding design elements, content, and use of a digital educational resource suitable to facilitate first-year student nurses' learning in nursing home placement?

## 3 | THE STUDY

### 3.1 | Aims and objective

To explore and describe educators' suggestions regarding a digital educational resource addressing quality in placement studies for first-year student nurses in nursing homes.

## 4 | METHODOLOGY

### 4.1 | Design

This study is part of a larger study (Laugaland et al., 2020) developing, exploring, evaluating, and testing the benefits of a digital educational resource on several outcomes in first-year student nurses in nursing home placement studies. The current study had an explorative, descriptive, qualitative research design aiming for an in-depth understanding of educators' suggestions for design elements, content, and use of a digital educational resource addressing placement studies for first-year student nurses in nursing homes. The study had an interpretive and constructivist epistemological framework, implying that understanding was constructed through social interaction between researchers and participants (Polit & Beck, 2020).

### 4.2 | Population and sample

Educators teaching and supervising first-year students in nursing home placements were the target population. The educators were full-time employees at a university. Many of the educators had previous experiences as registered nurses in nursing home placement and were knowledgeable in geriatric care. In their educator role, they were responsible for supporting students in developing the knowledge, skills, and clinical judgements necessary to provide safe and effective patient care but did not participate directly in the clinical learning setting.

### 4.3 | Sampling and recruitment

The study applied a purposive sampling strategy to recruit educators from a Norwegian university. After approval from the Vice-Dean of the Faculty of Health Sciences, educators were recruited to participate in the study via an e-mail containing general study information and a waiver of consent. A total of 14 educators provided written consents and were thereafter more deeply informed about the study.

### 4.4 | Sample size power

Malterud et al. (2015) recommendations for sample size power in qualitative studies were used for concluding the number of 14 educators. Malterud et al. (2015) consider that to which degree the qualitative findings are appropriate, depends on the data being explored alongside the study aim, purposive sampling strategies, quality of interview data, and the stringency in methods. We considered the current study's aim to have a clear scope, and thus a sample of 14 educators was satisfactory to reach an in-depth understanding and knowledge of the topic of interest. Moreover, the use of interview guides with follow-up questions, aiming for in-depth analysis through qualitative induction, contributed to the information power.

## 4.5 | Data collection

The digital educational resource was developed step by step. Therefore, two data collection strategies—focus group and individual interviews—were used to gain a comprehensive and in-depth understanding of educators' suggestions from different perspectives and in different phases for a digital educational resource addressing placement studies in nursing homes (Polit & Beck, 2020).

### 4.5.1 | Phase I

A focus group interview with eight educators was conducted in late 2019, using an interview guide addressing educators' suggestions for design elements and content to be integrated with a digital educational resource to optimally facilitate student supervision and learning in nursing home placements. This interview was conducted immediately following a workshop, and the group members were invited to discuss the following issues:

- What design elements do you suggest for a digital educational resource?
- What content do you suggest for a digital educational resource?

This interview was conducted in a meeting room at the university campus by the second author. At the beginning of the focus group session, the author established ground rules, such as respecting others' opinions and avoiding interrupting others. The second author, with a background in nursing education and qualitative research, led the interview session and, when appropriate, asked follow-up questions. The educators engaged in discussion, built upon each other's comments, and were given opportunities to share their views and suggestions. The focus group interview lasted approximately 38 min, was audio-recorded, and transcribed verbatim.

### 4.5.2 | Phase II

Six individual interviews were conducted in early 2022. Prior to the interviews, through a two-hour training session, the six educators had familiarised themselves with an earlier developed pilot digital educational resource that had been designed and partially informed by findings from the focus group interview conducted in Phase I. In order to further improve and develop this prototype digital educational resource, we supplemented the focus group interview with individual in-depth interviews with the educators. The developed interview guide addressed suggestions on issues such as usability, content, learning, collaboration, relevance, use, and utility, with the main interview questions:

- What design elements and content do you suggest would improve the quality of a digital educational resource?

- What are your suggestions regarding digital educational resource use during placement studies in nursing homes?

Due to the COVID-19 pandemic, all the individual interviews were conducted virtually by the first author using Zoom, a video conferencing service for hosting synchronous meetings. Throughout the interviews, a sense of rapport and trust was established, enabling the educators to feel comfortable (Polit & Beck, 2020). The interviews lasted approximately 55–90 min, were audio-recorded, and transcribed verbatim.

## 4.6 | Data analysis

Data gathered through the focus group and individual interviews were merged. Inductive qualitative content analysis, as described by Graneheim and Lundman (2004) and Lindgren et al. (2020), guided the analysis of the transcribed text. This qualitative analysis helped transform large volumes of text into manageable units of information, and to identify key patterns. The analysis entailed a process in which codes, sub-categories, categories, and overarching theme emerged from the transcribed text via inductive abstracting and interpreting, rather than coding the data according to predetermined concepts, categories, or themes. The subsequent steps used in our analysis entailed the following tasks. (1) Re-reading the transcribed text several times to gain a comprehensive understanding of what the participants were talking about. Consequently, important sections of the text were highlighted, and notes regarding areas that required further clarification were taken, e.g., preliminary codes and categories that emerged from the data through re-reading. (2) The transcribed data were reviewed to select which part of the raw data (meaning units) were of analytic relevance, and text related to the research question was identified and marked. (3) Raw data were condensed to reduce the text into manageable meaning units, maintaining their core meaning from the first phase. A more concise statement was created that captured the essential meaning of the original meaning units and accurately represented the original data and was easily manageable for analysis. (4) Each meaning unit was codified, which entailed identifying a condensed phrase, sentence, or paragraph in the text that represented a unique idea with a code. The code was typically a short word or phrase that summarised the condensed content of the meaning unit. After we had labelled each condensed meaning unit with a code, all the codes were reviewed, and those codes that had similar or related content were combined into subcategories. This involved grouping codes together based on their shared characteristics. Subcategories helped to further clarify and organise the data, making it easier to identify patterns that emerged from the analysis. (5) The analytic process entailed reviewing all the subcategories and identifying those that were related or that shared similar characteristics to create broader categories. (6) The final step was to develop the overarching theme of the categories and subcategories. We reviewed and identified

the categories that shared commonalities, and grouped them. This step involved several rounds of reviewing and reorganising until the most meaningful and comprehensive overarching theme was identified.

In summary, the manifest and latent contents were abstracted and interpreted into codes, subcategories, categories, and an overarching theme (Graneheim et al., 2017; Graneheim & Lundman, 2004; Lindgren et al., 2020). The manifest content was, in general, abstracted into subcategories, whereas the subcategories and latent content were interpreted into categories. Analysis by Graneheim et al. (2017) recommended having an overarching theme to act as a 'unifying red thread', providing meaning for the various experiences and manifestations of a topic.

Throughout the analysis, the first and last authors had discussions until consensus on the codes, subcategories, categories, and theme was established. Illustrative quotations were identified to strengthen this research (Graneheim & Lundman, 2004; Lindgren et al., 2020). The quotations have been adjusted to clarify what was said.

#### 4.7 | Ethical considerations

The study was performed in accordance with the ethical principles of the Declaration of Helsinki (World Medical Association, 2013) and was approved by the Norwegian Social Science Data Service (2018/61309 and 489776) and the university included in the study. To ensure confidentiality, participant characteristics such as age, gender, educational background, and years of supervision experience in clinical placement were withheld. All data were anonymised, stored securely to protect private information, and kept confidential.

#### 4.8 | Rigour

Lincoln and Guba (1985) proposed four criteria for ensuring trustworthiness: credibility, dependability, transferability, and confirmability. The first author conducted and audiotaped all the individual interviews, while the second author ensured that all the participants in the focus group interview discussed issues among themselves and with the researcher to ensure the study's consistency and credibility. The use of an interview guide was particularly important to ensure consistency in the data collection regarding individual interviews. The interviews were carefully transcribed and checked for accuracy. The coding and analysis processes were then repeated. Dependability and transferability were established by quoting informants' arguments. The transcripts were frequently referenced during data analysis. Thick descriptions were provided so that those who sought to transfer the findings to their own location could assess transferability. Confirmability was ensured by a clear stepwise description of the data collection and analysis process (Lincoln & Guba, 1985). Moreover, the rich presentation of the findings and quotations, and a table provided for an explicit

overview of the findings, are methodological issues recommended by Graneheim and Lundman (2004), strengthening trustworthiness and credibility.

The Consolidated Criteria for Reporting Qualitative Research (COREQ) reporting guidelines were used to ensure that we transparently detailed the methods used to obtain our findings (Tong et al., 2007).

## 5 | FINDINGS

In the following section, the findings revealed from the analytical process are presented. The overarching theme was a *digital educational resource facilitating interaction between stakeholders and students' learning processes* and consisted of three main categories, each of which comprised additional subcategories (Table 1).

In the following sections, quotations are included from the interviews. Quotations from the individual interviews are marked as 1–6, and the focus group interview is marked as FG.

### 5.1 | Suggestions for a digital educational resource to strengthen and support nurse educators' role in follow-up students

Participants made their suggestions for facilitating the educator's role in developing an understanding of complexities in tasks and consistency during student follow-up.

TABLE 1 Overarching theme, main categories and subcategories.

Overarching theme: A digital educational resource facilitating interaction between stakeholders and students' learning processes	
Main categories	Subcategories
Suggestions for a digital educational resource to strengthen and support nurse educators' role in follow-up students	Contributing to nurse educators' understanding of the complexity of their tasks
	Contributing to nurse educators' acting more uniformly in student follow-up
Suggestions for a digital educational resource to complement and support interaction between stakeholders in placement	A digital educational resource complementing nurse educators' physical presence in placement
	Facilitating the informal interaction between stakeholders
	Strengthening the formal interaction between stakeholders
Suggestions for a digital educational resource to facilitate student nurses' learning processes	Stimulating and facilitating reflective processes
	Providing feedback on students' written works
	Enhancing summative assessment meetings

### 5.1.1 | Contributing to nurse educators' understanding of the complexity of their tasks

Several educators experienced a challenge in mentoring first-year student nurses—who are frequently young and inexperienced—during placement learning in nursing homes. Educators suggested that a digital educational resource should provide guidelines for their roles.

A digital educational resource should make educators aware of their own behaviours when mentoring students. That would be great, because there are no courses on how to act as an educator; we are merely being thrown into it and must do the best we can.

(2)

For educators who work at different educational levels, a digital educational resource should help educators understand what the learning outcomes are for first-year student nurses who undergo placement learning in nursing homes to understand the basics of nursing care.

(5)

Furthermore, some educators requested guidelines on the optimal way to handle challenging situations, particularly when students were at risk of failing because of inadequate progression. Uncertainty about the educators' role often results in dissatisfaction and unsystematic student mentoring. Educators hoped for a digital educational resource that could provide support in challenging situations.

I have nothing substantial about how to handle different situations. It is challenging, for example, when a student has not reached what is expected—they must still be cheered on. Much depends on what I judge and assess as correct, based on my opinion.

(2)

### 5.1.2 | Contributing to nurse educators acting more uniformly in student follow-up

The participants expected that a digital educational resource would contribute to consistency in educators' student follow-ups and were aware of educators' individualised and preferred way of supervising students. Due to these inconsistencies, many student nurses felt confused, insecure, and that they were treated differently, and that some educators were even stricter or offered closer follow-ups.

There is variation in student follow-ups depending on what educators are responsible for. Some students are followed up closely and receive detailed information about meetings and requirements from the educator, while others only receive the minimum.

Some educators are very concerned about written submissions, including theoretical presentations, and students must submit their submissions several times before the educator is satisfied, while other educators approve of other students who only make a minimum effort. They only say 'yes, yes, ok, it is fine'.

(5)

Differences among educators also concerned the frequency of their meetings with students.

Some of us educators have frequent meetings with students, while others meet their students only when talking about learning outcomes and with mid-term and end-term summative assessments.

(6)

The educators suggested that a digital educational resource should provide information about what student nurses could expect from their educators. This included an overview of the schedule and frequency of meetings.

I think that a digital educational resource could be a step forward in understanding the similarities among educators. This applies to written submissions, expectations, and meetings.

(3)

## 5.2 | Suggestions for a digital educational resource to complement and support interaction between stakeholders in placement

Educators described their suggestions for supporting students' educational progress in terms of using a digital educational resource as a supplement (rather than a replacement) for the physical presence of an educator, and how they can facilitate informal dialogue among stakeholders.

### 5.2.1 | A digital educational resource complementing nurse educators' physical presence in placement

The use of technology was emphasised to only be used as complementary to the physical presence of an educator in nursing home placements.

Digitalisation and digital development are good; however, they must not be digitalised. Face-to-face meetings are important.

(1)



The educators agreed that all ordinary meetings with student nurses during placement learning in the nursing homes should, despite the use of digital educational resources, take place with the physical presence of an educator.

I will, regardless of the use of a digital educational resource, meet up in the placement as much as I have always done. The use of technology will not change the amount of physical presence during the placement period. All meetings with student nurses will be face-to-face.

(3)

Educators noted that student nurses and RN mentors valued face-to-face meetings among stakeholders. The interaction among stakeholders was reflected to be different in face-to-face meetings, compared with digital meetings. Many things happened in face-to-face meetings that could not be replicated using technology only, and thus the use of technology was noted to establish a physical distance among stakeholders.

Physical distance and the inability to use body language are reasons why the use of digital educational resources cannot replace face-to-face meetings such as assessment meetings.

(1)

## 5.2.2 | Facilitating the informal interaction between stakeholders

Educators suggested that a digital educational resource should provide a digital room (dialogue forum) that facilitated informal written communication among the student nurses, educators, and RN mentors. They wanted the dialogue forum to be transparent, where written communication among the stakeholders was visible during the placement period for all stakeholders. Educators also requested a user-friendly digital dialogue forum that could replace their current communications via e-mail and telephone. The purpose of an informal dialogue forum was to establish an atmosphere of openness among stakeholders, and to enable closer interactions and student follow-ups.

A dialogue forum could contribute to an interaction that builds relationships among stakeholders without having to meet them face-to-face.

(4)

It was further suggested that the interaction among stakeholders via a dialogue forum would facilitate students' contact with their educators.

Many students have a high threshold for sending e-mails to educators. A dialogue forum could help student nurses reduce the threshold for contacting the educator.

(6)

Many students are not responding to my e-mails; hopefully, a dialogue forum can enable better engagement.

(5)

The educators anticipated that a dialogue forum would also ease communication with RN mentors.

RN mentors are not easily accessible. I am excited that a dialogue forum will make communication with the RN mentor easier, compared with phone calls or e-mails.

(5)

The educators were responsible for the follow-up of several students simultaneously in the same placement period; therefore, a dialogue forum where they could communicate and forward the same information to all students simultaneously was requested to make their work more efficient.

It would be nice if all the students in the group received the same information in an open dialogue forum because everyone would receive answers simultaneously. This avoids having to repeatedly answer common questions from student nurses.

(4)

It will be cumbersome if one cannot send the same information to all students together, but must send it individually.

(6)

The educators emphasised the usefulness of having a dialogue forum that also allowed for limited transparency among stakeholders. They requested a dialogue forum where the educator and RN mentor could communicate and underlined the importance of such a possibility involving challenging situations.

I have been in situations where the RN mentor needs to communicate with me as an educator, specifically in situations where students may not pass their placement period or where students are too passive in their placement learning, taking little initiative in learning situations.

(3)

### 5.2.3 | Strengthening the formal interaction between stakeholders

The educators suggested that a digital educational resource should act as a link between academic and placement studies, establishing a consensus regarding the formal expectations and learning outcomes in students' placement learning.

It is important that the RN mentor understands what learning outcomes student nurses should pursue during their placement learning, as well as their mentoring role in the meetings with and follow-up of students. If this is taken into consideration in the digital educational resource, collaboration between academic and placements will be facilitated.

(FG)

A digital educational resource should give an overview of the content and the expectations of students, RN mentors, and educators to avoid misinterpretations of their roles.

(2)

Educators expected that a digital educational resource would contribute to enhanced interaction among student nurses, educators, and RN mentors. All stakeholders should be able to gain an understanding of their roles and responsibilities during the placement period. Furthermore, the educators suggested that the stakeholders should all receive the same information in order to obtain an understanding and overview of the structure and content elements regarding the placement period.

I want a digital educational resource providing guidelines and information about the expectations of stakeholders' roles, focusing on the meetings, as well as the elements and advice to be emphasised during student supervision.

(2)

A digital educational resource should provide an overview of the content, written submissions, and reflection meetings to avoid discussions about what should happen during the placement period.

(3)

### 5.3 | Suggestions for a digital educational resource to facilitate student nurses' learning processes

Educators described their suggestions for a digital educational resource to optimally facilitate student nurses' learning processes by encouraging students to engage in reflective processes, providing

them with clinically relevant learning tasks, offering feedback on their written work, and enhancing the assessment meetings.

#### 5.3.1 | Stimulating and facilitating reflective processes

The educators pointed out that they have an important influence on student nurses' learning in both the current and further placement learning periods.

I think it is already important in the first placement period—in the first year of education—to encourage student nurses to learn and engage in reflective learning about, for example, ethical dilemmas. In this way, students will likely continue to engage in reflective learning during further placement periods. This is how you develop, both as a student and as a person.

(5)

In general, educators revealed that engaging in and achieving reflective thinking skills was a challenging learning outcome for student nurses. They suggested that a digital educational resource could stimulate student nurses to engage in reflective thinking. Educators anticipated that frequently providing minor reflection tasks might positively contribute to students' learning processes. This was anticipated to support students in gaining a better understanding of their level of learning and knowledge. Therefore, they suggested that students should be provided small weekly reflection notes in the digital educational resource to gain an in-depth comprehension and insight into how student nurses academically assessed different learning situations.

Small reflection notes give the educator insight into students' reflection and learning processes.

(2)

#### 5.3.2 | Providing feedback on students' written works

The educators emphasised the importance of a digital educational resource providing good possibilities for student nurses to easily submit their written work, while also allowing educators to provide written feedback on their submissions. They also highlighted that many student nurses requested written feedback on their submissions during their placement learning.

When I looked at the student evaluations to gain insight into what I can improve, many students wrote that they had not received written feedback on their written submissions.

(1)



Furthermore, the educators requested a digital educational resource that enhanced transparency, allowing RN mentors to access students' written submissions and educators' written feedback, and that RN mentors should also be able to comment on the students' written submissions. Moreover, they wished written feedback to be transparent to all stakeholders to promote students learning.

The RN mentor should have access to the written feedback provided by the educator and vice versa. This would allow stakeholders to have an overview of the written feedback provided to the student, as well as to assess whether they emphasise similar outcomes in their feedback.

(2)

### 5.3.3 | Enhancing summative assessment meetings

The educators perceived summative evaluation meetings as challenging because RN mentors often played a passive role. They suggested that a digital educational resource should encourage and support RN mentors to prepare and write assessments. Educators suggested that this might enable RN mentors to become more verbally active during the assessment meetings.

It is important for a digital educational resource to enable RN mentors to write assessments. Educators must often speak for RN mentors because they are silent during summative assessment meetings. RN mentors should be more vocal in contributing to the summative assessment of the students.

(4)

The educators believed that written assessments conducted by both RN mentors and student nurses might inform educators on which learning outcomes the student needs to strive for further progress.

A digital educational resource should allow the educator to perform summative assessments of the student based on RN mentors' prepared and written experiences.

(4)

It is desirable that a digital educational resource provides access to students' written self-assessments. This would prepare the educator for summative assessment meetings and help me as an educator to know how the students worked and how they progressed.

(FG)

## 6 | DISCUSSION

The current study responds to the request from Laugaland et al. (2020) exploring educators' suggestions for a digital educational resource to optimally facilitate interaction between stakeholders and learning processes, assuring first-year student nurses' learning outcomes during placement at nursing homes.

The educators emphasised that the use of a digital educational resource could only fulfil a supplementary role and not serve as a replacement for educators' physical presence to support student nurses' learning during their placement studies. These findings are consistent with previous studies suggesting that the use of technology will never have the same value as face-to-face interactions (Lloyd-Penza et al., 2019; Salmani et al., 2022). In a qualitative study, Salmani et al. (2022) reported that participants in digital meetings lost social cues such as body language and were at risk of being distracted by what was happening around them. This suggests that face-to-face interaction with educators is crucial for effective supervision, and that a sociocultural situated learning context will deteriorate if a digital educational resource replaces the physical presence of an educator when supervising student nurses during their placement studies (Salmani et al., 2022). However, when designing a digital educational resource to supplement and facilitate supervision in placement studies, our study revealed the need to establish a guideline for meetings' content and frequency, to assure a common ground among educators. Unsurprisingly, educators were, in general, concerned about dissimilarities between the educators when supervising student nurses during their placement studies. Related to this finding, Cant et al. (2021) and Laugaland et al. (2020) reported an inconsistency between educators' presence during placement studies as reasons for students' low educator satisfaction and a challenge for students' learning. The inconsistencies in presence may raise tension between the educator and students due to failing students' requirements and expectations (Heinonen et al., 2019). Another possible explanation could be that educators' supervision is a key part of students' learning. Thus, inconsistencies in presence may restrict students' learning and cause failure in supporting them in integrating theoretical and practical knowledge, thereby hindering the development of nursing competence (Cant et al., 2021).

Furthermore, our findings showed that digital educational resource design may contribute towards knowledge and understanding of the stakeholders' roles, and encouraging openness and interaction between the stakeholders to facilitate student supervision and learning. Gaining knowledge about each other's roles in the partnership could instil a sense of security among stakeholders. Thus, our findings support a digital educational resource design that considers supervision's relational aspects as pivotal towards student learning and progression. This finding is broadly supported by previous studies (Belita et al., 2020; Gause et al., 2022; Husebø et al., 2018; Regmi & Jones, 2020). Gause et al. (2022) emphasised openness and interaction as prerequisites for implementing and using technology to facilitate student supervision, while Belita

et al. (2020) highlighted openness and interaction as important for stakeholders to assume responsibility for their tasks. In our findings, the educators emphasised the need for a dialogue forum facilitating openness and interaction between stakeholders during placement. Interestingly, interaction among stakeholders through a dialogue forum is reported to act as an indicator of satisfaction with the digital educational resource (Gause et al., 2022). Moreover, as the sense of belonging to a learning community is vital for student nurses' placement learning experiences (O'Brien & Battista, 2020), a digital educational resource should facilitate social issues and act as a digital learning community.

Even though the educators emphasised the importance of a dialogue forum contributing to openness between all stakeholders during supervision interactions, they also requested possibilities for a 'digital room' for the educator and RN mentor only, allowing for confidential dialogues in challenging situations to secure students' integrity and dignity. The educators suggested that this was particularly important in situations where a student's inadequate study progression was at stake. Additionally, educators and RN mentors often have divergent views on students' study progression (Christiansen et al., 2021; Frøiland et al., 2022), contributing to inconsistency between the two, ultimately hindering students' learning processes (Laugaland et al., 2021). A dialogue forum allowing for confidential dialogues may support stakeholders to reach consensus in challenging supervision situations (Christiansen et al., 2021).

According to the educators' suggestions, the design of a digital educational resource should stimulate students to engage in appropriate learning processes, a finding that corresponds with findings in recent studies (Egilsdottir et al., 2022; O'Connor et al., 2022). Thus, a digital educational resource should be designed to optimise engagement and learning during placement, and thereby provide educational resources beyond learning outcomes only. Regarding this issue, Koehler and Mishra (2009), from the field of educational technology, have emphasised that pedagogical approaches are vital when designing a digital educational resource, comprising one of three knowledge categories (technological, pedagogical, content) that should be included. The role of technology involves having a pedagogical approach contributing to the integration of the specific content to be taught and learned. The way to design digital educational resource integrating technology and pedagogical approaches to enhance optimal placement learning is still unclear (O'Connor et al., 2022).

Interestingly, the educators acknowledged stimulating students' reflective thinking skills as a pedagogical approach integrated with the digital educational resource design. This finding corresponds well with findings reported by Laugaland et al. (2021), that students undergoing placement studies in a nursing home were highly satisfied when being encouraged to reflect on their learning processes. Being encouraged to reflect contributed towards an advanced understanding of nursing, and improved independence in learning (Laugaland et al., 2021). Furthermore, this finding highlights stimulating reflective thinking as a pedagogical approach, which is

reported as crucial in developing metacognitive skills supporting the linking of theory and practice, developing nursing competence, and providing safe patient care (Barbagallo, 2021). Thus, a digital educational resource should be designed to optimally stimulate reflective thinking, benefitting student supervision interactions with the educator (Regmi & Jones, 2020). Such a pedagogical approach is consistent with situated learning theory, supporting educators' role when supervising student nurses in acquiring knowledge and understanding (O'Brien & Battista, 2020).

Furthermore, educators expressed concerns about supervising students during challenging situations, such as questionable study progression due to insufficient knowledge (Berhe & Gebretensaye, 2021) or being emotionally affected by patient experiences (Dalsmo et al., 2022). Stimulating reflective thinking here may help educators to get a deeper understanding of how to help students develop strategies for improved understanding and learning (Lloyd-Penza et al., 2019). Notably, educators often fail to appropriately engage students in developing reflective skills during placement studies (Barbagallo, 2021; Husebø et al., 2018), which may be due to educators themselves being insecure in their supervisory role (Laugaland et al., 2021).

Promoting appropriate assessment and possibilities for written feedback on students' submissions during placement, as highlighted by Sultan and Victor (2021), was underlined in educators' suggestions about the digital educational resource. It is well-reported that feedback is a valuable teaching and learning strategy that has a considerable influence on learner achievement (Dalsmo et al., 2022; Sultan & Victor, 2021). A digital educational resource offers flexibility wherein students can access learning resources at any time (Regmi & Jones, 2020). Thus, written feedback adapted to students' educational needs is in line with a more student-centred learning approach (Sultan & Victor, 2021). From a Vygotskian perspective (Vygotsky, 1978), a digital educational resource allowing for feedback from more experienced others may contribute towards students gradually assuming greater responsibility for their own learning and participation.

Furthermore, the educators stressed the importance of a digital educational resource that encourages RN mentors to become more active during summative assessment meetings in which they often take a passive role (Aase et al., 2022; Frøiland et al., 2022), possibly because they felt that they were being assessed by the educators along with student nurses (Christiansen et al., 2021). Another challenge in assessment meetings could be that the educator and RN mentor have different expectations regarding students' learning and competence development (Christiansen et al., 2021; Frøiland et al., 2022). Here, if a digital educational resource provides easily accessible academic documents for all stakeholders, differences in the two stakeholders' expectations may be mirrored and equalised. In addition, the educators were concerned by a potential power imbalance between stakeholders, and therefore suggested that access to the digital educational resource content might help RN mentors prepare themselves for the assessment meetings, strengthening their opportunities to take an

active verbal role rather than a listening one, and thus reduce the imbalance in power.

## 6.1 | Strengths and limitations of the work

The educators were engaged and willing to communicate suggestions in an articulate, expressive, and reflective manner. However, this study was conducted in only one undergraduate bachelor's programme in nursing, which may limit the transferability of these findings to other educational nursing programmes. Further, the focus group interview was conducted by a colleague of the educators and might have hindered the educators to speak freely. We analysed the data extensively; however, a computer program could have been used to expedite content analysis and comprehensively capture the main categories that emerged from the data.

## 6.2 | Recommendations for further research

Based on the findings, researchers should develop sound digital educational resources in close collaboration with key stakeholders and quantitatively test their efficiency for all stakeholders. Further, qualitative studies should address in-depth learning, collaborative, and assessment-related processes to increase our understanding of how digital educational resources may benefit all stakeholders in their processes, respectively. Further research should particularly explore how and to what degree a dialogue forum could facilitate consensus and equality between stakeholders in supervision and assessment.

## 6.3 | Recommendations for educational practice

Based on our findings, we recommend that digital educational resources supporting placement studies in nursing homes should include key knowledge and skills that students need to learn. Further, digital educational resources should be designed to engage students actively in their learning processes, such as in reflective thinking. Moreover, digital educational resources should provide opportunities for feedback and assessments, both formative and summative, and should strengthen collaboration between stakeholders throughout placement studies. We further recommend that a digital educational resource should be used as a supplement in placement studies, rather than a replacement for educator presence.

## 7 | CONCLUSIONS

The main categories in this qualitative study were: 'Suggestions for a digital educational resource to strengthen and support nurse educators' role in follow-up students', 'Suggestions for a digital educational resource to complement and support interaction between

stakeholders in placement', and 'Suggestions for a digital educational resource to facilitate student nurses' learning processes'. The three categories were captured by the overarching theme: *A digital educational resource facilitating interaction between stakeholders and students' learning processes*.

## AUTHOR CONTRIBUTIONS

All authors agreed upon the study's design. MR and IA: collected data, and MR and MTG: conducted the data analysis and were responsible for the drafting of the manuscript, and all authors critically reviewed the manuscript.

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## CONFLICT OF INTEREST STATEMENT

The authors declare that they have no competing interests.

## DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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